ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 85 and 86

[AMS–FRL–5823–7]

RIN 2060–AF75

Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines: Voluntary Standards for Light-Duty Vehicles

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today EPA is finalizing the main regulatory framework for the National Low Emission Vehicle (National LEV) program. After EPA takes comment on and finalizes supplemental regulations, today's regulations would allow auto manufacturers to volunteer to comply with tailpipe standards for cars and light, light-duty trucks that are more stringent than EPA can mandate. Once a manufacturer opts into the program, the standards would be enforced in the same manner as any other federal motor vehicle pollution control requirement. Manufacturers would be willing to opt into this program if there is a binding commitment to it by the northeastern part of the country (the Ozone Transport Region (OTR) or the States of the Ozone Transport Commission (OTC States)).

If the program were to come into effect after EPA finalizes the supplemental regulations, it would achieve significant reductions in smog and other air pollution nationwide. It also would achieve the same emission reductions in the OTR as if each OTC State adopted a state motor vehicle program. Today's regulations, together with other Agency actions, also substantially harmonize federal and California motor vehicle standards and test procedures to enable manufacturers to design and test vehicles to one set of standards nationwide if they opt into National LEV.

With this final rule, EPA is providing the regulatory structure that is a necessary step towards completion of an on-going process initiated by the OTC States and the auto manufacturers to improve public health through the introduction of cleaner vehicles nationwide and in the Northeast. The process cannot be completed until the auto manufacturers and the OTC States both agree to be bound by the program. As a result of the hard work of these parties, agreement has been reached on the main regulatory framework of the National LEV program. This agreement is reflected in today's rule. However, some additional issues must be resolved regarding the commitments the OTC States must make for the program to come into effect. EPA will resolve these issues when it adopts a supplemental final rule after further notice and comment. If National LEV is implemented, it will demonstrate how cooperative, partnership efforts can produce a smarter, cheaper program that reduces regulatory burden while increasing protection of the environment and public health.

DATES: This regulation is effective August 5, 1997. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 5, 1997. Sections 86.085–37(b)(1) introductory text, 86.1710–97(a), 86.1712–97, and 86.1776–97 contain information collection requirements that have not yet been approved by the Office of Management and Budget (OMB) and are not effective until OMB has approved them. EPA will publish a document announcing the effective date of these sections.

ADDRESSES: Materials relevant to this final rule have been placed in Public Docket No. A–95–26. The docket is located at the Air Docket Section, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460 (Telephone 202–260–7548; Fax 202–260–4400) in Room M–1500, Waterside Mall, and may be inspected weekdays between 8:00 a.m. and 5:30 p.m. A reasonable fee may be charged by EPA for copying docket materials.

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SUPPLEMENTARY INFORMATION:

Regulated entities. Entities potentially regulated by this action are those that manufacture and sell new motor vehicles in the United States. Regulated categories and entities include:

Category	Examples of regulated entities
Industry	New motor vehicle manufacturers.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your activities are regulated by this action, you should carefully examine the applicability criteria in § 86.1701–97 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

I. Obtaining Electronic Copies of the Regulatory Documents

The Preamble, Regulations, and Response to Comments documents are also available electronically from the EPA internet site and via dial-up modem on the Technology Transfer Network (TTN), which is an electronic bulletin board system (BBS) operated by EPA's Office of Air Quality Planning and Standards. Both services are free of charge, except for your existing cost of internet connectivity or the cost of the phone call to TTN. Users are able to access and download files on their first call using a personal computer per the following information. The official **Federal Register** version is made available on the day of publication on the primary internet sites listed below. The EPA Office of Mobile Sources also publishes these notices on the secondary internet sites listed below and on TTN.

Internet

World Wide Web: http://www.epa.gov/docs/fedrgstr/EPA–AIR/ (either select desired date or use Search feature) or http://www.epa.gov/OMSWWW/ (look in What's New or under the specific rulemaking topic)

Gopher: gopher.epa.gov Follow menus: Rules: EnviroSubset:Air or gopher.epa.gov Follow menus: Offices:Air:OMS

FTP: ftp.epa.gov Directory: pub/gopher/fedrgstr/EPA–AIR/ or ftp.epa.gov Directory: pub/gopher/OMS/

TTN BBS: 919–541–5742 (1,200–14,400 bps, no parity, eight data bits, one stop bit) Off-line: Mondays from 8:00–12:00 Noon ET Voice helpline: 919–541–5384

A user who has not called TTN previously will first be required to answer some basic informational questions for registration purposes. After completing the registration process, proceed through the following menu choices from the Top Menu to access information on this rulemaking.

<T> GATEWAY TO TTN TECHNICAL AREAS (Bulletin Boards)
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<K> Rulemaking & Reporting
<1> Light Duty

<10> File area #10 OTC Low-Emissions Vehicle & National LEV

At this point, the system will list all available files in the chosen category in reverse chronological order with brief descriptions. To download a file, type the letter ''D'' and hit your Enter key. Then select a transfer protocol that is supported by the terminal software on your own computer, and pick the appropriate command in your own software to receive the file using that same protocol. After getting the files you want with your computer, you can quit the TTN BBS with the <G>oodbye command. If you are unfamiliar with handling compressed (i.e. ZIP'ed) files, go to the TTN top menu, System Utilities (Command: 1) for information and the necessary program to download in order to unZIP the files of interest after downloading to your computer.

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II. Outline and List of Acronyms and Abbreviations

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B. List of Acronyms and Abbreviations

AAMA American Automobile Manufacturers Association
AIAM Association of International Automobile Manufacturers
APA Administrative Procedure Act
AQL Acceptable Quality Level
ATV(s) Advanced Technology Vehicle(s)
BBS Bulletin Board System
CAA Clean Air Act
CAAA Clean Air Act Amendments of 1990
CAL LEV California Low Emission Vehicle Program
CARB California Air Resources Board
CFR Code of Federal Regulations
CO Carbon Monoxide
CQA California Quality Audit
CST Certification Short Test
EPA U.S. Environmental Protection Agency
EPAct Energy Policy Act
FACA Federal Advisory Committee Act
FR Federal Register
FRM Final Rulemaking, Final Rule
FTP Federal Test Procedure
GSA General Services Administration
GVWR Gross Vehicle Weight Rating
HC(s) Hydrocarbon(s)
HCHO Formaldehyde
HEV(s) Hybrid Electric Vehicle(s)
HLDT(s) Heavy Light-Duty Truck(s)
IBR Incorporation by Reference
ICI(s) Independent Commercial Importer(s)
ICR Information Collection Request
I/M Inspection and Maintenance
ILEV(s) Inherently Low Emission Vehicle(s)
LDT(s) Light-Duty Truck(s)
LDV(s) Light-Duty Vehicle(s)
LEV(s) Low Emission Vehicle(s)
LLDT(s) Light Light-Duty Truck(s)
LVW Loaded Vehicle Weight
MIL Malfunction Indicator Light
MOU Memorandum of Understanding
MY Model Year
NAAQS National Ambient Air Quality Standards
National LEV National Low Emission Vehicle
NLEV National Low Emission Vehicle
NMHC Non-methane Hydrocarbons
NMOG Non-methane Organic Gases
NO_X Oxides of Nitrogen
NPRM Notice of Proposed Rulemaking
NTR Northeast Trading Region
OBD On-Board Diagnostics
OBD II Second Phase On-Board Diagnostics
OMB Office of Management and Budget
ORVR On-Board Refueling Vapor Recovery
OTC Ozone Transport Commission
OTC LEV Ozone Transport Commission Low Emission Vehicle
OTR Ozone Transport Region
PM Particulate Matter
RAF(s) Reactivity Adjustment Factor(s)
RFA Regulatory Flexibility Analysis
RFG Reformulated Gasoline
RIA Regulatory Impact Analysis
SEA Selective Enforcement Audit
SFTP Supplemental Federal Test Procedure
SIA Service Information Availability
SIP State Implementation Plan
SNPRM Supplemental Notice of Proposed Rulemaking
The Act Clean Air Act
The Agency U.S. Environmental Protection Agency
THC Total Hydrocarbon
TLEV(s) Transitional Low Emission Vehicle(s)
TTN Technology Transfer Network

UDDS Urban Dynamometer Driving Cycle
ULEV(s) Ultra Low Emission Vehicle(s)
UMRA Unfunded Mandate Reform Act
VOC(s) Volatile Organic Compound(s)
ZEV(s) Zero Emission Vehicle(s)

III. Introduction and Background

The U.S. Environmental Protection Agency (EPA) is adopting regulations for the National Low Emission Vehicle (National LEV) program in this final rule. EPA believes this is a cleaner, smarter, cheaper pollution control program for new motor vehicles. Under the National LEV program, auto manufacturers have the option of agreeing to comply with more stringent tailpipe emissions standards—standards that EPA could not impose without manufacturer agreement. Once manufacturers commit to the program, the standards will be enforceable in the same manner that other federal motor vehicle emissions control requirements are enforceable. Manufacturers have indicated their willingness to volunteer to meet these tighter emissions standards if EPA and the northeastern states (i.e., those in the Ozone Transport Commission (OTC) or the ''OTC States'') agree to certain conditions, including providing manufacturers with regulatory stability, recognizing that establishing advanced technology vehicles (ATVs) in the Northeast is a shared responsibility (rather than the sole responsibility of auto manufacturers), and reducing regulatory burdens by harmonizing federal and California motor vehicle emissions standards.

The National LEV program is another step in an unprecedented, cooperative effort by the OTC States, auto manufacturers, environmentalists, fuel providers, EPA, and other interested parties to improve air quality. The OTC States and environmentalists provided the opportunity for this cooperative effort by pushing for adoption of the California Low Emission Vehicle (CAL LEV) program throughout the northeast Ozone Transport Region (OTR). Under EPA's leadership, the states, auto manufacturers, environmentalists, and other interested parties then embarked on a process marked by extensive public participation and a demonstrated willingness to work with each other and to solve problems jointly. This working relationship is particularly remarkable given the adversarial and litigious nature of previous interactions between the parties.

In today's final rule, EPA is establishing the regulatory framework for National LEV. Given statutory constraints, however, the National LEV program will only be implemented if it is agreed to by the OTC States and the auto manufacturers. EPA does not have authority to force either the OTC States or the manufacturers to sign up to the program.

The OTC States and auto manufacturers have reached agreement on most issues raised by the National LEV program. Each side has sent EPA a Memorandum of Understanding (MOU) that it has initialed, indicating its agreement with the National LEV program as contained in that MOU. (These initialed documents are in the public docket for this rulemaking.) Although there are differences in the two Memoranda, they show that agreement has been reached between the OTC States and the auto manufacturers on the substantive issues addressed in this rule. With a few limited exceptions, those agreements are consistent with today's rule. EPA applauds the efforts of these parties, particularly the leadership shown by the OTC States and the auto manufacturers.

The OTC States and auto manufacturers have not reached agreement on a few remaining issues, in particular, those related to OTC State opt-in and commitment to the program. EPA did not take comment on and therefore cannot finalize these portions of the National LEV program in today's rule. These issues will need to be resolved and reflected in EPA regulations before the National LEV program can come into effect. Because the auto manufacturers and the OTC States have not resolved these issues, EPA will publish a Supplemental Notice of Proposed Rulemaking (SNPRM) to take comment on these issues before EPA resolves them in a supplemental final rule.

National LEV will provide environmental benefits by reducing air pollution nationwide. The program is designed to address air pollution problems, and will produce public health and environmental benefits both inside and outside the OTR. This will assist all states that were considering adopting the California LEV program to meet their obligations under the Clean Air Act (CAA or the Act).

EPA has determined that the National LEV program will result in emissions reductions in the OTR that are equivalent to or greater than the emissions reductions that would be achieved through OTC state-by-state adoption of the CAL LEV program. For a number of years, the OTC has been working to reduce motor vehicle emissions either by adoption of the CAL LEV program throughout the OTR or by adoption of the National LEV program. As a means to achieve such reductions, National LEV continues to provide a preferable alternative to adoption of CAL LEV throughout the OTR. Not only will National LEV provide emissions reductions benefits to the OTC States, it will reduce states' costs of providing their citizens with healthy air by avoiding the costs of state programs that duplicate each others' and EPA's efforts. Although a recent court decision struck down one of the OTC States' regulatory options for regionwide adoption of CAL LEV programs, *Virginia* v. *EPA*, No. 95–1163 (D.C. Cir. March 11, 1997)(discussed in section III.C.3.), the auto manufacturers and OTC States have recently sent letters to EPA expressing their continued support for National LEV. (Letter from AAMA and AIAM to EPA, April 15, 1997; Letter from OTC to EPA, April 18, 1997; both letters are in docket no. A–95–26).

EPA is also providing important relief from certain regulatory requirements to the auto manufacturers. Rather than having a fleet of California vehicles that are designed and tested to California standards, and a separate fleet of federal vehicles that are designed and tested to federal standards, in most instances under National LEV manufacturers will certify vehicles to harmonized California and federal standards that will allow them to sell most vehicles nationwide. Not only will this reduce testing and design costs, it will allow more efficient distribution and marketing of vehicles nationwide.

The cooperative nature of the program by itself should provide environmental benefits sooner, and in a way that greatly reduces regulatory transaction costs, than would otherwise be the case. Focusing energy on implementing the program the parties helped jointly design is a better use of resources than continued disagreement over whether any program should be implemented at all.

A. Introduction

EPA is today adopting the regulatory structure for a voluntary, National LEV program. The National LEV program includes a set of exhaust emissions standards that will significantly reduce emissions of ozone-producing pollutants nationwide from new light-duty vehicles (LDVs) and light-duty trucks (LDTs) at or below 6000 lbs gross vehicle weight rating (GVWR) (light, light-duty trucks, or LLDTs). The program includes a manufacturer fleet average standard for non-methane organic gas (NMOG) applicable in the OTC States beginning in Model Year

(MY) 1997,[1] and applicable nationwide (except California) beginning in MY2001. Manufacturers are not required to meet the standards in this program unless they choose to opt into the program. However, if a manufacturer opts into the program and EPA finds that the program is in effect, then the manufacturer will be bound by the program's requirements. A manufacturer that opts into the program can opt out only in certain limited circumstances.

In addition to the national public health benefits that would result from National LEV, the program has been motivated largely by the OTC's efforts to reduce motor vehicle emissions either by adoption of the CAL LEV program throughout the OTR or by adoption of the National LEV program. One of the OTC States' efforts was a petition the OTC filed with EPA. On December 19, 1994, EPA approved this petition, which requested that EPA require all OTC States to adopt the CAL LEV program (called the Ozone Transport Commission Low Emission Vehicle (OTC LEV) program. 60 FR 4712 (January 24, 1995) (OTC LEV Decision)). In that rule, EPA found that the reduction of emissions from new motor vehicles throughout the OTR is necessary to mitigate the effects of air pollution transport in the region and to bring ozone nonattainment areas in the OTR into attainment (including maintenance) by the dates specified in the CAA, as amended in 1990. On the basis of this finding, EPA issued a finding that the State Implementation Plans (SIPs) of the OTC States are substantially inadequate. Under the OTC's recommended program, all new motor vehicles sold in the OTR beginning in MY1999 would be required to be certified by the California Air Resources Board (CARB) to any one of the California motor vehicle emissions standards (i.e., California Tier 1, Transitional Low Emission Vehicle (TLEV), Low Emission Vehicle (LEV), Ultra Low Emission Vehicle (ULEV), or Zero Emission Vehicle (ZEV)). Manufacturers could choose to sell any mix of California-certified vehicles to comply with annual fleet average NMOG standards, which become increasingly stringent over time. Pursuant to the OTC recommendation, individual states in the OTR could (but were not required to) adopt a ZEV mandate to the extent permitted by the CAA.

The OTC LEV decision was challenged by the Commonwealth of Virginia and several motor vehicle manufacturers. The Court of Appeals held that EPA did not have authority to require the OTC States to adopt the CAL LEV program and vacated EPA's OTC LEV decision. *Virginia* v. *EPA*, No. 95–1163 (D.C. Cir. March 11, 1997).

The court decision striking EPA's OTC LEV decision changes some of the legal requirements for National LEV. When EPA proposed the National LEV program, it proposed criteria that the National LEV program would have to meet to be an acceptable LEV-equivalent program that would relieve OTC States of their obligation under the OTC LEV decision. EPA proposed that National LEV (1) would need to achieve emissions reductions equivalent to those that would be achieved by OTC LEV, and (2) would be an enforceable, stable program that was in effect. Because EPA no longer need find that National LEV is an acceptable LEV-equivalent program, EPA has reevaluated whether National LEV is legally required to meet the two criteria. EPA has determined that there is no longer a legal requirement for National LEV and OTC LEV to achieve equivalent emissions reductions. Nonetheless, for all parties to support National LEV, it must produce an acceptable quantity of emission reductions. Furthermore, for EPA to grant SIP credits, National LEV must be an enforceable, stable program.

In today's rule, EPA finds that National LEV will achieve reductions in new motor vehicle emissions in the OTR that are at least equivalent to the reductions that would be achieved through OTC state-by-state adoption of the CAL LEV program. EPA also finds that once manufacturers opt into the National LEV program, it is enforceable against the manufacturers. After EPA provides further notice to take comment on the type of OTC State commitments that would make the program lasting, the Agency intends to promulgate final provisions for OTC State commitments sufficient to adequately assure that National LEV will produce the intended emissions reductions for the intended duration of the program. Then, EPA will be able to find that National LEV is in effect when all auto manufacturers have opted into the program.

EPA provided numerous opportunities for public participation in the decision-making process leading to OTC LEV and National LEV, as described more fully in section III.C.4. EPA established a subcommittee of the Clean Air Act Advisory Committee pursuant to the Federal Advisory Committee Act (FACA) to evaluate issues relating to obtaining reductions in emissions from new motor vehicles. The Subcommittee has also served as a public forum to discuss voluntary, 49-state motor vehicle emissions standards and provided comments to EPA on the National LEV program.

B. Benefits of the National LEV Program

The National LEV program will result in significant environmental and public health benefits nationwide if the OTC States and auto manufacturers agree to implement it. The program promulgated today represents a significant step towards the goal of reducing smog throughout the United States. The National LEV program will also achieve reductions in emissions of other pollutants, including particulate matter (PM), benzene, and formaldehyde.

Ground-level ozone, the principal harmful component in smog, is produced by a complex set of chemical reactions involving volatile organic compounds (VOCs) and oxides of nitrogen (NO_X) in the presence of sunlight. Ground-level ozone causes health problems, including damaged lung tissue, reduced lung function, and lungs that are sensitized to other irritants. Scientific evidence indicates that the ambient levels of ozone affect healthy adults and children, as well as people with impaired respiratory systems, such as asthmatics. A reduction in lung function during periods of moderate exercise has been found following exposure to ozone for six to seven hours at concentrations at or near the current standard. This decrease in lung function may be accompanied by symptoms such as chest pain, coughing, nausea, and pulmonary congestion. Studies, to date, indicate that the acute health effects of exposure to ozone at the level of the current ozone NAAQS (such as coughing, chest pain, and shortness of breath) are reversible in most people when the exposure stops. However, the extent of such reversibility depends on factors such as the length of exposure and individual activity level. With repeated exposure to ozone over time, many of these symptoms attenuate but some indicators of cell damage suggest continued lung inflammation. Ground-level ozone is also responsible for significant agricultural crop yield losses each year. Studies also indicate that the current ambient levels of ozone are responsible for damage to both terrestrial and aquatic ecosystems, including acidification of surface waters, reduction in fish populations, damage to forests and wildlife, soil degradation, and reduced visibility.

The primary NAAQS for various pollutants, including ozone, are set by EPA on the basis of air quality criteria

[1] As discussed in note 17 below, EPA is using MY 1997 as a placeholder for the actual start date of National LEV.

and allowing an adequate margin of safety, at a level that the Agency determines is necessary to protect public health. EPA then classifies areas across the country based on whether they attain these standards. Areas that do not meet these standards are deemed ''nonattainment'' areas and rated based on the severity of their air quality problem. There are 66 ozone nonattainment areas throughout the United States, including several areas classified as ''serious'' or ''severe'' for ozone. Houston and the upper Midwest, in particular, experience high levels of ground-level ozone pollution. The implementation of the National LEV program nationwide in MY2001 will advance the goal of emissions reductions in those areas. Motor vehicles are a significant contributor to smog because of their emissions of VOCs and NO_X. A vehicle certified to the National LEV standards will, over its lifetime, emit 400 pounds less pollution than a Tier 1 vehicle. Implementation of National LEV is expected to achieve nationwide reductions of NO_X emissions of 400 tons/day in 2005 and 1250 tons/day in 2015, and nationwide reductions in NMOG emissions of 279 tons/day in 2005 and 778 tons/day in 2015.

In evaluating the OTC petition, EPA analyzed the level of emissions reductions throughout the OTR necessary to attain (or maintain) the NAAQS for ozone, given the serious transport issue. EPA concluded, based on its analysis in the context of the OTC LEV decision, that NO_X reductions of 50 percent to 75 percent from 1990 levels from every portion of the OTR lying to the south, southwest, west, and northwest of each serious or severe OTR nonattainment area, and VOC reductions of 5 percent to 75 percent from the portion of the OTR in or near (and upwind of) each serious and severe OTR nonattainment area, are necessary to bring each such area into attainment by the applicable date.

EPA has projected that, without a program that achieves reductions in the Northeastern United States equivalent to those achieved by OTC state-by-state adoption of CAL LEV, on-highway vehicles will account for approximately 38 percent of NO_X emissions and 22 percent of anthropogenic VOC emissions in 2005. As described in the OTC LEV decision, EPA's modeling analyses support the conclusion that no combination of potentially broadly practicable control measures in the OTR would be sufficient to achieve the necessary level of emissions reductions without more stringent new motor vehicle emission standards. Thus, EPA determined that all of the emissions reductions in the OTR associated with implementing the OTC LEV program, or a LEV-equivalent program, are necessary. While the court decision overturned the OTC LEV decision requiring adoption of OTC LEV, the court did not overturn EPA's underlying assessment of the need for significant additional emissions reductions in the region.

More stringent motor vehicle standards outside the OTR, such as those contained in today's rule, will help the OTR achieve necessary reductions, in addition to producing benefits in States outside the OTR. EPA has determined that the National LEV program promulgated today would provide at least equivalent emissions reductions of VOCs and NO_X in the OTR as would OTC state-by-state adoption of CAL LEV programs, and would do so in a more efficient and cost-effective manner, for several reasons.[2] First, the National LEV program provides for the introduction of TLEVs in the OTR in MY1997, two years earlier than EPA had required under the OTC LEV program.[3] Second, since the National LEV program will apply nationwide (except for California) in MY2001, vehicles purchased outside the OTR that move into the region will be up to 70 percent cleaner than incoming vehicles (i.e., Tier 1 vehicles) would have been under the OTC LEV program. EPA estimated that if migration into the OTR of non-LEV vehicles were taken into account in estimating benefits of OTC LEV, this would result in a 16 ton/day increase in VOC emissions and a 28 ton/day increase in NO_X emissions in 2005 compared to EPA's estimates of highway vehicle emissions in the OTR without factoring in migration. The National LEV program, when implemented nationwide in MY2001, will greatly reduce this migration effect. Even more significant, without the OTC LEV SIP call, a substantial number of the OTC States are now unlikely to adopt state CAL LEV programs effective for the relevant timeframe, which dramatically increases the relative benefits of National LEV over an approach that relies on OTC state-by-state adoption of CAL LEV.

The National LEV program is also expected to achieve pollution reduction benefits from motor vehicles beyond those associated with ozone pollution, including benefits from control of PM, benzene, and formaldehyde. All states, not just those in the OTR, will realize these air quality benefits.

PM is the generic term for a broad class of chemically and physically diverse substances that exist as discrete particles over a wide range of sizes. PM emissions have been associated with numerous serious health effects, including upper and lower respiratory illnesses such as pneumonia, chronic obstructive pulmonary disease, chronic bronchitis, aggravation of the respiratory system in children with pre-existing illnesses, and premature mortality in sensitive individuals (such as those with cardiovascular diseases). In addition, studies have shown that PM emissions episodes can result in a short-term decrease in lung function in small children. PM emissions also contribute to impairment of visibility, acidic deposition, and potential modification of the climate.

The National LEV program will require diesel LDVs and LLDTs to meet PM standards that are more stringent than the comparable Tier 1 standards. As discussed more fully in the Regulatory Impact Analysis (RIA)[4] for this rulemaking, EPA's modeling shows that implementation of the National LEV program will result in a 28.6 ton/day reduction in particulates less than 10 microns in diameter (PM–10) in 2005, compared to expected PM emissions when current Tier 1 standards apply outside the OTC and OTC state-by-state adoption of CAL LEV is fully implemented within the OTC. Furthermore, in western areas (such as Denver) with a PM pollution problem caused by nitrates, the NO_X reductions achieved by the National LEV program will provide additional PM emissions benefits.

National LEV also will decrease emissions of two carcinogens: benzene and formaldehyde. As discussed more fully in the RIA for this rulemaking, EPA's modeling demonstrates that implementation of the National LEV program will reduce emissions of benzene by seven tons/day and formaldehyde by four tons/day nationwide in 2005. EPA has classified benzene as a Group A known human carcinogen, based on studies on workers

[2] Since EPA's modeling was completed, circumstances have changed that have set back the potential realistic start dates both for National LEV and for OTC state-by-state implementation of CAL LEV. EPA's modeling shows that the programs as designed (i.e., National LEV starting in MY1997 and CAL LEV throughout the OTR implemented by MY1999) would produce equivalent emission reductions. See section V.A. In the SNPRM, EPA will discuss the relative emission reduction effects of delayed start dates.

[3] Although it is unrealistic to start National LEV with MY1997 (see discussion in n. 17), EPA believes it is possible for National LEV to start sooner than most OTC States could start state LEV programs.

[4] Available in the public docket for review; see **ADDRESSES.**

showing that long-term exposure to high levels of benzene causes cancer. Exposure to benzene emissions has also been associated with non-cancer health effects, including blood disorders, adverse effects on the immune system, and damage to reproductive organs. EPA has classified formaldehyde as a probable human carcinogen, based on animal studies showing that long-term exposure to, and inhalation of, formaldehyde is associated with certain types of tumors. In addition, exposure to formaldehyde is associated with non-cancer health effects, including irritation of the eyes, nose, throat, and lower airway, at low levels of exposure, and adverse effects on the liver and kidneys. Unlike the current federal Tier 1 program, the National LEV program includes standards for formaldehyde emissions from motor vehicles.

EPA believes that the National LEV program is particularly promising because it would provide these nationwide health and environmental benefits while reducing some aspects of the auto manufacturers' regulatory burden and compliance costs. Currently, manufacturers typically design, test, and produce two different types of vehicles (California and federal), each of which must meet different standards according to different test procedures. One of the goals of the National LEV program is to use a single test procedure and standard for each particular type of emission control requirement. Because of this harmonization with California's program,[5] implementation of the National LEV program will streamline the process for certifying a vehicle for sale, reduce auto manufacturers' design and testing costs, and provide other efficiencies in the marketing of automobiles.[6]

EPA also believes the National LEV program is a preferable alternative to OTC state-by-state adoption of CAL LEV because it will use fewer regulatory and legislative resources than would OTC state-by-state adoption of CAL LEV, since the implementation of the National LEV program is premised on agreement reached by the OTC States, the auto manufacturers, and EPA. The OTC States, the auto manufacturers, and EPA, with input from environmental and public health groups, and other interested parties, have made significant efforts that resulted in a broad outline for a viable, cost-effective national low emission vehicle program. EPA believes that cooperation among the various interested parties is the best way to achieve significant emissions reductions and to design a practical, enforceable, and efficient program. It allows the OTC States, EPA, auto manufacturers, other affected industry groups, environmental groups and other interested parties to spend resources making the program work instead of fighting each other on a state-by-state basis over adoption of CAL LEV programs. It also eliminates the need for any state, besides California, to spend any resources on enforcement of its own motor vehicle emissions control program since enforcement responsibilities will remain with EPA and California. The National LEV program is a promising example of how cooperative efforts can advance the goal of cleaner air.

EPA has also analyzed the costs of the National LEV program. EPA used the detailed assessment of the cost of LEVs produced by CARB in 1994 and updated in April, 1996. CARB estimated the incremental cost of $96 per car for LEVs only in California.[7] EPA believes that the incremental cost for National LEV will be considerably lower than the CARB estimate for a variety of reasons. First, automotive pollution control technology will continue to advance, leading to better controls at lower costs over time. For example, in the two years between CARB's technology assessments, Honda announced the introduction of new LEV technology that will add little or no cost to vehicles. Second, the National LEV program includes numerous provisions to harmonize federal and California motor vehicle requirements. The resulting cost-savings for auto manufacturers and dealers (in areas such as vehicle design, certification testing, mechanic training and inventory control) will be significant and offset at least a portion of the costs for LEVs. Third, the nationwide production of LEVs will result in economies of scale for the manufacturers. Fourth, CARB's own cost estimates have generally been shown to be higher than actual price differences. For example, CARB estimates price increases for TLEVs at $61, but informal surveys of TLEV prices in California and New York have generally shown no price differentials between comparable TLEV and Tier 1 vehicles. Finally, auto industry experience has consistently demonstrated rapid price decreases in successive model years for newly-introduced technology. Analysis discussed in the RIA yields an annual incremental cost estimate of $950 million for National LEV when compared to current federal regulatory obligations, or of $600 million for National LEV when compared to CAL LEV throughout the OTR and current regulations in the rest of the country. EPA believes that these costs would actually be lower, as discussed above. The total expenditure for new cars in the United States in 1993 was approximately $225 billion.

C. Background

To provide a context for, and background to, the National LEV Program, it is necessary to discuss briefly the federal and California motor vehicle programs and the OTC's efforts to have the CAL LEV program adopted throughout the OTR. Additional background information is provided in the Notice of Proposed Rulemaking (NPRM) detailing the National LEV program on October 10, 1995 (60 FR 52734, 52738–52740). EPA provided extensive and numerous opportunities for public involvement in that decision and in developing the framework for a national voluntary low emission vehicle program.

1. Current Federal Motor Vehicle Emissions Control Program

The CAA prohibits the introduction into commerce of a new motor vehicle that is not covered by a certificate of conformity issued by EPA. To obtain such a certificate for a vehicle or engine

[5] In addition to using the same tailpipe standards as California, EPA is working with CARB to make changes to other EPA standards and test procedures that will further harmonize the federal and California motor vehicle emission control programs. EPA expects that CARB will reassess its regulations shortly to further this harmonization. Even if National LEV becomes effective, California will continue to have its own program. Manufacturers could decide to sell some vehicles (such as ULEVs or ZEVs) in California (or California and the OTR), but not nationwide.

[6] EPA received a letter from the Government of Canada (available in the public docket for review), indicating that government's interest in adopting national motor vehicle emissions standards that are the same as those contained in any national low emission vehicle program adopted in the United States. Such harmonization of motor vehicle emission control standards in the United States and Canada would provide even greater efficiencies to the auto manufacturers and would broaden the geographical range of the emissions benefits of such a program, including the specific benefit of reduced downwind pollution transport.

[7] A November, 1996 CARB Staff Report on Low Emission Vehicle and Zero-Emission Vehicle Program Review modified CARB's vehicle cost estimates. CARB now estimates the incremental costs of LEVs at approximately $120. EPA's cost analysis for the National LEV program, which has included the data in CARB's staff reports on the CAL LEV program, looks at costs of vehicles in California and then estimates National LEV program costs based on nationwide sales volumes. Two principal reasons for vehicle price differentials between California and National LEV vehicles are economy of scale in production volumes and allocation of costs among the number of vehicles being produced, with such costs distributed over an appropriate number of years. EPA's cost estimates rely in part on the start date of the National LEV program, which will be addressed in the upcoming SNPRM. See n. 17 below. Once the actual start date is determined, EPA will recalculate its estimates for vehicle costs using up-to-date cost information.

family, manufacturers must demonstrate compliance with all federal emissions control standards and requirements that apply to new motor vehicles for that class or category of vehicles for the relevant model year. The exhaust emission standards and procedures that currently apply to new LDVs and LDTs, known as the Tier 1 standards, were promulgated on June 5, 1991 (See 56 FR 25724; the standards themselves are codified at 40 CFR 86.094–8 and 86.094–9). The Tier 1 program includes standards for non-methane hydrocarbon (NMHC), oxides of nitrogen (NO_X), carbon monoxide (CO) and particulate matter (PM), all measured over the Federal Test Procedure (FTP) and applicable for the full statutory useful life of the vehicle. For MY1996 and thereafter, all LDVs and the LLDTs must comply with the Tier 1 standards. The federal motor vehicle program also includes other standards and requirements that apply to new motor vehicles, such as evaporative emissions, cold temperature CO, on-board refueling vapor recovery, and on-board diagnostic equipment.

Under section 207 of the Act, manufacturers must warrant the emissions performance of their new, certified motor vehicles for a portion of the vehicle's full useful life. EPA enforces the federal standards through its Selective Enforcement Audit (SEA) program (assembly line testing) and through in-use compliance testing and recall programs.

2. California Low Emission Vehicle Program

Section 209 of the CAA generally preempts states from adopting and enforcing standards relating to emissions from new motor vehicles and new motor vehicle engines.[8] However, the Act provides two exceptions. One allows EPA to waive preemption for the State of California, permitting that state to adopt and enforce its own motor vehicle emissions control program.[9] The second exception allows states other than California to adopt and enforce California's standards, if certain specified conditions are met.[10]

In 1990, California adopted the LEV program, containing three basic components. First, manufacturers must certify new motor vehicles to one of the following five emissions categories: California Tier 1, TLEVs, LEVs, ULEVs, and ZEVs. Second, manufacturers must comply with an overall fleet average NMOG standard. This requirement began in MY1994 and becomes more stringent over time. The third element is a ZEV production mandate, which requires manufacturers to include a certain percentage of ZEVs in their LDV fleet for sale in California. Initially, the ZEV mandate would have begun in MY1998, when two percent of a manufacturer's LDV fleet was required to be ZEVs. This would have increased to five percent in MY2001 through MY2002, then ten percent in MY2003. However, at a March 28, 1996, hearing CARB approved changes that eliminate all of the ZEV mandates except for the ten percent requirement beginning in MY2003. EPA granted California a waiver of preemption for its LEV program in January 1993. *See* 58 FR 4166 (January 13, 1993).

The States of New York, Massachusetts, New Jersey, Connecticut, Rhode Island, and Vermont, all of which are members of the OTR, have adopted all or portions of the California LEV program pursuant to section 177 of the Act. Massachusetts and New York are currently implementing their LEV programs. Connecticut, New Jersey and Rhode Island have also adopted the California LEV program, excluding the ZEV production mandate, effective in MY1998 for Connecticut and MY1999 for the other two states. In addition, Vermont has adopted the California LEV program effective in MY1999, which includes a ZEV sales target, that would apply only if certain criteria are met. As a result of automobile manufacturers' challenges to the New York and Massachusetts LEV programs, federal district and appellate court decisions have upheld these programs.[11]

3. OTC Efforts To Reduce Motor Vehicle Emissions in the OTR

Since it was convened in 1991, the OTC has worked on addressing the contribution of motor vehicles to the northeast ozone problem. It has identified two methods of controlling new motor vehicle emissions—state-by-state adoption of the CAL LEV program and National LEV. The auto manufacturers have said they prefer National LEV. As part of the process of achieving state-by-state adoption of CAL LEV throughout the OTR, the OTC sought and obtained from EPA a SIP call requiring each OTC State to adopt CAL LEV unless the State could show that the program was not necessary for the State to meet certain of its Clean Air Act obligations or unless there was an equivalent national motor vehicle program. Although a recent court decision struck down this SIP call and thus removed one of the mechanisms for the OTC to achieve the goal of state-by-state adoption of the CAL LEV program, the OTC States remain free to pursue this goal through other means.

A summary of the OTC LEV decision is provided here. Interested parties are referred to the OTC LEV decision SNPRM and Final Rulemaking (FRM) for additional information. *See* 59 FR 48664 (September 22, 1994); and 60 FR 4712 (January 24, 1995).

In February, 1994, the OTC formally recommended, pursuant to section 184(c) of the CAA, that EPA require all OTC States to adopt an OTC LEV program in their SIPs. The OTC's recommended LEV program would have required that, beginning in MY1999, all new LDVs and LLDTs sold or otherwise introduced into commerce in the OTR be certified to California LEV program standards. In addition, manufacturers would be required to meet California's fleet average NMOG standard for such vehicles. The OTC recommended that member states be allowed, but not required, to adopt California's ZEV mandate, unless EPA determined that the CAA required a state to adopt the ZEV mandate in order to adopt the NMOG average part of the LEV program. In addition, the OTC stated that it expected EPA to evaluate alternatives to OTC LEV.

On December 19, 1994, EPA approved the OTC recommendation. EPA found that the emissions reductions resulting from OTC LEV or a LEV-equivalent program are necessary for ozone nonattainment areas in the OTR to achieve attainment (and maintenance) by the applicable deadline, and that the OTC LEV program is consistent with the CAA. *See* 60 FR 4712 (January 24, 1995). Based on that approval, EPA issued to each OTC State a finding that its SIP is substantially inadequate to meet certain requirements insofar as the SIP would not currently achieve those necessary emissions reductions. EPA found that states could satisfy the finding of SIP inadequacy by adopting OTC LEV or by submitting a ''shortfall'' SIP.[12] The States were required to

[8] Clean Air Act section 209(a), 42 U.S.C. 7543(a).

[9] Clean Air Act section 209(b), 42 U.S.C. 7543(b).

[10] Clean Air Act section 177, 42 U.S.C. 7507.

[11] *Motor Vehicle Manufacturers Association* v. *New York State Department of Environmental Conservation,* 79 F.3d 1298 (2d Cir. 1996); *American Automobile Manufacturers Association (AAMA)* v. *Commissioner, Massachusetts Department of Environmental Protection,* 31 F.3d 18 (1st Cir. 1994); *Motor Vehicle Manufacturers Association* v. *New York State Department of Environmental Conservation,* 17 F.3d 521 (2nd Cir. 1994); *MVMA* v. *NYSDEC,* 869 F. Supp. 1012 (N.D.N.Y. Oct. 24, 1994); and *AAMA* v. *Greenbaum,* No. 93–10799-MA (D. Mass. Oct. 27, 1993).

[12] As described in the OTC LEV decision, a ''shortfall'' SIP program must contain adopted measures that make up the shortfall between (1) the emission reductions necessary to prevent adverse

submit a SIP revision on or before February 15, 1996, to cure this inadequacy.

In the OTC LEV decision, EPA also said that the SIP inadequacy would be satisfied if EPA were to determine through rulemaking that a federal 49-state motor vehicle emission control program was an acceptable LEV-equivalent program and that such program was in effect. Thus, if EPA were to find that auto manufacturers had opted into a LEV-equivalent federal motor vehicle emissions control program deemed acceptable by EPA through rulemaking action, then states would be relieved of the obligation under the OTC LEV decision to adopt the OTC LEV program in their SIPs. EPA had proposed that National LEV would be such a program, provided that the OTC States and auto manufacturers made sufficient commitments to it.

Only six states made submissions in response to the OTC LEV SIP call. New York and Massachusetts both submitted LEV programs that are currently in effect. Both programs include ZEV mandates. Connecticut, New Jersey, Rhode Island, and Vermont submitted OTC LEV programs in which OTC LEV is a ''backstop'' program. Manufacturers would not have to comply with those four states' programs if National LEV is an acceptable-LEV equivalent program and is in effect. New Jersey's program is conditioned further—it will not be implemented unless a minimum number of OTC States (excluding itself), represented by 40 percent of new vehicles registered in the OTR in MY1999, also implement the OTC LEV program not later than MY1999. Vermont also has a ZEV sales target, which would apply if certain criteria are met, independent of whether National LEV is in effect.

In a recent decision, the Court of Appeals struck down EPA's OTC LEV decision and SIP call. *Virginia* v. *EPA*, No. 95–1163 (D.C. Cir. March 11, 1997). The Court found that, while section 184 of the CAA gives EPA authority to require the OTC States to adopt specific pollution control measures upon the recommendation of the OTC, sections 177 and 202(b)(1)(c) of the CAA preclude EPA from requiring the OTC States to adopt the CAL LEV program prior to MY2004. The Court let stand EPA's underlying finding that the region needs substantial emissions reductions to mitigate the effects of air pollution transport and to bring (and keep) nonattainment areas in the region into attainment for ozone. It also affirmed the right of each State to adopt the CAL LEV program if it so chooses.

The Court decision does not dramatically alter the need for or potential benefits of National LEV. Although National LEV's development has been closely tied to EPA's OTC LEV decision and SIP call, National LEV is not dependent on them. National LEV was developed as an alternative to state-by-state adoption of CAL LEV in the OTR. Although the Court decision may affect the number of OTC States that will actually adopt CAL LEV, it does not limit states' ability to adopt CAL LEV and thus does not solve the problems created for manufacturers when some states have CAL LEV and some states rely on the federal program. Although the states have the option of adopting CAL LEV on a state-by-state basis, National LEV may provide greater emission reductions to upwind states than state-by-state adoption of CAL LEV because some states may not adopt CAL LEV.

4. Public Process

The Agency has employed a public process designed to provide maximum opportunity for public participation in an expedited decision-making process. A complete discussion of the history of this process can be found in the NPRM published on October 10, 1995 (60 FR 52734). In addition to the numerous public meetings and other opportunities for public comment described in that notice, EPA received numerous comments on the NPRM and held a widely attended public hearing on November 1, 1995. In developing today's rule, the Agency has fully considered all of the public comments timely filed in this rulemaking. EPA's responses to significant comments are contained either in today's rule or in the detailed Response to Comments document contained in the public docket. Where EPA notes that it is deferring resolution of certain issues raised in the NPRM, the response to comments on those issues is also deferred. In addition to relying on this rule and the Response to Comments document as the statement of basis and purpose for today's action, EPA is also relying on the detailed explanations in the NPRM where it references those explanations.

D. National LEV Program

1. Agreement—A Necessary Predicate for the National LEV Program

The National LEV program is a voluntary program that cannot be implemented without the agreement of the auto manufacturers and the OTC States. EPA cannot require the auto manufacturers to meet the National LEV standards, absent the manufacturers' consent, because section 202(b)(1)(C) of the Clean Air Act prevents EPA itself from mandating new exhaust standards applicable before MY2004. The auto manufacturers have said that they will not agree to be bound by the National LEV program unless the OTC States accept National LEV as an alternative to OTC state adoption of CAL LEV programs under section 177. EPA does not have the authority to require the OTC States to accept the National LEV program. Thus, National LEV is dependent upon the auto manufacturers and the OTC States voluntarily committing to the program.[13]

The OTC States and auto manufacturers have been negotiating a voluntary, national program that would include committing to National LEV and to the introduction of ATVs in the OTR. They had hoped to memorialize their agreement in a comprehensive MOU to be signed by all OTC States and all auto manufacturers with sales in the United States. The OTC States (collectively) and the auto manufacturers (collectively) have each initialed MOUs reflecting their willingness to agree to a National LEV program. Although the MOUs are different in some respects, they show basic agreement on the national program contained in the regulations promulgated today. The ATV component (discussed in more detail in footnote 52 below) is not a part of EPA's regulations, but would be an agreement between the OTC States and the auto manufacturers that would be contained in an attachment to the MOU if that MOU is finalized.

Although the OTC States and the auto manufacturers have reached agreement on most issues and EPA today is promulgating the regulatory framework for National LEV, some issues are still unresolved. When EPA published the NPRM, it anticipated that the OTC States and the auto manufacturers would continue to make progress on these few remaining issues (mainly related to OTC State commitment to the

consequences on downwind nonattainment, as determined by EPA in the OTC LEV decision, and (2) the emission reductions that would be achieved by the measures mandated by the Clean Air Act and potentially broadly applicable measures, as identified by EPA in the OTC LEV decision. *See* 60 FR 4730 (January 24, 1995).

[13] *See Virginia* v. *EPA*, No. 95–1163 (D.C. Cir. March 11, 1997), slip. op. at 10, footnote 4. (''The program is voluntary because section 202 of the Clean Air Act forbids EPA from itself modifying motor vehicle emissions standards 'before the model year 2004.' '').

National LEV program), and thus left these issues to be addressed in a later SNPRM which could be informed by the anticipated agreement. The OTC States and the auto manufacturers have not yet resolved these issues. Rather than lose the potential regional and national public health benefits of National LEV, EPA intends to publish an SNPRM to take comment on the remaining issues that must be finalized for the OTC States and the auto manufacturers to commit to the program.[14] EPA will then resolve these issues in a supplemental final rule.

EPA is hopeful that, after these remaining issues are resolved, the OTC States and the auto manufacturers will agree to National LEV. The program would have many benefits to the nation as a whole, the OTC States, and the auto manufacturers. A set of uniform, more stringent standards that apply in 49 states is a more environmentally beneficial and economically efficient approach to achieving emissions reductions from new motor vehicles than a ''patchwork'' of California standards in some states and federal standards in others. The National LEV program would achieve at least the same level of emissions reductions in the OTR as would the OTC state-by-state adoption of the CAL LEV program. The introduction of LEVs nationwide would help alleviate pollution transport problems in the OTR and in other states and would eliminate concerns about non-LEV vehicles being introduced into the OTR from states outside the region that have not adopted CAL LEV. In addition, a national program would impose less administrative burden on the OTC States and other states than would state-by-state adoption and enforcement of CAL LEV. Finally, a cooperative, partnership approach to program implementation should provide benefits beyond those achieved through a traditional command-and-control approach.

2. Description of National LEV Program

In today's final rule EPA is promulgating a set of voluntary National LEV standards to control exhaust emissions of air pollutants from new motor vehicles. These standards will apply when the OTC States and the motor vehicle manufacturers commit to the National LEV program. The National LEV new tailpipe emission standards and related requirements will apply in addition to the applicable federal Tier 1 tailpipe standards and will not change for the duration of the program.[15] The National LEV standards and requirements include: (1) tailpipe emissions standards for NMOG, NO_X, CO, formaldehyde (HCHO), and PM; (2) fleet average NMOG values; (3) allowance for the use of California Phase II reformulated gasoline (RFG) as the test fuel for the tailpipe standards; (4) certain California on-board diagnostic system requirements (OBD II), excluding anti-tampering provisions; and (5) averaging, banking and trading provisions.

In general, the National LEV standards and related requirements are patterned after California's more stringent tailpipe standards and fleet average NMOG standards. Under the National LEV program, manufacturers can certify LDVs and LLDTs to one of the following certification categories (listed in order of increasing stringency): Tier 1, TLEV, LEV, ULEV, or ZEV. Each certification category contains tailpipe emission standards for NMOG, CO, NO_X, formaldehyde (HCHO), and PM. Manufacturers that opt into the National LEV program will be required to produce and deliver for sale a combination of vehicles that complies with an annual fleet average NMOG value. Sales of LDVs and LLDTs in the OTR will have to meet an increasingly stringent fleet average NMOG standard from MY1997[16] to MY2001. Beginning with MY2001, manufacturers will be required to comply with a nationwide (except California) fleet average NMOG standard for LDVs and LLDTs that is equivalent to the average NMOG emissions of a 100 percent LEV fleet. An averaging, banking and trading program comparable to California's can be used to meet the fleet average NMOG requirements.

As National LEV is voluntary, manufacturers will only have to comply with the National LEV standards if they choose to opt into the program. Once they opt in, however, manufacturers must stay in the National LEV program and comply with its standards. Manufacturers may opt out of National LEV only under certain circumstances which, if they occurred, would change the basic presumptions upon which the manufacturers opted into the program. Such conditions are an OTC State's failure to meet or keep its commitment regarding adoption of a State motor vehicle program under CAA section 177 or a change in one of the designated ''Stable Standards'' (as discussed below in section IV.A.2.a).

Any manufacturer that opts into the National LEV program will be fully subject to its requirements. Barring one of the limited and unlikely events that would allow manufacturers to opt out of the program, manufacturers will be required to meet the National LEV standards and requirements for all of the model years covered by the program. A manufacturer that fails to meet these requirements will be subject to the same enforcement measures as exist for violation of any federal motor vehicle emission standard promulgated under section 202(a) of the Act. Once manufacturers opt into National LEV, they will find administration and enforcement of its requirements indistinguishable from administration and enforcement of the rest of the federal motor vehicle emissions program.

Manufacturers that opt into the National LEV program will have to comply with the specified tailpipe emissions and related standards beginning in MY1997[17] for LDVs and LDTs offered for sale in the OTR, and beginning in MY2001 for those same vehicle categories offered for sale in the rest of the country, except California. The National LEV standards will continue to apply until the first model year for which manufacturers must meet a mandatory federal program that is at least as stringent as the National LEV program. By statute, EPA can not promulgate mandatory exhaust standards more stringent than Tier 1 standards (''Tier 2 standards'') applicable before MY2004, so the National LEV standards will apply at least through MY2003.

Vehicles in the National LEV program must comply with all other federal

[14] Primarily, the SNPRM will address the OTC States' commitment to National LEV (the nature, the mechanisms and the timing of the commitments) and related issues. As a result of the bifurcation of the National LEV rulemaking process, issues that were noticed in the NPRM may not be decided finally until the final rule that follows the SNPRM. This rule and the Response to Comments note those issues that are not being decided finally in today's rule. The SNPRM will describe the issues on which EPA is taking further comment.

[15] The CAA requires that all MY1996 and later LDVs and LLDTs meet the Tier 1 exhaust emission standards at the time of certification. As noted later in section IV, most of the Tier 1 emission standards have numerically equivalent or more stringent analogues in the National LEV standards. Thus, certification to the National LEV standards directly demonstrates compliance with most of the Tier 1 standards. Manufacturers must still demonstrate compliance with those remaining Tier 1 standards that lack National LEV analogues.

[16] As discussed in n. 17 below, EPA is using MY1997 as a placeholder for the actual start date of National LEV.

[17] Throughout this rule, EPA is using MY 1997 as a placeholder for the start date of National LEV. MY1997 is the start date in the MOUs initialled by the auto manufacturers and the OTC States. EPA believes that MY1997 is an unrealistic start date given the court decision vacating EPA's OTC LEV decision and given the likely timing of final agreement on National LEV. In the upcoming SNPRM, EPA will take comment on the appropriate start date for National LEV.

requirements applicable to LDVs and LLDTs for the appropriate model year, including emissions standards and requirements, test procedures, and compliance and enforcement provisions. However, as part of EPA's effort to reinvent environmental regulations by reducing regulatory burden without sacrificing environmental benefits, EPA is also harmonizing, to the greatest extent possible, federal and California standards and test procedures. Thus, today's rule includes changes to current federal regulations designed to harmonize certain federal and California standards and test procedures, and sections elsewhere in this preamble summarize harmonization efforts in other rules. This should reduce the regulatory burden on manufacturers by facilitating the design, certification, and production of the same vehicles to meet both federal and California requirements.

IV. Provisions of the National LEV Program

The National LEV regulations establish the structure and requirements of a voluntary program to reduce tailpipe emissions from motor vehicles, as summarized in the above section III.D.2. The following sections lay out the provisions of the program in more detail. First, EPA describes the structure of the voluntary program, explaining how manufacturers opt into the program, under what limited conditions they could opt out of the program, and the program's duration. The next section lays out the National LEV standards and requirements that manufacturers would be opting into. These include the tailpipe emissions standards for individual vehicles, the fleet-wide average emissions standards, and the averaging, banking and trading program through which the fleet-wide standards would be implemented. Finally, EPA discusses the legal authority for the voluntary National LEV program and the enforceability of these provisions.

A. Program Structure

This section discusses basic structural elements of the National LEV program: the process and timing for manufacturers to opt into the program and for EPA to find that the program is ''in effect''; the conditions allowing, process for, and ramifications of, a manufacturer's decision to opt out of the program; and the duration of the program.

1. Opt-In to National LEV and In-Effect Finding

The opt-in provisions are designed to provide a simple mechanism that allows EPA to determine readily when a manufacturer has opted in and become legally subject to the National LEV program requirements. A motor vehicle manufacturer would opt into the program by submitting a written notification that unambiguously and unconditionally states that the manufacturer is opting into the program, subject only to the condition that EPA finds the program to be in effect.

Today's regulations set forth various requirements for opt-in notifications. The opt-in notification must state that the manufacturer will not challenge EPA's authority to establish the National LEV program and to enforce it once a manufacturer has unconditionally opted into the program. Parties that choose to opt into a program that they have volunteered to establish should agree that they will not challenge the program later, particularly in the context of an enforcement action brought by EPA due to a party's failure to comply with the program requirements. The regulations require the manufacturers' notifications to contain specified language renouncing such legal challenges. The opt-in notification also must be signed by a person or entity within the corporation with authority to bind the corporation to its choice. The signatory must hold the position of Vice President for Environmental Affairs, or a position of equivalent authority.

The opt-in will become binding upon EPA's receipt of the notification or, if it is conditioned on EPA making an in-effect finding, upon the satisfaction of that condition. Under today's rule, any conditional opt-ins would become fully binding when EPA finds that National LEV is in effect. Once EPA has promulgated the few outstanding provisions of the National LEV program related to the OTC State commitments and begun accepting manufacturer's opt-ins and OTC State commitments to the program, EPA can make the finding that the program is in effect without any additional rulemaking if all the manufacturers listed in the regulations have opted into the program. Upon EPA making an in-effect finding, National LEV will be fully enforceable.

It is possible that the final regulations EPA intends to issue after taking further comment on OTC State commitments to National LEV (for which EPA will provide further notice and opportunity to comment) may result in changes or additions to the opt-in provisions promulgated today. For example, at this time, EPA is not establishing deadlines either for auto manufacturers to opt into the program or for EPA to find that the program is ''in effect''. Rather than making a final decision on these issues today, EPA expects to set such deadlines as part of the final regulations it intends to issue after taking further comment on OTC State commitments and related issues.

2. Opt-Out From National LEV

For the National LEV program to be useful and beneficial, it should continue in effect for a substantial period of time stretching into the next decade. States seek certainty regarding emissions benefits over time, while motor vehicle manufacturers seek certainty regarding emission standards to plan future production. Also, to give states SIP credits for National LEV, EPA must find that the emissions reductions will be enforceable over the intended duration of the program. All of these objectives require that the program be stable over time, and the opt-out provisions are structured to support this goal.

Once manufacturers have voluntarily chosen to opt into the program and any permissible conditions of their opt-in have been met, they can opt out of the program only under a few specified circumstances, or ''offramps.'' These offramps are limited to: (1) an OTC State's failure to meet or keep its commitment regarding adoption or retention of a state motor vehicle program under section 177; or (2) EPA modification of certain specified standards or requirements over the manufacturers' objection.

If a manufacturer were to opt out of the National LEV program, when that opt-out became effective the manufacturer would become subject to all standards that would apply if National LEV did not exist. The federal Tier 1 tailpipe emissions and related standards would apply, as would any applicable state standards promulgated under section 177. In the SNPRM on OTC State commitments, EPA will take comment on what state section 177 standards would be applicable, in light of the requirements of section 177 and how the OTC States and manufacturers have addressed this issue in their initialed MOUs. All vehicles certified under the National LEV standards, however, would have to continue to comply with those standards, which would have been incorporated as conditions of the certificate under which those vehicles were sold. In addition, each manufacturer would be held responsible for any debits it held at the time it opted out.

a. Conditions allowing opt-out. (1) OTC states' failure to meet or keep their commitments. The first condition allowing manufacturers to opt out is a failure of any OTC State to meet its commitment regarding adoption or retention of a section 177 program that does not allow compliance with National LEV as a full alternative to compliance with the state program. Since National LEV is intended to provide an alternative to OTC state-by-state adoption of CAL LEV, manufacturers should not be bound to stay in the National LEV program if an OTC State requires them to comply with a section 177 program contrary to the terms of the final agreement. This offramp not only gives manufacturers recourse if an OTC State does not fulfill its part of the bargain, but also encourages the OTC States to fulfill their commitments by setting a serious penalty for breach of their commitments.

Unfortunately, EPA is unable to finalize this section of the National LEV regulations now.[18] When EPA proposed National LEV, the manufacturers and the OTC States had not yet reached agreement on the exact content and form of such an OTC State commitment. Details that had yet to be resolved concerned what the OTC States would commit to do regarding adoption or retention of the section 177 programs (both LEV and ZEV requirements), the timing of any agreed upon actions, and possible instruments for such state commitments (which might be some combination of SIP revisions, consent decrees, legislative resolutions, letters from the State Attorneys General, Executive Orders from the Governor, letters from the Governor to EPA, or an MOU with the manufacturers). EPA had expected that the OTC States and auto manufacturers would have reached agreement on these issues by this time, and had planned to issue an SNPRM taking comment on the whether and how the National LEV regulations would reflect the OTC States' and auto manufacturers' agreement on these issues. The SNPRM would have taken comment on the stability and enforceability of the program in light of the nature of those commitments. Unfortunately, the auto manufacturers and the OTC States have not yet reached agreement on these issues.

Before the National LEV program can go into effect, EPA will need to resolve the OTC State commitment issues mentioned above. EPA will issue an SNPRM taking comment on these additional issues and then promulgate a final rule to complete the National LEV rulemaking that was initiated by the NPRM.

(2) EPA Changes to Stable Standards. With certain exceptions, manufacturers will also be able to opt out if EPA changes a motor vehicle requirement that it has designated a ''Stable Standard.'' The Stable Standards, which are listed in Table 1, are divided into two categories: Core Stable Standards and Non-Core Stable Standards. Core Stable Standards generally are the National LEV standards that EPA could not impose absent the consent of the manufacturers. Non-Core Stable Standards are other federal motor vehicle standards that EPA does not anticipate changing for the duration of National LEV. For both Core and Non-Core Stable Standards, EPA can make changes to which manufacturers do not object. For Non-Core Stable Standards, EPA can also make changes that do not increase the stringency of the standard or that harmonize the standard with the comparable California standard. EPA can make other changes to any of the Stable Standards, but such changes would allow the manufacturers to opt out of National LEV.

The primary purpose of this provision is to provide manufacturers certainty that the voluntary standards that EPA does not have authority to mandate (absent manufacturers' consent) are not changed without their consent. The additional stability of the other motor vehicle standards that EPA is providing by designating them Non-Core Stable Standards should provide manufacturers with additional incentive to opt into National LEV. Today's rule follows the same basic approach set out in the proposal, but incorporates several refinements, as discussed below. This section lists the Stable Standards, explains the rationale for including each requirement as a Stable Standard, and explains what types of changes EPA can make without giving manufacturers the opportunity to opt out of National LEV.

(i) Designation of Stable Standards. EPA has refined the approach to the Stable Standards in the proposal by subdividing them into two categories: Core Stable Standards and Non-Core Stable Standards. Core Stable Standards generally are standards specific to the National LEV program (and certain related requirements). Non-Core Stable Standards generally are other motor vehicle pollution control requirements that the Agency does not anticipate changing for the duration of the National LEV program. The list of Core and Non-Core Stable Standards is provided in Table 1.

TABLE 1.—DESIGNATION OF CORE AND NON-CORE STABLE STANDARDS

Type	Stable standard
Core Stable Standards	TLEV, LEV, ULEV, and ZEV tailpipe emission standards (''LEV standards'').
	Fleet average NMOG standards and related banking and trading provisions.
	Federal Test Procedure (FTP) (as used for determining compliance with the LEV tailpipe standards, i.e., ''conventional'' or ''on-cycle'' FTP).
	Certification test fuel specifications (as used for determining compliance with the LEV standards).
	Low volume manufacturer provisions.
	Limitations on the sale of TLEV and Tier 1 vehicles in the NTR.
Non-Core Stable Standards	''Off-cycle'' emissions standards.
	Supplemental Federal Test Procedures (SFTP) (as used for determining compliance with these off-cycle emission standards).
	On-board diagnostic (OBD–II) requirements.
	Cold temperature carbon monoxide (Cold CO) requirements.
	Evaporative emissions control requirements.
	Onboard refueling vapor recovery requirements.
	Reactivity adjustment factors (RAFs) (used to determine compliance with LEV standards).

[18] Today's regulations do not provide for an opt-out based on this condition. EPA expects to propose to add this condition, as discussed below.

The Core Stable Standards include:

- The TLEV, LEV, ULEV and ZEV tailpipe standards (the ''LEV standards''),
- The fleet average NMOG standards, and
- The limitation on the sales of TLEVs and Tier 1 vehicles in the NTR.

These requirements are all standards that EPA could not itself require manufacturers to meet prior to MY2004 (absent manufacturer consent) because section 202(b)(1)(C) of the Act prohibits EPA from unilaterally imposing numerical standards as stringent as these prior to MY2004. Since EPA could not impose these standards unilaterally, EPA does not believe it should have authority to change these standards unilaterally. Designating these numerical standards as Core Stable Standards protects the manufacturers' reasonable expectations in opting into the voluntary standards by providing an offramp should EPA change those standards without their consent.

The Core Stable Standards also include:

- The specifications for the ''conventional'' or ''on-cycle'' FTP, as revised,
- The certification test fuel for testing compliance with LEV standards,
- The NMOG fleet average banking and trading program, and
- The low-volume manufacturer requirements.

These requirements are designated as Core Stable Standards because changes to these requirements may affect the ability of manufacturers to meet the LEV standards or the NMOG fleet average standards, or because these requirements are directly related to those standards. (Changes to the reactivity adjustment factors (RAFs) might also affect the ability of manufacturers to meet the LEV and NMOG fleet average standards, but these are designated Non-Core Stable Standards, for the reasons discussed below.)

The on-cycle FTP, the certification test fuel, and the NMOG fleet average banking and trading program are the means through which compliance with the numerical standards will be determined. The on-cycle FTP and the test fuel directly impact the ability of manufacturers to meet the LEV standards because changes to program elements like the FTP drive cycle, road simulation hardware, or the blending parameters of the fuel, may translate into changes in the emission test scores of vehicles. These test scores are themselves the basis for pass/fail decisions with respect to the LEV standards. The NMOG fleet average banking and trading program will allow banking and trading of credits to give manufacturers flexibility in meeting the fleet average NMOG standard. The banking and trading program is part of the way that manufacturers will demonstrate compliance with the NMOG fleet average standard. Changing this program could adversely affect a manufacturer's ability to comply with the fleet average standard. Given the voluntary nature of the LEV standards and the NMOG fleet average standard, EPA believes that manufacturers are entitled to certainty not only with respect to the standards, but also with respect to the means by which the manufacturers' compliance with those standards will be determined.

The final Core Stable Standard, the low volume manufacturer provisions (including the definition of low volume manufacturer and the relaxed phase-in schedule), directly determines the stringency of the NMOG fleet average standards. The phase-in schedule provides manufacturers meeting the low volume definition higher (less stringent) NMOG fleet average standards for the initial years of the National LEV program.

The Non-Core Stable Standards include:

- OBD II requirements,
- Cold temperature CO requirements (through MY2000),[19]
- Evaporative emissions requirements, and
- Onboard refueling and vapor recovery requirements.

As described in more detail in the proposal and in the Response to Comments document for this rule, EPA reviewed each of these requirements and determined that it was highly unlikely that EPA would need to change these requirements for the duration of the National LEV program (or prior to MY2001, for cold CO requirements). With the exception of cold CO (which EPA has a statutory obligation to revisit for MY2001), EPA does not have statutory obligation to revise or re-evaluate these standards for the expected duration of the National LEV program. EPA's conclusion that these standards will not need to be changed for the expected duration of National LEV (prior to MY2001 for cold CO) is based on when these requirements were promulgated by EPA, how long it would take to gather information to determine that a new control level was appropriate, and EPA's knowledge of technology development necessary to meet these requirements.

The Non-Core Stable Standards also include the recently promulgated ''off-cycle'' FTP standards and test procedure (Supplemental Federal Test Procedure or SFTP). 61 FR 54852 (October 22, 1996). The ''off-cycle'' FTP standards and SFTP (described in more detail in section IV.B.5.a) were developed to test emissions resulting from typical driving patterns that were not included in the test procedure that EPA and CARB have used historically (the ''on-cycle'' FTP). Currently, the only off-cycle standards are based on Tier 1 technology. Given the lengthy testing and evaluation process that resulted in the off-cycle standards and the time required to populate the fleet with vehicles complying with the new standards and then to evaluate them for any necessary revision of the standard, EPA does not foresee the need for or the ability to revise the off-cycle standards and SFTP for Tier 1 vehicles for the expected duration of the National LEV program. As discussed later in section IV.B.5.a, EPA anticipates that CARB will adopt more stringent off-cycle standards for LEVs and ULEVs. Today's rule is structured so that EPA can follow that change for National LEV certification without allowing manufacturers to opt out of National LEV. EPA intends to take comment on additional SFTP issues in the SNPRM.

Finally, EPA has designated reactivity adjustment factors (RAFs) as Non-Core Stable Standards. RAFs are used to adjust vehicle emission test results to reflect differences in the impact on ozone formation between alternative-fueled vehicles and a vehicle fueled with conventional gasoline. (See discussion below in section IV.B.5.d.) Including RAFs in the National LEV program puts two competing policy concerns before the Agency. RAFs play a role in setting the overall ability of manufacturers to meet the TLEV, LEV and ULEV tailpipe standards, which is an important issue for the auto manufacturers in deciding whether to opt into National LEV. One of the principles of National LEV has been that EPA should not have unilateral authority to change the tailpipe standards and related requirements because they are voluntary standards. Following this principle, RAFs should be part of the Core Stable Standards. EPA is concerned, however, that locking in the RAFs for the duration of National LEV places more weight on them than is warranted by the current scientific evidence. CARB set RAFs based on the

[19] Section 202(j)(2) of the Act requires the Administrator to assess the need for further reductions in cold CO emissions from MY2001 and later model year vehicles. Therefore, unlike the other Stable Standards, EPA can change cold CO standards for MY2001 and later model year vehicles without triggering an off-ramp.

best scientific evidence available, but recognized the need for further investigation. California will be analyzing its current RAFs and possibly revising the values. California has already set up a scientific review panel, and the current RAFs apply only through MY2000. California's recognition that its RAFs may need to be modified weighs against casting the RAFs in concrete in National LEV and supports placing them in the Non-Core Stable Standards. EPA believes an appropriate compromise between the need for stability and the evolving nature of RAFs is to include RAFs in the Non-Core Stable Standards, but include a cap of 1.0 for all California Phase 2 RFG RAFs.

Placing RAFs in the Non-Core Stable Standards means that, to harmonize the California and federal requirements, EPA can modify any RAF value that California decides to change. This provides the Agency with the necessary flexibility to address any uncertainty associated with RAFs, but at the same time does not allow EPA to change RAFs unilaterally without triggering an offramp. The limitation on changes to the California Phase 2 RFG RAFs provides assurances to the manufacturers that the stringency of the National LEV program will not change dramatically for the gasoline-powered vehicles—the vast majority of vehicle types covered by the program. The cap of 1.0 was selected because it sets the maximum stringency from a change in RAFs for California Phase 2 RFG at what the numerical emission levels would be without RAFs. If California sets a RAF greater than 1.0 for California Phase 2 RFG, EPA could amend the National LEV regulations to provide for a RAF of 1.0 (without triggering an offramp). EPA may make any harmonizing changes to RAFs for alternatively-fueled vehicles if California modifies the existing RAFs, but this is expected to have a minimal impact on the program overall due to the percentage of the national fleet that is expected to be alternative-fueled vehicles.

(ii) Changes to Stable Standards. EPA can make certain types of changes to Stable Standards without giving manufacturers the ability to opt out of National LEV. EPA can make changes to which manufacturers do not object. In addition, EPA can make any of the following types of changes to Non-Core Stable Standards without triggering an off-ramp:

- Changes that do not increase the stringency of the standard,
- Changes that harmonize the standard with the comparable California standard, and
- Changes applicable after MY2006.

First, a manufacturer cannot opt out of National LEV based on a change to any Core Stable Standard unless the manufacturer has provided written comment during rulemaking on that change stating that it is sufficient to trigger a National LEV offramp. EPA believes this is appropriate because it is not necessary to provide an offramp opportunity for a change to which the manufacturer has no objection. This is the only type of change EPA can make to a Core Stable Standard without allowing manufacturers to opt out of National LEV.

Second, EPA can make technical changes and other revisions that do not increase the overall stringency of a Non-Core Stable Standard, without triggering an offramp. EPA commonly amends its emission control program regulations to address technical and administrative concerns raised by program implementation without affecting overall stringency. Allowing manufacturers to opt out of the program for such changes would endanger the stability of the National LEV program. EPA anticipates that the flexibility to make technical changes that do not impact on stringency will be appropriate for each of the designated Non-Core Stable Standards. However, such amendments are more likely for regulations like those of the off-cycle emission program, or the evaporative emissions and onboard refueling vapor recovery program (ORVR), which are recently promulgated, under review as part of ongoing EPA streamlining efforts, or both.

Third, EPA may change any Non-Core Stable Standard to harmonize with the comparable California standard or requirement, even if the revision would increase the stringency of the standard or requirement, without triggering an offramp. This policy is consistent with the goal of harmonizing the federal and California programs. The ability to harmonize with California without triggering an offramp will be critical in particular for the off-cycle standards and SFTP (discussed in detail in section IV.B.5.a below), the OBD program, and RAFs. The ability to harmonize with California without triggering an off-ramp provides a useful safety valve that helps improve the stability of National LEV. If changes to an existing standard would produce significant environmental benefits as a result of currently unanticipated technological or other developments, based on California's past approach to motor vehicle regulation and its continuing need for air quality improvements, EPA believes California is likely to make those changes. EPA can then achieve the same environmental gains by amending its regulations to harmonize with California.

Fourth, EPA can make changes to the Non-Core Stable Standards without triggering an offramp if the change is effective after MY2006. By MY2006, EPA expects that federal Tier 2 tailpipe standards will be adopted and effective, and that the National LEV standards will be replaced by the Tier 2 standards. In the event that the National LEV program continues beyond MY2006, EPA cannot predict with a reasonable degree of accuracy whether it expects to make revisions to the Non-Core Stable Standards for an unlimited period after that date. For this reason, EPA does not believe it would be appropriate to continue the offramp opportunity for changes to Non-Core Stable Standards indefinitely. EPA chose MY2006 as the end date for the Non-Core Stable Standards offramp to provide manufacturers with increased regulatory stability for the maximum intended duration of the National LEV program.

Finally, EPA can make changes to, or promulgate, any federal motor vehicle requirements that are not designated in today's regulations as Stable Standards, without triggering an offramp opportunity. For example, EPA believes it is essential to guarantee attainment of the stringency of the requirements already in force (as opposed to increasing the stringency of these current requirements) without providing manufacturers the opportunity to opt out of the National LEV program. Thus, the emissions durability program and defeat device requirements, which are designed to ensure that vehicles actually comply with the emissions standards over their useful lives, are not Stable Standards. See the Response to Comments document for this rule and the NPRM (60 FR 52744 (col. 3)). Similarly, an offramp would not be triggered by EPA's adoption of a new requirement for motor vehicles, such as any air toxics regulations.

b. Opt-Out Procedures. As proposed, to opt out of the National LEV program, a manufacturer would follow the same notification procedure used to opt in, additionally specifying the condition allowing opt-out and providing supporting evidence for the applicability of that condition. A manufacturer also would have to exercise its opt-out option within the time limits discussed below.

Manufacturers generally would have to decide whether to exercise their opt-out option within 180 days of the occurrence of the condition triggering

opt-out.[20] If one manufacturer sends EPA an opt-out notification, however, the time limit for other manufacturers to opt out is extended by 30 days beyond the 180 day period. For opt-outs based on an EPA change to a Stable Standard, EPA would have an opportunity to prevent the opt-out from coming into effect by withdrawing the change to the Stable Standard before the effective date of the opt-out (discussed below).

Setting a time limit for opt-out provides an important measure of certainty and program stability by ensuring that if manufacturers declined to opt out of the program despite the occurrence of an offramp, all parties could rely on the program to continue. Manufacturers opposed this approach, expressing concern that regardless of whether a manufacturer individually believes the triggering event sufficient to opt out, manufacturers are likely to opt out upon the occurrence of any offramp for fear that one or more of their competitors will opt out. Since manufacturers believe they might be at a significant competitive disadvantage if they were subject to National LEV while other manufacturers were not, all manufacturers would have to opt out to protect themselves against that eventuality.

By allowing manufacturers an extended time period to opt out if another manufacturer opts out, EPA is removing the incentive for any manufacturer to exercise a protective opt-out. Instead, manufacturers can wait to see if any other manufacturer opts out and then decide at that time whether they want to exit the program. If no manufacturer opts out within the specified time period, the program would remain in place. The extended time for opt-out enhances program stability by removing an incentive for manufacturers to opt out. Moreover, it neither creates a new opportunity to opt out of the program nor reduces program stability, because it only arises if an opt-out has already occurred.

For opt-outs based on an EPA change to a Stable Standard, EPA has further enhanced program stability by providing an opportunity for EPA to withdraw a change to a Stable Standard if such a change in fact results in an opt-out. If EPA retracts a change on which an opt-out is based, this would invalidate the offramp and prevent the opt-out from coming into effect. EPA would have to withdraw the change before the effective date of the opt-out (discussed below). The need for such a withdrawal might arise in a couple of possible circumstances. In objecting to a proposed change to a Stable Standard, manufacturers only have to indicate that they believe the change is sufficient to allow an opt-out; it would not make sense to try to force manufacturers to make a final decision as to whether they would actually opt-out before the change is even finalized. Thus, a manufacturer's objection to a proposed change would not necessarily indicate that the manufacturer would opt out of National LEV based on the change, and EPA might decide it is reasonable to go ahead with the change despite an objection. Also, EPA may have reason to believe that it has adequately modified a proposed change to accommodate objections, but a manufacturer might still choose to opt out. Providing EPA an opportunity to withdraw the change enhances program stability by protecting against such possibilities.

Within sixty days of an opt-out notification, EPA is required to determine whether or not the alleged condition allowing opt-out has occurred and therefore whether the opt-out is valid. If the basis for an opt-out were a change to a Stable Standard, EPA could find that the opt-out is valid provided that EPA did not withdraw the change before the effective date of the opt-out. If EPA withdrew the change in time, concurrently with the withdrawal EPA could then find that the opt-out was not valid. The determination of whether the opt-out was valid would not be subject to notice and comment, but it would be a nationally applicable final agency action, subject to judicial review under section 307(b) of the Act. EPA intends to publish any such determination in the **Federal Register**. If EPA were to agree that an opt-out was valid, that determination would be a final agency action authorizing the opt-out. Thus, even if the reviewing court subsequently overturned EPA's decision, the manufacturer could not be held liable for its failure to comply with the National LEV requirements prior to the court's decision.

If EPA were to determine that an opt-out was invalid and the manufacturer decided to challenge that determination in court, the manufacturer would be on notice that its failure to comply with National LEV in the interim would be at the manufacturer's own risk. During the pendency of the manufacturer's action challenging EPA's determination, the manufacturer would be able to certify Tier 1 vehicles lawfully.[21] If the reviewing court ultimately agreed with EPA's determination that the opt-out was invalid, however, then the manufacturer was always subject to the National LEV requirements and would be liable in an enforcement action to the extent that it violated National LEV regulations during the pendency of the court action. For example, a manufacturer would be liable for any exceedance of the NMOG fleet average requirement during the pendency of the court action.[22] If the reviewing court ultimately agreed with the manufacturer that the opt-out was valid, then the manufacturer would not be held to National LEV program requirements from the effective date of its opt-out notification.

An EPA determination of the validity of an opt-out will allow for quick judicial resolution of any dispute over an opt-out and provide compliance guidance in the interim. Occurrence of an opt-out is likely to call into question whether the National LEV program will continue, which in part will depend on the validity of that opt-out. All parties involved (i.e., EPA, the states, the manufacturer opting out, and the other manufacturers) would need both of those issues resolved as soon as possible.

Providing for EPA to make a determination regarding the validity of an opt-out ensures that any dispute over an opt-out can be resolved in the United States Court of Appeals for the District of Columbia. Judicial review would be based on the Agency's administrative record. Publication of EPA's determination in the **Federal Register** would start a 60-day period for filing a petition for review of EPA's action under section 307(b), thereby facilitating

[20] Where the offramp is an EPA change to a Stable Standard, a manufacturer would have to exercise its opt-out option within 180 days of EPA's publication of the change in the **Federal Register**.

[21] The National LEV regulations generally allow manufacturers to certify vehicles to Tier 1 standards as one of the five vehicle emissions categories. However, sale of Tier 1 vehicles and TLEVs in the OTR from MY2001 on is limited to those engine families that are certified and offered for sale in California in the same model year, and sales of these vehicles industry-wide in the NTR must not exceed a cap of five percent, as discussed below in section IV.B.4. In the event of a contested opt-out, manufacturers would not have to comply with these limitations while the disposition of the opt-out remained unresolved, although manufacturers would ultimately be liable for violation of some provisions if a court were to find the opt-out invalid.

[22] The manufacturer would also remain liable for violation of the limitation on sales of Tier 1 vehicles and TLEVs where the same engine families were not certified and offered for sale in California. However, the manufacturer would not be liable for any exceedance of the five percent cap and the manufacturer's vehicles would not be counted towards the industry-wide cap. This exemption is driven by a practical implementation concern. In a situation where one manufacturer had opted out of National LEV, it would be very difficult to determine other manufacturers' liability under the five percent cap in any equitable manner if the cap applied to the manufacturer that had opted out.

early identification and faster resolution of opt-out challenges. This approach provides greater certainty to both the OTC States and manufacturers regarding the status of the National LEV requirements in the interim. An EPA determination that an opt-out is valid provides the manufacturer with a safe harbor, which allows it to stop complying with National LEV without legal risk. Even if the opt-out is successfully challenged, the manufacturer will not be liable for noncompliance with National LEV during the period prior to the court's decision. Also, OTC States are made aware that EPA believes that the opt-out is valid, and those states without a CAL LEV program as a backstop will have more incentive to adopt CAL LEV in a timely manner if the state wishes to continue to control emissions from motor vehicles. If EPA determines an opt-out is invalid, the manufacturer will know the risk it would run by ceasing compliance.

If EPA were not required to make a determination on the validity of an opt-out, the only ways to challenge an opt-out would be through a declaratory judgment action or an enforcement action brought in the district court. It is unclear whether a court would grant a motion for a declaratory judgment on this issue. An enforcement action might take several years to ripen, assuming that an action could not be brought until the manufacturer violated the fleet average NMOG requirement and then failed to make up the debits within the following model year. Moreover, a district court opinion would probably be appealed to the court of appeals. Overall, this approach could easily entail anywhere from two to five years of uncertainty regarding whether the opt out was valid, and whether National LEV would remain in effect. In addition, litigation in the district courts is resource intensive, potentially involving extensive discovery, and may produce inconsistent results across different courts. In the absence of an EPA determination, there is an additional disadvantage for a manufacturer. To find out whether an opt out is valid, the manufacturer probably would have to stop complying with National LEV and put itself at risk for penalties in enforcement actions, prior to obtaining a judicial ruling on the validity of the opt-out.

c. Effective Date of Opt-Out. Once EPA or the reviewing court determines that an opt-out is valid, the effective date of the opt-out will depend on the condition authorizing the opt-out, unless a manufacturer specifies a later effective date than provided in the regulations. First, if an OTC State were to adopt a state motor vehicle program under CAA section 177 in a way that violated a commitment the state had made, an opt-out would be effective for the next model year.[23] The ''next'' model year is the model year named for the calendar year following the calendar year in which the state violated the commitment. For example, if an OTC State violated a commitment in 1999, the manufacturer's opt-out would be effective for MY2000. Second, if EPA were to modify one of the Core Stable Standards over the objection of a manufacturer, an opt-out would be effective starting the model year that includes January 1 of the second calendar year following the calendar year in which the manufacturer opted out. (E.g., if a manufacturer opted out on July 1, 1999, the opt-out would be effective starting with MY2001). However, if the first model year in which manufacturers would have to comply with the changed Core Stable Standard is earlier, the opt-out would be effective as of that earlier date. Third, if EPA were to modify one of the Non-Core Stable Standards in a way that would provide an offramp, the opt-out would be effective for the first model year to which the modified standard applied. However, for opt-outs based on changes to either a Core or Non-Core Stable Standard, if EPA withdraws the change to the Stable Standard before the date that the opt-out would have become effective, the opt-out will not become effective. This approach balances achieving emissions reductions, minimizing burden on manufacturers, and providing incentives for the OTC States and EPA to keep their commitments.[24]

Making opt-out effective the next model year after an OTC State violates a commitment regarding a section 177 program is consistent with the basic agreement underlying the National LEV program; it also increases the program's stability. National LEV is founded on the concept of a voluntary agreement between the OTC States and the automobile manufacturers. The heart of this agreement will be that the manufacturers will comply with National LEV, in exchange for the OTC States not requiring compliance with a CAL LEV program. Due to the inherent legal constraints on attempting to bind a sovereign state to future action, the manufacturers are limited in their ability to assure through mechanisms enforceable in court that the OTC States could not subsequently require compliance with a CAL LEV program. Thus, it is important that the structure of the National LEV program provide strong practical incentives to the OTC States to fulfill their commitments under the agreement and provide recourse to the manufacturers if the OTC States violate the agreement. Allowing manufacturers to opt out effective the next model year after an OTC State violates a commitment regarding a section 177 program provides a strong disincentive for a state to take such an action. Assuming that a CAL LEV program is not in place as a backstop in some OTC States, those states without backstops would receive Tier 1 vehicles for over two years, given section 177's lead-time requirements, and all states in the OTR would face higher levels of emissions from migration and transport. This somewhat severe result is appropriate as an incentive to fulfill one of the key commitments underlying the National LEV program. Manufacturers are entitled to opt out of National LEV quickly, once the fundamental basis of the agreement has been violated.

The timing of the effective dates of opt-outs based on EPA changes to Core or Non-Core Stable Standards is designed to be consistent with elements of the fundamental agreement underlying the National LEV program while enhancing the stability of the program. Manufacturers commented that EPA's original proposal would not give them sufficient time to evaluate the consequences of a change in a Stable Standard. They also argued they would be less likely to opt out initially upon such a change, if they could opt out later if they subsequently found the consequences of the change too burdensome. EPA believes that an unlimited time for opt-out introduces far too much uncertainty into the National LEV program. Thus, the approach adopted in this rule gives manufacturers more time to decide whether to opt out, providing 180 rather than 60 days, but not unlimited time. The approach also enhances program stability by providing EPA an opportunity to withdraw any change on which manufacturers have based an opt-out, and thereby to remove the offramp.

The slightly different effective dates for opt-outs based on changes to Core and Non-Core Stable Standards

[23] This decision regarding violation of OTC State commitments is not incorporated in the regulations that EPA is promulgating today, but will be reflected in a later rule that finalizes the OTC State commitment provisions of the program.

[24] In the supplemental notice of proposed rulemaking, EPA may propose to refine or modify this approach in light of the proposed provisions of OTC state commitments. In particular, today's final rule does not address the possibility of providing leadtime before manufacturers become subject to any backstop ZEV mandates.

recognize that these two sets of Stable Standards play different roles in relation to the National LEV program. For changes to the Core Stable Standards, it is appropriate to make an opt-out effective quickly, either as soon as EPA has had the opportunity to withdraw its change but has declined to do so, or even sooner if manufacturers would actually have to comply with the change before that date. The Core Stable Standards are the standards the manufacturers have volunteered to meet that EPA could not have imposed. These are the National LEV exhaust emissions standards, the fleet average NMOG standards, the banking and trading provisions that implement these standards, and certain other related requirements. The Core Stable Standards are discussed more fully in sections IV.A.2.a.(2) and IV.B. of this rule. If EPA were to modify any of these requirements over the manufacturers' objections, National LEV would require the manufacturers to comply with something that EPA did not have the authority to mandate and that the manufacturer had never volunteered to meet. Thus, the effective date for opt-outs based on changes to Core Stable Standards ensures that manufacturers can exit the program as soon as EPA has had the chance to prevent the opt-out by revoking the change, and even sooner, if necessary to avoid forcing compliance with a requirement that EPA could not have imposed absent National LEV. This protects the reasonable expectations of the manufacturers volunteering for the National LEV program. It also provides an additional incentive for EPA not to make changes to Core Stable Standards that might allow an opt-out because the opt-out could become effective in a time-frame shorter than the time required for OTC States without backstops to adopt and implement a CAL LEV program.

For opt-outs based on changes to Non-Core Stable Standards, EPA is finalizing the proposed approach of delaying the effective date of an opt-out until the first model year that manufacturers must comply with the changed standard. Here too, EPA would have the opportunity to withdraw the change prior to the effective date of the opt-out. This approach protects emissions reductions without increasing manufacturers' burdens or reducing program stability. EPA has designated certain standards as Non-Core Stable Standards to give the manufacturers some assurance regarding the stability of the federal motor vehicle requirements as an additional incentive to volunteer for the National LEV program. Although stability of the Non-Core Stable Standards is one component of the National LEV program, it is not the central exchange on which a voluntary agreement would be founded. To the extent that a change in a Non-Core Stable Standard would not apply until some future date, delaying the effective date of an opt-out until that date would protect the OTC States from increased emissions caused by an event outside of their control and would give those states without a backstop some time to adopt a CAL LEV program. Yet the manufacturers would not be burdened by this approach because as soon as they were subject to the revised standard they would no longer have to comply with National LEV. The only incentive for EPA to increase the stringency of a Non-Core Stable Standard over a manufacturer's objection, other than to harmonize with California, would be if the overall emission reductions produced were greater than the emission reductions from National LEV. Thus, while delaying the opt-out effective date provides somewhat less of a disincentive for EPA to trigger an offramp, this is appropriate, given that EPA would only take such action if it would produce greater emissions reductions than would National LEV.

d. Programs in Effect as a Result of Opt-Out. If a manufacturer were to opt out of the National LEV program, when that opt-out became effective the manufacturer would be subject to all standards that would apply if National LEV did not exist. The federal Tier 1 tailpipe emissions and related standards would apply, as would any applicable state standards promulgated and in effect under CAA section 177. EPA will address this issue further in the SNPRM on OTC State commitments.

e. Opt-Out By States. EPA received a couple of comments from oil industry representatives asserting that all individual states should have the opportunity to opt out of National LEV. EPA believes that an approach allowing individual states to reject National LEV (except to exercise section 177 rights) would be unnecessary, impracticable, costly, and counter-productive to the goal of achieving clean air nationwide. EPA also notes that no state requested such a right, even though all states had the opportunity to comment on National LEV during the public comment period and EPA has conducted extensive outreach efforts to communicate with states about this program.

First, EPA believes that states will not want to opt out because they will receive important benefits from National LEV. As described above in section III.B, numerous areas around the country need reductions in smog-forming pollutants and particulate matter. Even those areas that do not have smog or PM problems will benefit from reductions in emissions of carcinogens and other toxic air pollutants.

Second, the commenter that suggested an opt-out process for states was motivated by concerns that National LEV might require new, costly fuel controls. As described more fully below in section IV.B.7., today's regulations clarify that National LEV vehicles will not require new fuel controls.

Third, giving a state the right to opt out of National LEV would allow a state to *require* manufacturers to produce dirtier vehicles than the manufacturers want to produce—something the CAA prohibits both states and the federal government from doing, and that would be a perverse policy. Under the CAA, a manufacturer has always had the legal option of producing a vehicle that is cleaner than required—something the manufacturer might do because it believes that the public favors cleaner cars or because it is more cost-effective to manufacture vehicles that meet both California and federal standards. The commenter that suggested a state opt-out has not explained how such an option is allowed by the CAA, nor has it shown sufficient policy justification for limiting a manufacturer's right to make cleaner cars.

Fourth, establishing a mechanism to allow individual states to reject air quality benefits by ''opting out'' of a national motor vehicle program would run counter to the Congressionally-established national approach to regulating motor vehicles. The CAA provides that manufacturers would need to meet, at most, two sets of motor vehicle standards nationwide. Congress recognized the substantial difficulties and costs incurred by building and certifying vehicles to meet a multiplicity of different standards and the burdens distribution of those vehicles to different states would place on vehicle distribution and sales networks. Manufacturers are free to build vehicles with tighter emissions controls than required by law, and states and federal agencies have no ability to stop manufacturers from doing so.

Finally, if there were a legal mechanism to allow an individual state to opt out of National LEV, such opt-outs could substantially increase costs for manufacturers, dealers, and ultimately consumers both in opt-out states and others. If an individual state could reject National LEV and require manufacturers to build to looser standards, even if those vehicles were less expensive to produce, there is no

guarantee that manufacturers would supply such vehicles at lower prices in that state. EPA understands that as a national industry, the automotive industry largely redistributes any difference in costs among states so that the same model costs about the same in all states. Moreover, such dirtier vehicles might actually cost more to produce and distribute, given that building vehicles to a different standard would require specialized manufacture and distribution of vehicles. The manufacturers support National LEV as a more cost-effective approach to achieve emission reductions, but cost-savings from nationwide standards could be eroded by requiring a third set of standards in a few states. If manufacturers did not redistribute those higher costs across all of their vehicles, a state that had opted out of National LEV might actually experience higher costs for new motor vehicles. Thus, implementation of National LEV as a 49-state program is the legal and cost-effective approach to achieving cleaner air through cleaner new motor vehicles.

3. Duration of Program

This rule uses MY1997 as a placeholder for the start date of the program. As explained above (see n. 17), EPA believes that MY1997 is not a reasonable start date and will take comment in the SNPRM on the appropriate start date.[25]

Under today's rule, the National LEV program will continue until EPA promulgates a mandatory national tailpipe program that is at least equivalent in stringency to the National LEV program. If EPA promulgates such a mandatory tailpipe program, then the National LEV program will end in the first model year that the mandatory program is at least as stringent on a fleetwide basis as National LEV.

EPA proposed that the National LEV program would stay in place through MY2003 and possibly through MY2005, depending on whether, by a specified date, EPA had signed a final rule establishing new, mandatory tailpipe standards (''Tier 2 standards'') at least as stringent as National LEV. Under the proposed regulations, if EPA did not issue the specified regulations on time, then National LEV would end in MY2003. In that event, manufacturers would be required to meet federal Tier 1 standards starting in MY2004 in any state where California or OTC LEV standards were not in effect. EPA also took comment on various other possible approaches, including having the National LEV program extend until the first model year in which manufacturers must meet new, mandatory tailpipe standards at least as stringent as National LEV.

EPA received several comments expressing serious concern regarding the proposal that would allow the National LEV program to end after MY2003 if EPA did not promulgate Tier 2 regulations that were more stringent than National LEV. These commenters noted that the proposal would provide insufficient assurance of future emissions reductions and would hinder State efforts to reduce ozone pollution.

EPA agrees with these comments and has decided not to adopt the proposed approach. EPA believes it is unacceptable to set up a program that has the country take a step backward environmentally if the Agency fails to act by a future deadline. The proposed approach could cause a reversion to Tier 1 standards beginning in MY2004, which would cause considerable emission increases throughout the country.

The final regulations require that the National LEV program stay in effect until a mandatory federal program is in effect that is equivalent or more stringent. This approach will provide greater assurance that vehicles manufactured in or after MY2004 will not create greater pollution than those manufactured prior to MY2004. It will therefore reduce the considerable uncertainty that the proposed approach would have created regarding emissions from vehicles after MY2004.

Though some commenters believe that the proposed approach would provide EPA with greater incentive to promulgate standards by December 15, 2000, incentive is not the same as assurance. Promulgation of Tier 2 standards by December 15, 2000, is not a certainty. Section 202(i) of the Act requires several actions by EPA prior to promulgation of Tier 2 standards. EPA must, for example, complete a report to Congress and must make specific determinations discussed in section 202(i). EPA has not taken these actions at this time. Until such time as those determinations are made, there can be no certainty that Tier 2 standards will actually be promulgated, or that such standards will be equivalent or more stringent than National LEV standards. Moreover, the proposed approach would stake the continued reduction of motor vehicle emissions on the prospect of EPA completing its Tier 2 process by December 15, 2000. Although EPA intends to continue to work diligently on its Tier 2 process, there are too many possible occurrences that are out of EPA's control for EPA to guarantee completion of the process by that date. Therefore, to allow for more certainty in the National LEV program, EPA is promulgating regulations that allow the program to continue until the first model year in which an equivalent or more stringent federal program is implemented and applicable to new LDVs and LLDTs.

Some commenters favored the proposed approach because they assumed that the OTC States' commitments regarding State adoption of section 177 programs would last for the duration of National LEV. These commenters wanted a more definite end to the OTC State commitments than would be provided by having the OTC State commitments last for the duration of National LEV as contained in this rule. EPA believes the best way to accommodate this concern is to set a separate end date for the OTC State commitments. EPA will take comment on the appropriate end date for OTC State commitments in the SNPRM.

B. National LEV Voluntary Tailpipe and Related Standards and Phase-In

Today's final rule adopts the proposed National LEV exhaust emission standards for LDVs and LLDTs.[26] The standards are closely patterned after the California LEV emission standards, and they include exhaust emission standards applicable to individual vehicles as well as a set of fleet average NMOG standards.

Once manufacturers have opted into the National LEV program and EPA has found the program to be in effect, manufacturers will be required to certify each LDV and LLDT engine family to one of five ''vehicle emission categories,'' each of which has a unique set of emission standards (described below). The five vehicle emission categories, in order of increasing stringency, are the federal Tier 1 standards, TLEVs, LEVs, ULEVs, and ZEVs. The Tier 1 category includes the

[25] Auto manufacturers had requested several adjustments to the National LEV program to address concerns regarding compliance for MY1997, given the abbreviated time frame for program start up. As discussed above (see n. 17) EPA is using MY1997 as a placeholder for the actual start date of the program, even though EPA now believes that start date is not realistic. Rather than include special provisions for MY1997, EPA will take comment in the SNPRM on the appropriate start date.

[26] The federal definitions of ''light-duty vehicle'' and ''light light-duty truck'' (40 CFR 86.094–2) correspond exactly to the California definitions of ''passenger car'' and ''light-duty truck,'' respectively. In addition, the federal light light-duty truck and California light-duty truck categories are each divided into two subcategories based on identical ranges of loaded vehicle weight. The alignment of these definitions allows the California emission standards to be applied directly to the corresponding federal vehicle certification categories.

federal standards for exhaust emissions of NMHC, CO, NO_X, and PM. The four remaining categories (the ''LEV'' categories) include standards for the same pollutants, as well as for formaldehyde.

In addition to meeting the exhaust standards for each emission category, manufacturers must also comply with fleet average NMOG standards (described more fully in section IV.B.3., below). Separate standards apply to the LDVs and LLDTs, and compliance is based on the number of vehicles produced and offered for sale in each of the five emission categories, together with the NMOG standard for that category. NMOG averages first take effect in the OTC States in MY1997,[27] and they decline (become more stringent) until stabilizing for MY2001 and beyond. Beginning in MY2001, manufacturers must demonstrate compliance with the same NMOG fleet averages both in the OTC States and in the 37 States outside the OTC States and California. Manufacturers are allowed, but not required, to introduce TLEVs, LEVs, ULEVs, and ZEVs outside the OTR and California prior to MY2001. However, only vehicles subject to the National LEV program sold in the OTR will be counted towards a manufacturer's fleet average NMOG calculation during the phase-in period in the OTR.

The exhaust emission standards and fleet average NMOG requirements, as well as other regulatory elements of the National LEV program, are contained in a new Code of Federal Regulations (CFR) subpart (subpart R of title 40, part 86).

1. Exhaust Emission Standards for Categories of NLEVs

This section discusses the exhaust emission standards that NLEVs must meet. In addition to the voluntary National LEV exhaust standards that are derived from the California LEV program, manufacturers of NLEVs must also demonstrate compliance with a few mandatory federal exhaust standards that have no counterpart in the California LEV program.[28] Both types of standards are discussed here.

a. Certification Standards. This final rule establishes separate sets of emission standards for LDVs and for LLDTs. Current federal regulations divide the LDT vehicle category into two subcategories, each of which is further divided into subcategories. LLDTs are those LDTs less than or equal to 6000 lbs GVWR, and heavy light-duty trucks (HLDTs) are those LDTs greater than 6000 lbs but less than or equal to 8500 lbs GVWR. The National LEV program contains standards only for the LLDTs, therefore the HLDT category will continue to be certified to the applicable Tier 1 standards. Emission standards that apply to LLDTs are divided into two sets. One set, which is identical to the standards for LDVs, applies to LLDTs up through 3750 lbs loaded vehicle weight (LVW), and another slightly less stringent set applies to LLDTs between 3750 and 5750 lbs LVW. Also consistent with current federal and California regulations, separate sets of standards are promulgated for the vehicle's intermediate useful life (five years or 50,000 miles, whichever occurs first) and full useful life (10 years or 100,000 miles, whichever occurs first).

As noted above, there are five vehicle emission categories for vehicles under the voluntary National LEV program, ranging in stringency from the current federal Tier 1 vehicles to ZEVs. The Tier 1 standards have already been codified in the current federal regulations with a phase-in schedule that required 100 percent of MY1996 LDVs and LLDTs to meet the Tier 1 standards. The TLEV, LEV, ULEV and ZEV certification standards for LDVs and LLDTs up through 3750 lbs LVW are shown in Table 2 and those for LLDTs from 3750 to 5750 lbs LVW are shown in Table 3. As noted below, the particulate standards adopted specifically for National LEV apply only to diesel vehicles. Non-diesel vehicles will be subject to the federal Tier 1 PM standards, as described below.

The federal exhaust standards with no California counterparts are (1) the Tier 0 total hydrocarbon (THC) standard for all vehicles, (2) the Tier 1 50,000-mile PM standard, and (3) the 100,000-mile PM standard for non-diesel vehicles. The California program contains neither a THC standard nor a 50,000-mile PM standard, and the California 100,000-mile PM standard applies only to diesel vehicles. All NLEVs must comply with the federal THC emissions standard. EPA has adopted the California 100,000-mile diesel PM standard for NLEVs, but, to meet the requirements of the mandatory federal program, diesel NLEVs must also certify to the Tier 1 50,000-mile PM standard. Non-diesel NLEVs must meet the federal Tier 1 50,000-mile and 100,000-mile PM standards.

Compliance with the Tier 0 THC standard should not result in testing beyond that required for LEV standards. The current federal program provides for a reduced data reporting burden, including the use of engineering justifications, in certain cases where compliance with a mandatory standard for a given vehicle or emission control technology is clear cut. Such is the case for current-technology gasoline vehicles when demonstrating compliance with the Tier 1 PM standards and for most current technology vehicles whose Tier 1 NMHC values demonstrate compliance with the THC standards. The Agency anticipates that manufacturers will reduce their compliance burden by taking advantage of these same data reporting options when certifying NLEVs.

[27] MY1997 is used in this rule as a placeholder for the actual start date. See n. 17 above.

[28] Participation in the voluntary National LEV program does not relieve manufacturers of their obligation to meet the mandatory federal exhaust emission standards. The core of the mandatory federal exhaust standards are the set of Tier 1 standards, plus selected pre-Tier 1 (''Tier 0'') standards that Congress let stand in the 1990 CAA Amendments. Most of these mandatory federal standards have analogues in the National LEV standards, and for each of these, the voluntary National LEV standard is of equal or greater stringency. Certification of a vehicle to the voluntary standards therefore also demonstrates compliance with the analogous mandatory standards. (For testing purposes, the National LEV standard may be described as ''replacing'' the analogous federal standard, although the federal standard technically still applies.) For those few federal exhaust standards that have no National LEV counterpart (discussed below), manufacturers must also demonstrate compliance of NLEVs with those standards.

TABLE 2.—NATIONAL LEV INTERMEDIATE AND FULL USEFUL LIFE STANDARDS (G/MI) FOR LDVS AND LLDTS TO 3750 LBS LVW

Vehicle useful life (miles)	Vehicle emission category	NMOG	CO	NO_X	HCHO	PM[1] (diesel only)
50,000	TLEV	0.125	3.4	0.4	0.015	.....
	LEV	0.075	3.4	0.2	0.015	.....
	ULEV	0.040	1.7	0.2	0.008	.....
100,000	TLEV	0.156	4.2	0.6	0.018	0.08
	LEV	0.090	4.2	0.3	0.018	0.08
	ULEV	0.055	2.1	0.3	0.011	0.04

[1] See the discussion in this section IV.B.1.a regarding the applicability of PM standards.

TABLE 3.—NATIONAL LEV INTERMEDIATE AND FULL USEFUL LIFE STANDARDS (G/MI) FOR LLDTS FROM 3751 LBS LVW TO 5750 Lbs LVW

Vehicle useful life (miles)	Vehicle emission category	NMOG	CO	NO_X	HCHO	PM[1] (diesel only)
50,000	TLEV	0.160	4.4	0.7	0.018	.....
	LEV	0.100	4.4	0.4	0.018	.....
	ULEV	0.050	2.2	0.4	0.009	.....
100,000	TLEV	0.200	5.5	0.9	0.023	0.08
	LEV	0.130	5.5	0.5	0.023	0.08
	ULEV	0.070	2.8	0.5	0.013	0.04

[1] See the discussion in this section IV.B.1.a regarding the applicability of PM standards.

The voluntary standards also include two-tiered NMOG standards for flexible-fuel and dual-fuel vehicles, based on California's approach to standards for these vehicle types.[29] Flexible- and dual-fuel vehicles have to certify to the applicable standards both on the alternative fuel and on gasoline. When certifying on an alternative fuel, these vehicles have to meet the intermediate and full useful life emission standards for TLEVs, LEVs or ULEVs laid out above.[30]

When certifying on gasoline, flexible-fuel and dual-fuel vehicles have to meet the next higher (less stringent) category of NMOG emission standards than the standards to which the vehicle was certified on an alternative fuel. However, except for NMOG, the vehicle must meet the same emissions standards (NOx, CO, etc.) when operated on gasoline as it did when operated on the alternative fuel. For example, a flexible-fuel vehicle that certifies to ULEV standards on an alternative fuel would have to certify to the LEV NMOG standard and ULEV CO, NOx, PM, and HCHO standards when operated on gasoline. The same principle holds true for determining applicable in-use standards for flexible-fuel and dual-fuel vehicles. This approach allows manufacturers to optimize the emission control system for the alternative fuel rather than for gasoline, and encourages rather than discourages the development of alternative fuel technologies. Consistent with California, flexible-fuel and dual-fuel vehicles will be counted toward the NMOG fleet average standard on the basis of their NMOG certification levels on the alternative fuel, not on gasoline. There is, however, no requirement under the National LEV program that such vehicles operate on alternative fuels in-use.

b. In-Use Standards. As proposed in the NPRM, the National LEV program explicitly adopts California's intermediate in-use standards, which are slightly less stringent than the certification standards. These standards, which apply to in-use testing for a period of model years following introduction of the certification standards, are set at less stringent levels than the certification standards to allow manufacturers to gain in-use experience with vehicles certified to LEV or ULEV standards. EPA is adopting these standards consistent with the current California requirements, which include recently adopted revisions. (See the Response to Comments document for further discussion of these revisions, section II.D.1.) The in-use standards apply through MY1999 for LEVs and through MY2002 for ULEVs, and include both intermediate useful life (50,000 miles) and full useful life (100,000 miles) standards (full useful life in-use standards apply starting with MY1999). In-use standards for LDVs and LLDTs to 3750 lbs LVW are shown in Table 4 and those applicable to LLDTs from 3751 to 5750 lbs LVW are shown in Table 5. As indicated in the tables, compliance with in-use standards beyond the intermediate useful life is not required for LEVs and ULEVs until after MY1998. These in-use standards for vehicles certified under the National LEV program apply to vehicles sold both within and outside the OTR. Some of the complexity in the tables below results from changes in the in-use formaldehyde standards that occur starting with MY2001.

[29] Flexible-fuel vehicles are those that can operate on either of two different fuels or any combination of those fuels, while dual-fuel vehicles can operate on either of two different fuels but not on combinations of those fuels.

[30] Consistent with California's methodology, the measured NMOG mass emissions are adjusted by a RAF for the given type of alternative fuel before being compared to the applicable emission standard. Determination of the applicable RAF is discussed later in section IV.B.5.d.

TABLE 4.—NATIONAL LEV IN-USE STANDARDS (G/MI) FOR LDVS AND LLDTS TO 3750 LBS LVW [1]

Vehicle emission category	Model year	Useful life (miles)	NMOG	CO	NO_X	HCHO
LEV	1997–1999	50,000	0.100	3.4	0.3	0.015
	1999	100,000	0.125	4.2	0.4	0.018
ULEV	1997–1998	50,000	0.058	2.6	0.3	0.012
	1999–2000	50,000	0.055	2.1	0.3	0.012
	2001–2002	50,000	0.055	2.1	0.3	0.008
	1999–2002	100,000	0.075	3.4	0.4	0.011

[1] MY1997 is used in this rule as a placeholder for the actual start date. See footnote no. 17.

TABLE 5.—NATIONAL LEV IN-USE STANDARDS (G/MI) FOR LLDTS FROM 3751 LBS LVW TO 5750 LVW [1]

Vehicle emission category	Model year	Useful life (miles)	NMOG	CO	NO_X	HCHO
LEV	1997–1998	50,000	0.128	4.4	0.5	0.018
	1999	50,000	0.130	4.4	0.5	0.018
	1999	100,000	0.160	5.5	0.7	0.018
ULEV	1997–1998	50,000	0.075	3.3	0.5	0.014
	1999–2002	50,000	0.070	2.8	0.5	0.014
	1999–2002	100,000	0.100	4.4	0.7	0.014

[1] MY1997 is used in this rule as a placeholder for the actual start date. See footnote no. 17.

2. Non-methane Organic Gases Fleet Average Standards

a. Compliance with the NMOG Standards. Under the National LEV program, manufacturers will be required to meet an increasingly stringent fleet average NMOG standard. Today's action adopts the fleet average NMOG standards and schedule for LDVs and LLDTs as proposed in the NPRM. The fleet average NMOG values (Table 6) will apply, on a manufacturer-by-manufacturer basis, to vehicles sold in the OTR from MY1997 until the end of the National LEV program.[31] The NMOG values will also apply to vehicles sold in every state outside the OTR, except California, beginning with MY2001. (Low volume manufacturers, as defined in this rule, will be exempt until MY2001, as discussed more fully in section IV.C. below.) The decreasing fleet average standards were derived by multiplying certification emission levels for various categories of vehicles by achievable implementation rates for each vehicle category. The NMOG standards are equivalent to the sale of 40 percent TLEVs in MY1997–MY1998, 40 percent TLEVs and 30 percent LEVs in MY1999, 40 percent TLEVs and 60 percent LEVs in MY2000, and 100 percent LEVs in MY2001.

TABLE 6.—FLEET AVERAGE NMOG EXHAUST EMISSION STANDARDS (G/MI) FOR LDVS AND LLDTS SOLD IN THE OTR[1]

Vehicle type	Model year	Fleet average NMOG
LDV and LLDT (0–3750 LVW)	1997	0.200
	1998	0.200
	1999	0.148
	2000	0.095
	2001 and later	0.075
LLDT (3751–5750 LVW)	1997	0.256
	1998	0.256
	1999	0.190
	2000	0.124
	2001 and later	0.100

[1] MY1997 is used in this rule as a placeholder for the actual start date. See footnote no. 17.

Manufacturers will be required to meet separate NMOG averages for each of two vehicle groups; i.e., a fleet average will be calculated for LDVs and LLDTs from 0–3750 LVW, and for LLDTs from 3751–5750 LVW. Also, as discussed below, manufacturers will have to meet NMOG averages for each of these groups in the two separate regions: states within the OTR (Northeast Trading Region or NTR), and states (except California) outside the OTR (37 States). Prior to MY2001, compliance with the fleet average NMOG requirements is required only in the OTR. However, a manufacturer choosing to bank credits for use in the 37 States beginning in MY2001 will have to demonstrate that its fleet average NMOG is more stringent than the NMOG value for Tier 1 vehicles in the 37 States for these early years.[32] Beginning in MY2001, manufacturers will have to meet the fleet average NMOG standards separately in each of the two regions.

Manufacturers will be able to comply with the fleet average NMOG standards by selling any combination of vehicles certified to the Tier 1, TLEV, LEV,

[31] MY1997 is used in this rule as a placeholder for the actual start date. See n. 17 above.

[32] For purposes of demonstrating compliance with the fleet average NMOG standards, the NMOG value for Tier 1 LDVs and LLDTs 0–3750 lbs LVW is 0.25 grams/mile, and for LLDTs 3751–5750 lbs LVW is 0.32 grams/mile.

ULEV, or ZEV levels, such that the overall LDV and LLDT fleets in each region meet the required fleet average values. A sales-weighted fleet average will be calculated based on the intermediate useful life (five years, 50,000 mile) certification NMOG standards of the vehicle categories. A manufacturer will multiply the NMOG emission standard for each certification category by the number of that type of vehicle that the manufacturer sold in that region, add these products to the Hybrid Electric Vehicle (HEV) contribution factor (discussed in section IV.B.8.), and then divide by the total number of vehicles sold in that region by the manufacturer.

b. Tracking Vehicles for Fleet Average NMOG Compliance. Because vehicles sold to locations in California and other countries, including Canada and Mexico, are excluded from the National LEV program, and because fleet average NMOG calculations are specific to each of the two regions, as described further in the following section, manufacturers are required to obtain data on the location of vehicle sales to demonstrate accurate fleet average NMOG calculations. However, to ease the burden on manufacturers of tracking vehicles to the end user, manufacturers need only track vehicles to the location where the completed vehicle or truck is purchased, otherwise known as the point of first sale. In most cases, this will be the sale from the manufacturer to the dealer. In cases where the end user purchases the completed vehicle directly from the manufacturer, the location of the end user is the point of first sale. Vehicle sales data pertaining to vehicles already shipped to a point of first sale is also known as first delivery information.

In the NPRM, EPA proposed to have manufacturers track vehicles to the location where the completed vehicle or truck is purchased, but mistakenly called this ''point of first *retail* sale'' (emphasis added). EPA did not intend to require, however, to have vehicles tracked to the end user, which is the general level of tracking triggered by point of first retail sale requirements. The term ''point of first retail sale'' derives from requirements applicable to the heavy-duty engine market. Heavy duty engine manufacturers often sell engines to truck builders, who in turn may sell their completed trucks to consumers or dealers located anywhere. This dispersion of the engines even after the first sale makes it necessary for manufacturers to track engines to the point of first retail sale in order to make a reasonable estimate of the engine's final location. However, in the light-duty market, manufacturers sell almost all of their production to dealerships, who in turn sell most vehicles to users located in the general area of the dealership. The practical constraints on dispersion of vehicles after the first sale make tracking light-duty vehicles and trucks to the point of first retail sale unnecessary, as EPA recognized in establishing trading requirements for phase-in of Tier 1 vehicles. Thus, today's action clarifies the vehicle tracking requirement and corrects the proposed language now to require manufacturers to track National LEV vehicles to the point of first sale.

EPA recognizes that dealers occasionally trade vehicles to obtain particular makes or models, but the Agency does not believe that this trading will have any significant effect on the air quality benefits of the National LEV program. Trading vehicles between dealerships occurs largely over limited geographic distances, which means that most trades will redistribute vehicles within the same region. EPA believes that inter-regional trades would have a de minimis effect on vehicle mixes and resulting air quality.

EPA is making an additional minor change in the regulations to clarify an inconsistency in the proposal. The proposed regulations applied the National LEV requirements to vehicles that manufacturers ''produce and deliver for sale,'' which is the language used in the California regulations. However, under both the proposed and final rules, for purposes of determining compliance with the National LEV requirements, manufacturers must track vehicles to the point of first sale (point of first retail sale in the proposal). Practically, this means that the proposed and final National LEV requirements apply to the vehicles actually sold by manufacturers, rather than the vehicles delivered for sale, which may be different. As discussed above, for the Agency to enforce the National LEV requirements on a region-specific basis, it is necessary to track vehicles to where they are first sold. The point at which vehicles are delivered for sale is more difficult to identify and may give a less accurate indication of the vehicles' final destination. Given that the tracking requirement will be used to determine compliance, EPA is modifying the applicability of the National LEV requirements to reflect that this is the controlling requirement. Thus, in the final rule, EPA is applying the National LEV requirements to the vehicles actually sold by manufacturers, which are the same vehicles used for demonstrating compliance with those requirements.

c. *OTC State Government ATV Purchases.* Manufacturers may not include in their fleet average NMOG calculations ATVs bought in the OTR by state governments. EPA is including this limitation at the request of the OTC States and auto manufacturers. The OTC States and manufacturers intend the limitation to allow the OTC States to promote ATV purchases pursuant to the ATV component they had negotiated, without allowing manufacturers to offset these purchases with increased sales of higher-emitting vehicles. For the purpose of National LEV, an ATV is defined as any vehicle certified by CARB or EPA that is either: (1) A dual-fuel, flexible-fuel, or dedicated alternatively fueled vehicle certified as a TLEV, LEV, or ULEV when operated on the alternative fuel; (2) certified as a ULEV or Inherently Low Emission Vehicle (ILEV) (irrespective of whether conventionally or alternatively fueled); or (3) a dedicated or hybrid electric vehicle.

This exclusion of OTC State government purchases of ATVs from the fleet average NMOG value applies to any ATV purchases by OTC State governments that the governments have properly reported to the manufacturers. For the limitations to apply, the governments must report their purchases of these vehicles to the respective manufacturers no later than February 1 of the calendar year following the end of a given model year. Reporting should consist of a letter from the government official responsible for the purchases to the manufacturer representative listed in that manufacturer's application for certification. The letter should list the number of vehicles purchased, vehicle makes and models, and the associated engine families. If necessary, EPA can provide OTC State governments the name and address of the manufacturer representative upon request. Reporting OTC State governments should also send a copy of this letter to EPA, to the name and address stated in section 40 CFR 86.1710–97(g)(4), so that EPA can include these data in verifying manufacturers' compliance with the fleet average NMOG standards. Failure of the government entities to report these data correctly would allow manufacturers to include these vehicles in their fleet average NMOG values.

EPA has determined that Federal government ATV purchases will not be excluded from manufacturers' NMOG fleet average values. This requirement would be too burdensome to meet effectively because the location of Federal vehicle purchases often do not correspond to the vehicles' main service

area. The General Services Administration (GSA) coordinates Federal vehicle purchases. Federal agencies order vehicles from GSA and have them shipped to or picked up from specified regions. In turn, these vehicles are frequently re-distributed elsewhere based on that particular agency's needs. Thus, it would be difficult, if not impossible, to devise a system to have Federal entities track and report the number of ATVs being used in the OTR. In addition, EPA does not believe that allowing manufacturers to include ATVs purchased by the federal government would raise any problem of double-counting under the Energy Policy Act (EPAct). The EPAct requirements are not directed towards manufacturers. Thus, a manufacturer that counts a vehicle purchased under EPAct towards meeting its National LEV fleet average NMOG requirement would not be receiving any additional credit for compliance with EPAct as well.

d. Reporting Requirements. EPA is including in today's rule several provisions designed to simplify reporting requirements. Under certain conditions, a manufacturer whose entire fleet, apart from California vehicles, is certified to LEV or cleaner standards may not need to calculate separate NMOG fleet averages for each trading region and may use production data in lieu of sales data for determining compliance. Manufacturers may also simplify their reporting under National LEV by combining the information required here with their annual production reports.

A manufacturer whose entire fleet for the 49 states is certified to LEV or cleaner standards would not need to calculate separate fleet average NMOG values for each region or track vehicles to specific regions to evaluate compliance with the NMOG fleet average requirement. Because each individual vehicle is certified at or below the fleet average NMOG value, any mix of vehicles sold in either region would necessarily meet the applicable fleet average NMOG requirement. The manufacturer could simply show compliance with the fleet average NMOG requirement by showing that each engine family was certified to a standard equivalent to or more stringent than the fleet average NMOG requirement. If a manufacturer decides to use this reduced reporting requirement, then EPA will designate that manufacturer's fleet average NMOG values for the affected model years, for each region, as equal to the applicable fleet average NMOG standards for such model year. Such a manufacturer would not be able to generate credits because region-specific tracking is necessary to calculate the credits generated for a specific region, based on the number of vehicles sold in that region.

Region-specific tracking is also used to calculate total number of vehicles sold in the OTR for assessing industry-wide compliance with the five percent cap on sales of Tier 1 vehicles and TLEVs, which is described in section IV.B.4. below. EPA believes that a reasonable estimate of the manufacturer's total sales in the OTR will be adequate to allow the Agency to assess industry-wide compliance with the five percent cap. EPA will estimate the manufacturer's sales in the OTR by calculating the average percentage of the manufacturer's total fleet that was sold in the OTR over the last two years for which the manufacturer reported OTR sales, and then applying this percent to the manufacturer's total sales in the 49 states for that model year.

A manufacturer may also combine the currently required production report [33] with the National LEV report in a single submission. Manufacturers taking advantage of this option would have to report at the time the production report is due, which is typically 30 days after the end of the model year. This is sooner than EPA has allowed for the National LEV report, which is not due until May 1 of the calendar year following the model year. EPA is giving manufacturers this extra time to file the National LEV report to allow manufacturers to include in their report any credit trading activity that occurs after the end of the model year. Manufacturers that are not generating or using credits probably will not need the additional reporting time. The option of combining the reports leaves the choice up to each manufacturer to decide for itself whether filing an earlier combined report makes sense. EPA believes that these simplified compliance provisions allow manufacturers to reduce their compliance burdens without diminishing program stringency or EPA's ability to ensure compliance.

3. Fleet Average NMOG Credit Program

a. Fleet Average NMOG Credit Program Requirements. An important part of today's National LEV rulemaking is the set of provisions allowing manufacturers to use a market-based approach to meet the fleet average NMOG requirements through averaging, banking, and trading NMOG credits and debits. Both this overall approach and most of the specifics of program implementation are modeled on California's trading program. The few differences between the National LEV and California requirements are mainly due to the need to have separate compliance determinations in the OTC States and the 37 States, or are driven by EPA's legal authority.

As proposed, fleet average NMOG credits and debits will be calculated in the same manner as under the California regulations. Credits and debits will be calculated in units of g/mi as the difference between the required fleet average NMOG standard and the fleet average NMOG value achieved by the manufacturer, multiplied by the total number of vehicles the manufacturer sold in a given model year in each of the applicable regions, including ZEVs and HEVs. A manufacturer will generate credits in a given model year if its fleet average NMOG value is lower than the fleet average NMOG standard for that model year. Debits will be incurred when a manufacturer produces a fleet average NMOG value above the fleet average standard required for that model year. A manufacturer's balance for the model year will equal the sum of all outstanding credits and debits.

As under the California regulations, the separate fleet average NMOG standards for the two different vehicle classes require manufacturers to calculate separate fleet average NMOG values for each class. Class A represents the LDVs and LLDTs 0–3750 lbs LVW, and Class B represents the LLDTs 3751–5750 lbs LVW. Once calculated, fleet average credits and debits are not specific to these classes.

The National LEV program does, however, include geographic limits on both calculation of fleet average NMOG values and offset of debits with credits, as proposed in the NPRM. Prior to MY2001, the fleet average NMOG standard will apply only to vehicles sold within the OTC States.[34] To ensure that the voluntary program continues to produce acceptable emissions reductions in the OTR, from MY2001 on, credit and debit averaging will be conducted in two separate regions: the NTR, and the remaining 37 States, excluding both California and the NTR. The NMOG average, credits, and debits

[33] See 40 CFR 86.085–37(b).

[34] For administrative convenience, EPA will include the entire Commonwealth of Virginia in the OTR trading region (designated as the Northeast Trading Region (NTR)) even though only northern Virginia is in the OTR. Inclusion in the trading region means that for purposes of assessing compliance with the fleet average NMOG standard and the other National LEV provisions, the entire Commonwealth of Virginia will be considered as a whole as part of the NTR. This inclusion is only for purposes of the National LEV program. EPA received no negative comments on the proposed inclusion of the entire state of Virginia in the trading region.

for a regional fleet will be based on vehicles sold in each region, and each regional fleet average will have to meet the applicable NMOG standard independently.

Therefore, manufacturers will be required to calculate four separate fleet average NMOG values for four separate averaging sets: Class A in the NTR, Class A in the 37 States, Class B in the NTR, and Class B in the 37 States. Each manufacturer will have a separate balance for each of the two regions, which will be calculated by summing all of the manufacturers' credits and debits within that region.[35] Only credits remaining after calculating the manufacturer's balance for the region will be available for trading, and they may be traded only in that region.

As under the California regulations, the National LEV standards provide that manufacturers may incur a debit balance in a given region and model year, but the manufacturer must equalize any emission debits by the reporting deadline after the end of the following model year. Manufacturers will be able to offset debits by (1) using credits generated by that manufacturer in a previous year (discounted if appropriate), (2) earning an equal amount of emission credits the year after incurring the debit, or (3) presenting to EPA an equal amount of credits acquired from another manufacturer. However, a manufacturer will have to use any available credits from a region to offset any debits from the same region in the model year those debits were generated. A manufacturer may not carry over to the next model year both credits and debits for the same region or transfer those credits to another manufacturer. A manufacturer that fails to equalize debits within the required time period will be deemed to be in violation as of that date. The deadline for equalizing debits is the due date for the annual report for the model year following the model year in which the debits were generated.

As proposed, the voluntary standards also incorporate the California approach for discounting unused credits over time. Unused credits that are available at the end of the second, third and fourth model year after the model year in which the credits were generated will be discounted to 50 percent, 25 percent, and 0 percent of the original value of the credits, respectively. For example, if a manufacturer generated 200 credits in the OTR in MY1999, those credits would retain their full value in MY2000. However, in MY2001, the credits would be discounted by 50 percent, so the manufacturer would hold only 100 credits. In MY2002, the manufacturer would hold 50 credits, and in MY2003, the credits would have no value.

As with other emission credits or allowances recognized under the Act, credits would not be the holder's property, but instead would be a limited authorization to emit the designated amount of emissions. Nothing in the regulations or any other provision of law should be construed to limit EPA's authority to terminate or limit this authorization through a rulemaking.

b. Early Reduction Credits. Manufacturers may also generate credits in the 37 States prior to MY2001 for use in the 37 States, as EPA proposed in the NPRM. This will provide manufacturers added flexibility as well as create an incentive for them to introduce cleaner vehicles into this region before MY2001, thus providing air quality benefits sooner. Since these credits cannot be used or traded before MY2001, EPA will treat any credits earned in the 37 States before MY2001 as if earned in MY2001. It does not make sense to apply the normal discount rate to these credits before MY2001 because that would remove or sharply reduce the incentive for early introductions. This is also consistent with California's approach to allowing early generation of credits. However, these credits will be subject to the normal discount rate starting with MY2001, meaning they will retain their full value for MY2002 and will be discounted from then on. In addition, these early reduction credits will be subject to a one-time ten percent discount applied in MY2001, as discussed below.

EPA believes that there are substantial benefits to encouraging early introductions of cleaner vehicles, but remains concerned that giving full, undiscounted credits for all early reductions may generate some windfall credits. ''Windfall'' credits are credits given for emission reductions the manufacturer would have made even in the absence of a credit program. The purpose of giving credits for early reductions is to encourage manufacturers to make reductions that they would not have made but for the credit program. Because credits can be used to offset higher emissions in later years, if manufacturers are given credits for early reductions they would have made even without a credit program, then the credit program could have a detrimental effect on the environment.

There is some potential for windfall credits here because, in the absence of early reduction credits, it is likely that there still would be some early introduction of National LEV vehicles in the 37 States. Under the California LEV program, windfall credits should not occur because there is no other regulatory or market incentive for manufacturers to introduce new technology early in California. Under National LEV, however, manufacturers would already be producing cleaner vehicles for California and the OTR. Distribution efficiencies would encourage some cross-border sales of National LEV vehicles in the states bordering the OTR, and manufacturers might certify some 50-state engine families due to economies of scale in production and distribution.[36] The potential influence of such economic factors is illustrated by the fact that manufacturers are currently producing numerous 50-state engine families without the chance to earn early credits.[37]

Despite the potential for some windfall credits, the 37 States will receive substantial benefits from early introductions of cleaner vehicles. Early introduction will benefit public health and help areas in the 37 States that currently exceed the ozone standard to come into attainment sooner through fleet turnover replacement of older, higher-emitting vehicles. Early reduction credits can be a powerful incentive for early introductions, and the National LEV program should take full advantage of this tool. Early reduction credits also benefit manufacturers by providing additional compliance flexibility. Further, while some windfall credits might be generated along with early reductions

[35] Credits or debits earned or incurred in the National LEV program would not be interchangeable with credits or debits earned or incurred in California because the National LEV and California LEV programs are separate.

[36] To the extent that 50-state vehicles or cross border sales are driven by the existence of National LEV requirements in the OTR, it could be argued that credits for such vehicles would not be windfall credits because the economic incentives for supplying such vehicles would stem from the National LEV program itself. Even if this were the case, giving manufacturers early reduction credits for such vehicles would still reduce the benefits of National LEV relative to its benefits absent early reduction credits, which would appropriately be considered windfall credits. Moreover, in the absence of National LEV, adoption of CAL LEV programs in at least some OTC States might well have driven many of the same production choices. Thus, to the extent that those 50-state vehicles would have been supplied to the 37 States with or without National LEV, early reduction credits for such vehicles would be windfalls.

[37] This quantity of 50-state vehicles does not necessarily have any relevance to estimating supply of such vehicles in the absence of early reduction credits, however. In the past, manufacturers have moved toward 50-state certification primarily because California and federal standards were not significantly different. However, the much larger differences between Tier 1 and LEV standards will reduce the incentives to certify 50-state vehicles under National LEV before MY2001.

that should be credited, such windfall credits could never be precisely quantified, given that the calculation would have to be based on predicting actions under circumstances that do not exist.

Balancing these factors, EPA has structured the National LEV program to provide a significant incentive for early introductions, while assuring some environmental benefit to offset any possible windfall credits. EPA believes it is appropriate to err on the side of environmental protectiveness here. Compensating for potential windfall credits will help ensure that the benefits of encouraging early introductions are not offset by increased emissions overall. Moreover, while manufacturers objected to any sort of adjustment to account for potential windfall credits, the opportunity to earn early reduction credits at all is not addressed in the MOUs initialed by the OTC States and manufacturers, and EPA does not believe that either party regards early reduction credits or limitations on such credits as important in their decisions whether to participate in the program.

It would be impossible to identify which early introductions would have occurred even in the absence of the credit incentive. Rather, the most straightforward way to address the possibility of windfall credits is to discount all early reduction credits by a set percentage. This discount rate must be low enough to retain the marginal incentive to generate early reduction credits. Recognizing that precision is impossible here, EPA has attempted to pick a discount rate that reflects some real environmental benefit, but does not so devalue early reduction credits as to discourage manufacturers from generating them. On the basis of these criteria, EPA has selected a ten percent discount rate to be applied on a one-time basis to all credits earned in the 37 States region before MY2001. The ten percent discount rate should not provide a significant disincentive to manufacturers generating credits and it is in line with comparable provisions in other EPA programs.[38] EPA believes that this figure appropriately balances the goals of preserving the expected emissions reductions from National LEV, with a margin of error to protect the environment, and encouraging early introduction of cleaner National LEV vehicles into the 37 States.

Today's action also clarifies EPA's proposal to allow low volume manufacturers to generate credits in the OTR prior to MY2001, when they would first be required to meet the fleet average NMOG standards. In the NPRM, EPA stated that these manufacturers could generate and sell credits in the OTR. EPA is expanding this requirement to allow low volume manufacturers also to bank and then use these credits beginning in MY2001. These credits would be discounted in the same manner as credits generated in the OTR by the other manufacturers. Unlike the early reduction credits in the 37 States, these early reduction credits could be used prior to MY2001, if transferred to other manufacturers.

c. Enforcement of Fleet Average NMOG Credit Program. As described in the proposal (60 FR 52750), compliance for vehicles subject to the fleet average NMOG standards will be evaluated in two ways. First, compliance of an individual vehicle with its certified NMOG tailpipe emissions levels will be determined and enforced in the same manner as compliance with any other emission standard. Each vehicle must meet its certified emission standards as determined and enforced through certification, SEA, in-use testing, and, for certain vehicles, testing performed under some California assembly-line programs.[39] Second, manufacturers must show that they meet the applicable fleet average NMOG standards. Manufacturers can either report a fleet average NMOG level meeting the applicable fleet average NMOG standard or present to EPA enough credits to offset any debits by the reporting deadline after the end of the model year following the model year in which the debits were incurred.

The fleet average NMOG credit program will be implemented and enforced through the certificate of conformity, which the manufacturer will be required to obtain under 40 CFR 86.1721–97 for all vehicles prior to their introduction into commerce. The certificate for each vehicle will require the vehicle to meet the applicable National LEV tailpipe and related emission standards, and will be conditioned on the manufacturer demonstrating compliance with the applicable fleet average NMOG standard within the required time frame. If a manufacturer fails to meet this condition, the vehicles causing the fleet average NMOG violation will be considered not covered by the certificate applicable to the engine family. EPA will then assess penalties on an individual vehicle basis for sale of vehicles not covered by a certificate.

If a manufacturer does not equalize its debits within the specified time period, EPA will calculate the number of noncomplying vehicles by dividing the total amount of debits for the model year by the fleet average NMOG requirement applicable for the model year and averaging set in which the debits were first incurred. In the case where both averaging sets in a region are in deficit, any applicable credits would first be allocated to the averaging sets as determined by the manufacturer; then, the number of noncomplying vehicles would be calculated using the revised debit values. Each noncomplying vehicle will be deemed to be in violation of the condition on its certificate. EPA will determine these vehicles by designating vehicles in those engine families with the highest certification NMOG emission values first and continuing until a number of vehicles equal to the calculated number of noncomplying vehicles as determined above is reached. In the instance where only a portion of vehicles in a particular engine family would be deemed noncomplying vehicles, EPA will determine the actual noncomplying vehicles by counting backwards from the last vehicle produced in that engine family.[40] Manufacturers will be liable for penalties for each vehicle sold not covered by a certificate. This is a one-time violation and would not subject the manufacturer to further penalties related to the sale of those vehicles without a certificate for failing to meet the fleet average NMOG standard.[41] Because a violation has not occurred until a manufacturer fails to make up outstanding debits within the required time period, for purposes of assessing the time of the violation and the tolling of the Statute of Limitations, the violation occurs upon the due date for filing the annual report for the model

[38] For example, the Open Market Trading Rule, 60 FR 39668 (August 3, 1995) and 60 FR 44290 (Aug. 25, 1995) proposed a ten percent discount rate for all generated credits. This NPRM has been turned into guidance that will be issued to the states. See also the heavy duty averaging, banking, and trading program, which requires that any debits be made up at a ratio of 1.2 to 1, equivalent to a 20 percent discount on the credits being applied to make up the debits. *See* 40 CFR 86.094–15.

[39] See section VI.C.1. of this rulemaking for a discussion on the California Quality Audit Program.

[40] For example, if the noncompliance calculation determined that only 100 vehicles of a 1000 vehicle engine family contributed to the debit situation, then EPA will designate the last 100 vehicles produced as the actual vehicles sold in violation of the condition of their certificates.

[41] Those vehicles, as any other vehicles, would still be subject to a federal recall action under section 207(c) of the CAA if EPA found they did not meet their certification standards in use, but that would be unrelated to the lack of coverage by a certificate at the time of sale. For purposes of any in-use enforcement action, the vehicles will be held to the certification standards stated in the certificate that would have covered the vehicles but for the violation of the condition on the certificate.

year after the model year in which the manufacturer generated the debits.

In the NPRM, EPA took comment on whether manufacturers should automatically be required to make up any outstanding debits, even if the manufacturer would also be subject to penalties in an enforcement action for failure to make up the debits within the required time period. Such an approach is exemplified in the acid rain trading program under Title IV of the Act. In general, EPA believes that enforcement of an emissions trading program should be structured to hold the environment harmless for any violations. A trading approach provides manufacturers additional flexibility and lower costs for compliance with a given standard. It is important that this flexibility does not undercut the expected environmental benefits.[42] EPA believes that requiring manufacturers to offset any debits, in addition to paying a penalty, is the best means of ensuring that the environmental benefits of an emissions trading program are maintained.

However, EPA believes an approach different from the proposed approach is appropriate here. While there will be strong incentives for manufacturers to make up outstanding debits, as discussed below, debits will not continue to roll over automatically until they are made up. Instead, EPA will assess whether a manufacturer met the fleet average NMOG requirement for each model year, based on whether the manufacturer offset its debits for the model year by the deadline.

There are several reasons why EPA believes this alternative approach is appropriate under the particular circumstances of National LEV. First, because National LEV is a voluntary program, EPA cannot impose provisions that would preclude the parties from agreeing to the program. The motor vehicle manufacturers have indicated that it would be unacceptable to continually roll over outstanding debits into the next year's balance, in addition to making them subject to penalties for failure to make up the debits on time. Second, EPA is confident that the National LEV program will meet the statutory requirements for emissions reductions from motor vehicles, even if manufacturers are not automatically required to make up debits, because National LEV will produce emissions reductions substantially beyond those required by title II of the CAA. Third, not rolling over debits will not affect the relative quantity of emissions reductions from National LEV compared to those that would be produced by OTC state-by-state adoption of CAL LEV programs because CAL LEV also is not structured to require that manufacturers make up debits automatically.

Finally, EPA believes that its current enforcement authority provides strong incentives for manufacturers to remedy the environmental harm by making up debits. If the Agency determines that an enforcement action is appropriate, EPA would have some discretion in choosing the appropriate penalties. The sale of vehicles not covered by a certificate is a violation under CAA section 203(a). Section 205 authorizes penalties of up to $25,000 per vehicle. The applicable penalties are listed in section 205(a) of the Act. Among the statutory penalty factors listed in section 205 is ''action taken to remedy the violation,'' which EPA would take into account in determining the ultimate penalty to be assessed. The Agency also has broad injunctive relief authority under section 204, and other applicable injunctive relief provisions, which EPA would use if necessary to require that environmental harm be corrected.

Where a manufacturer has opted out of the program, the manufacturer will remain subject to an enforcement action for failure to make up any outstanding debits within the required time period. Such a manufacturer could make up debits through purchasing credits. If the manufacturer failed to make up the debits, but took other action to remedy the violation, EPA would take this into account in determining the ultimate penalty to be assessed, as discussed above. Failure to make up debits outstanding upon opt-out within the required time frame is a one-time violation.

EPA will also use the mechanism of conditioning the certificate to enforce the requirement that manufacturers not sell credits that they have not generated. If a manufacturer transferred invalid credits, the manufacturer would receive an equivalent number of debits, which the manufacturer would be required to offset by the reporting deadline for the same model year in which the invalid credits were generated. Failure to make up these debits within the required time period would be considered a violation of the condition on the certificate and nonconforming vehicles will not be covered by the certificate. EPA will identify the nonconforming vehicles in the same manner as described above.

When credits are transferred between manufacturers, EPA proposed generally to make both the provider and receiver of credits potentially liable for any credit shortfall resulting from the trade. With today's action, EPA has determined that this is unnecessary in the context of the National LEV program. Instead, EPA will treat traded credits as presumptively valid, which is the approach California takes under its LEV program. Should the credit generator have erroneously sold credits that did not exist, the generator would be liable for making up the resulting deficits and, where appropriate, for violating the regulations governing generation and sale of credits. Where the credit generator provided valid credits, yet a credit shortfall occurred because the recipient held insufficient credits, no liability would attach to the generator. In instances of fraud, EPA retains the authority to enforce against any party to such fraud. EPA believes that the integrity of credit transactions will be sufficiently served by holding the party reporting a shortfall responsible for making up the deficit and retaining enforcement authority against parties improperly transferring credits.

This enforcement mechanism operates in a similar fashion to the comparable mechanism under the California LEV regulations. California focuses on the party reporting a shortfall of credits associated with its fleet average NMOG calculations. One difference in the California and National LEV fleet average NMOG enforcement schemes is that California provides for timely verification of credits while the National LEV program does not. This enables California generally to avoid instances where invalid credits are traded. The National LEV program accounts for this by not holding a credit recipient liable for purchasing invalid credits.

As stated in the discussion on multi-party liability for credit transactions in the Response to Comments document, EPA believes that an enforcement scheme that will charge a party for credits it sells and then generally will only look to the party reporting a shortfall is both fair and efficient in the circumstances of the National LEV program. This approach will create an incentive for credit generators to ensure that the credits they are trading are valid. Putting the burden on the credit generator places responsibility on the party that is best able to ensure the validity of credits through careful trading and record-keeping. This approach also enhances the viability of the market by reducing risks for credit buyers. The risk that credits might be invalidated and the buyer might be liable for a shortfall would create a disincentive for manufacturers to rely

[42] Even in the case where manufacturers make up debits after the deadline there is some cost to the environment from the additional delay in meeting the fleet average NMOG standard.

on credit purchases for compliance, particularly given the difficulty a buyer may have in independently validating credits. In cases where credits have changed hands more than once, enforcing against the credit generator removes any question between the various trading parties as to whose credits actually caused the debit situation and creates a simple enforcement scheme.

There are several aspects of National LEV that reduce the need for multi-party liability in this program. First, once EPA receives the annual compliance reports, it will be very simple to verify whether the credits were actually generated and assign responsibility for the shortfall. If EPA can easily assign responsibility and enforce against one party, there is less need to hold the other party potentially liable as well. Second, because verification is so straightforward, EPA expects few problems with sales of invalid credits. Giving buyers an incentive to help enforce the validity of credits adds relatively little under these circumstances, particularly given that access to production data would be necessary for validation and this is something manufacturers are unlikely to share with competitors. Third, the main benefit to retaining multi-party liability in the National LEV context would be to protect against a situation where one party sells invalid credits and then goes bankrupt, leaving no one liable for either penalties or compensation for the environmental harm. Given the stability of the motor vehicle manufacturing market, EPA believes this is a highly unlikely scenario. In this context, retaining multi-party liability simply to address such an eventuality is not worth the likely disincentive to trading. EPA does not believe, however, that this balancing of advantages and disadvantages would necessarily support the same decision for other differently situated trading programs.

d. Reporting for Fleet Average NMOG Credit Program. Manufacturers are required to prepare an annual report after the end of each model year to demonstrate compliance with the applicable fleet average NMOG standards. Manufacturers must submit the report no later than May 1 of the calendar year following the end of the given model year. Manufacturers must also report any credit transactions for the year as part of the annual report. EPA does not believe that more frequent reporting of trading actions, such as the California program requirement of immediate reporting of trades, is necessary or appropriate under the National LEV program. The only practical benefit to more frequent reporting would be for a credit recipient to verify if credits had already been traded. But under the liability scheme described in today's action, the recipient would generally carry no liability if the credit generator sold it credits that were not available for sale. Thus, more frequent reporting is not necessary to protect the buyer or enforce against the generator in the event of a sale of invalid credits. EPA intends to develop an electronic reporting mechanism that is similar to California's format. The format for reporting fleet average NMOG data will be detailed in a Dear Manufacturer letter from EPA after the final regulations have been published.

The integrity of the proposed fleet average NMOG credit program depends on accurate record keeping and reporting by manufacturers, and effective tracking and auditing by EPA. If a manufacturer fails to maintain the required records, EPA may void the certificates for the affected vehicles ab initio. If a manufacturer violates reporting requirements, the manufacturer is subject to penalties of up to $25,000 per day, as authorized by section 205 of the Clean Air Act.

In the NPRM, EPA proposed to allow manufacturers the opportunity for a hearing if the Agency decided to void a certificate as part of an enforcement action. EPA is including this language in the final rule, but is clarifying the scope of its application. A hearing would not be available for determination that certain vehicles were not covered by a certificate due to a violation of a condition of a certificate, such as an exceedance of the fleet average NMOG requirements. In this situation EPA is not suspending or revoking the certificate. Rather, EPA is applying a limitation included in granting the certificate to determine which vehicles the certificate covers. Moreover, if EPA brought an enforcement action against a manufacturer based on a determination that certain vehicles were not covered by a certificate when sold, such an action would provide the manufacturer an opportunity for a hearing at that juncture. However, if EPA voids a certificate ab initio, manufacturers would have an opportunity for a hearing on that action of voiding the certificate.

4. Limits on Sale of Tier 1 Vehicles and TLEVs

As recommended by the OTC States and the manufacturers, today's rule contains two limits on the sale of TLEVs and Tier 1 vehicles in the OTC States after MY2000. First, the rule places a five percent cap on sales of Tier 1 vehicles and TLEVs in the NTR starting in MY2001. The industry-wide number of these LDVs and LLDTs sold in a model year in the NTR is limited to five percent of the total number of new National LEV motor vehicles sold in that model year in the NTR. Second, manufacturers may sell Tier 1 vehicles and TLEVs in the NTR after MY2000 only if the same engine families are certified and offered for sale in California as Tier 1 vehicles and TLEVs in the same model year. These requirements address concerns raised by some parties regarding whether National LEV would achieve NO_X emissions equivalent to OTC LEV (and thus to OTC state-by-state adoption of CAL LEV programs). As discussed in greater detail in the NPRM (60 FR 52751(col.1)), the concern is that the higher fleet average NMOG standards under National LEV might allow manufacturers to sell relatively greater numbers of Tier 1 vehicles and TLEVs in the OTR than they could have sold under OTC state-by-state adoption of CAL LEV programs, which could have a disproportionate effect on NO_X emissions. The final rule modifies the proposed limit on the sale of these vehicles in a few respects to simplify its administration.

As proposed, EPA would assess compliance with the five percent cap on the basis of the total sales of vehicles by all manufacturers in the NTR in a given model year.[43] If the industry-wide cap is exceeded, EPA would allocate responsibility for that exceedance among individual manufacturers whose sales of Tier 1 vehicles and TLEVs exceeded five percent of the number of vehicles in their individual NTR fleets. Each of these manufacturers would be responsible only for its pro rata share of the industry-wide exceedance, not for the amount by which it exceeded five percent of its own fleet. For example, assume the industry-wide five percent cap was exceeded by 20 vehicles, manufacturers A and B were the only ones who exceeded a manufacturer-specific five percent cap, manufacturer A exceeded five percent of its fleet by 100 vehicles, and manufacturer B exceeded five percent of its fleet by 300 vehicles. Manufacturer A would be responsible for five vehicles, while manufacturer B would be responsible for 15 vehicles.

Apart from the provision for industry-wide averaging to determine the total number of vehicles violating the five percent cap, this approach does not

[43] This total would not include vehicles sold by a manufacturer that had opted out of National LEV, regardless of whether EPA determined the opt-out to be valid.

otherwise provide for compliance through averaging, banking and trading. As discussed at length in the NPRM (60 FR 52751–52754), a trading system is extremely difficult to use to enforce an industry-wide violation. None of the commenters offered any suggestions as to a workable way to retain trading to meet the five percent cap agreed to by the OTC States and manufacturers. Nevertheless, the approach in the final rule maintains the most important aspect of flexibility for manufacturers in that it assesses compliance industry-wide and only holds individual manufacturers responsible for their pro rata share of the industry-wide exceedance.

Enforcement of the five percent cap will be delayed until the first full model year following a model year in which EPA notifies manufacturers that they have exceeded the industry-wide five percent cap. This ensures that manufacturers likely to sell Tier 1 vehicles and TLEVs in excess of five percent of their individual fleets will have warning that the industry as a whole may not be below the five percent cap. Those manufacturers will then be able to reduce their own percentage production of Tier 1 vehicles and TLEVs beginning in the following model year, which would be the first year in which EPA could enforce the five percent cap.

This delayed enforcement of the five percent cap substitutes for a trading approach by allowing manufacturers time to adjust their production after an industry-wide exceedance rather than protecting themselves prior to an industry-wide exceedance by purchasing credits. While this delayed enforcement approach has the potential to allow up to two years of exceedances of the five percent cap, EPA does not believe this is sufficient to affect the acceptability of emissions reductions from National LEV when compared to those that could be produced by OTC state-by-state adoption of CAL LEV programs. EPA believes that both the likelihood of an industry-wide exceedance and the emissions impact of such an exceedance, if it occurred, are very small. Moreover, the administrative burden of a trading program without delayed enforcement greatly outweighs the potential environmental benefits of the approach adopted here.

As proposed, low volume manufacturers are exempt from the five percent cap provisions. EPA recognizes that these manufacturers may lack the flexibility in their product line that would allow them to adjust the makeup of their fleet to meet this requirement. Also their small market share means that the potential contribution of increased NO_X emissions from these manufacturers would be insignificant.[44] Vehicles produced by low volume manufacturers will not be included in calculating the industry-wide total number of vehicles sold in the NTR or industry-wide compliance with the five percent cap.

Coupled with the five percent cap is a requirement that beginning in MY2001, manufacturers will be able to offer Tier 1 vehicles or TLEVs for sale in the NTR only if the same engine families are certified and offered for sale in California in the same model year.[45] This requirement applies to all manufacturers, including low volume manufacturers. This provision should reduce the likelihood that the industry will ever exceed the five percent cap by encouraging the same sales mix under National LEV and OTC state-by-state adoption of CAL LEV programs. To meet the tighter NMOG standards in California, manufacturers will need to produce a mix of engine families that includes relatively fewer Tier 1 vehicles and TLEVs but still meets consumer demand for a range of types of vehicles.[46] Because consumer demand for a given type of vehicle does not tend to vary widely by region, once limited to producing a certain number of Tier 1 and TLEV engine families for California, manufacturers are unlikely to sell a significantly different vehicle mix in the OTR. The National LEV provision for reduced reporting requirements for manufacturers with 100 percent LEV fleets provides an additional incentive for manufacturers not to produce any Tier 1 vehicles and TLEVs.

Both of these limits on sales of Tier 1 vehicles and TLEVs would be implemented and enforced in the same manner as the fleet average NMOG standards. The certificate for each Tier 1 vehicle and TLEV produced and offered for sale in the NTR in MY2001 and later model years would be conditioned on demonstrating compliance with the five percent cap provisions; it would also be conditioned on the manufacturer certifying and offering for sale the same engine families in California in the same model year. If a manufacturer failed to comply with these requirements, then each noncomplying vehicle would be deemed to be in violation of the certificate of conformity. For a violation of the five percent cap, the number of noncomplying vehicles would correspond to the manufacturer's pro rata share of the industry-wide exceedance. EPA would determine these noncomplying vehicles in the same manner as for violations of the fleet average NMOG standards, starting with vehicles in engine families with the highest certification NMOG values.

Manufacturers would not be required to prepare an annual report demonstrating compliance with the five percent cap provision because all relevant data will be provided to EPA under the requirements of the fleet average NMOG program. However, manufacturers would still be required to maintain accurate records and failure to do so could result in EPA voiding ab initio the certificates of the affected vehicles and imposing any other applicable penalties.

5. Tailpipe Emissions Testing

This section discusses how exhaust emission standards will be measured for NLEVs during vehicle certification testing. To specify the exhaust emission standards that NLEVs must meet, it is necessary to specify the test procedure and fuel used to measure exhaust emissions. For the National LEV program, this is complicated by the fact that EPA has recently completed revisions to its test procedure used to measure exhaust emissions. 61 FR 54852 (October 22, 1996). CARB is also in the process of changing its test procedure. This section discusses how the National LEV program will be affected by the EPA and CARB changes to the FTP. This section also discusses the test fuel to be used for measuring National LEV exhaust emissions.

a. Federal Test Procedure. The FTP, as revised, is the vehicle test procedure that will be used by EPA and CARB to determine compliance of LDVs and LDTs with the conventional or ''on-cycle'' exhaust emission standards. EPA and CARB use the FTP to test vehicle emissions performance over a ''typical'' driving schedule, using a dynamometer to simulate actual road conditions. EPA recently revised the FTP to replicate actual driving patterns more accurately. In addition to requiring an equipment change to the existing FTP, the revisions add new ''off-cycle'' test sequences (Supplemental Federal Test Procedure or SFTP) and standards to control emissions under driving patterns not

[44] For example, in MY1994, low volume manufacturers accounted for less than 0.5 percent of the overall motor vehicle fleet.

[45] This requirement would not apply to a manufacturer supplying Tier 1 vehicles pursuant to an opt-out from National LEV that EPA had determined to be invalid during the period that the determination was undergoing legal challenge.

[46] The CARB fleet average NMOG standard for passenger cars for MY2001 is 0.070 g/mi, which is below the comparable NMOG standard for LEVs. Thus, a manufacturer will likely have to produce a fleet of mostly LEVs and ULEVs to meet this California requirement.

tested under the old FTP.[47] This section discusses the revisions to the FTP and their ramifications for National LEV.

The FTP revisions have been under consideration for several years. As the Agency noted in the preamble to the National LEV proposal, EPA was pursuing changes to the FTP through a separate rulemaking under section 206(h) of the CAA, which requires EPA to ''review and revise as necessary [the FTP] to insure that vehicles are tested under circumstances which reflect the actual current driving conditions under which motor vehicles are used. * * *'' After an extensive test program and review of available data, the Agency concluded in 1994 that modifications to the FTP were necessary. Shortcomings identified in the review included a poor representation of actual road load conditions by the standard FTP dynamometer and regimes of non-FTP or ''off-cycle'' driving whose absence from the existing FTP drive cycle (the Urban Dynamometer Driving Cycle or UDDS) had potentially significant emissions impacts.

EPA published a Revised FTP proposal on February 7, 1995 (60 FR 7404). Key elements of the proposal were an improved dynamometer specification, and new off-cycle requirements for aggressive driving and air conditioning emission standards, and a new Supplemental Federal Test Procedure (SFTP) for determining compliance with those standards. The only major change proposed for on-cycle compliance was the dynamometer revision (e.g., the UDDS itself was unmodified). The stringency of the proposed off-cycle emission standards was based on the technologies found in vehicles certified to the current, federal on-cycle (Tier 1) emission standards. A final rule implementing the SFTP was published on October 22, 1996. 61 FR 54852. EPA did not propose LEV-stringency off-cycle standards as part of its Revised FTP rulemaking or as part of the National LEV rulemaking.

EPA and CARB have coordinated closely their review of the FTP, their research efforts, and the development of their respective off-cycle policies. (The vehicle manufacturers have also contributed significant testing resources and technical analysis to the program.) CARB is likely to make changes identical to EPA's changes to the on-cycle test procedure. CARB also is likely to adopt off-cycle standards and requirements that it deems appropriate for TLEVs, LEVs, and ULEVs. The American Automobile Manufacturers Association (AAMA), the Association of International Automobile Manufacturers (AIAM), and CARB have now reached an agreement regarding off-cycle emission standards for LEVs and ULEVs. The agreement to date is summarized in correspondence (available in the public docket for this rulemaking) between the auto manufacturers and CARB. That agreement centers upon establishing low-mileage (4,000 miles) emission standards to assure control of emissions from new motor vehicles using the off-cycle driving schedules, while relying on a revised FTP, as well as OBD II systems, to monitor deterioration of in-use emissions. The 4,000 mile standard for LEVs and ULEVs is believed to require controls significantly more stringent than would be required by applying the recently promulgated federal off-cycle standards. CARB released a public mailout on April 3, 1997, that details their proposed off-cycle emissions standards, and expects to submit a proposal to their Board in July of 1997. The auto manufacturers have concluded that the finalized CARB SFTP standards, if consistent with their agreement with CARB, are appropriate to extend to the National LEV program.

In the National LEV NPRM, EPA proposed to apply the Revised FTP (both on-cycle and off-cycle components), once it was finalized, to vehicles in the National LEV program. Further, the Agency stated its intent to harmonize National LEV requirements with any off-cycle FTP revisions that California subsequently adopts for its LEV program. The Agency received only one comment in response to the National LEV proposal on the interplay between the Revised FTP effort and the National LEV rule. That comment supported including the SFTP and the associated off-cycle emission standards in the Stable Standards.

EPA's treatment of the FTP in this final National LEV rule is consistent with the proposal. Changes to the light-duty test procedures promulgated in EPA's final Revised FTP rulemaking apply to NLEVs as well as to the rest of the light-duty fleet. Thus, the revised FTP will be used to determine compliance with the TLEV, LEV, and ULEV on-cycle exhaust standards set forth in IV.B.1. In addition, unless and until California adopts off-cycle standards for LEVs and ULEVs, all NLEV vehicles must meet the off-cycle exhaust standards recently adopted by EPA (40 CFR 86.000–8 and 40 CFR 86.000–9). EPA intends to take further comment in the SNPRM on what off-cycle standards and phase-in should apply to all vehicle types in the National LEV program if California adopts off-cycle standards for LEVs and ULEVs. EPA intends to harmonize its off-cycle standards for LEVs and ULEVs with California once California adopts such standards. If the final CARB SFTP standards are consistent with the CARB/manufacturer agreement, EPA intends to propose to adopt the CARB 4,000 mile standard for LEVs and ULEVs under the NLEV program, which would probably make compliance with the recently promulgated federal off-cycle standards unnecessary for these vehicle types.

b. Compliance Test Fuel. EPA is today adopting the National LEV compliance fuel provisions as they were proposed. Manufacturers will determine their certification fuel specifications for exhaust testing of both petroleum and alternative fuel NLEVs according to California's certification fuel requirements. Those regulations currently include the option to certify gasoline TLEVs, LEVs, and ULEVs on either federal fuel or California Phase II reformulated gasoline. Tier 1 vehicles must continue to be certified on federal fuel. The approach to specifications for alternative fuels and the rationale for that approach are the same as given in the NPRM (50 FR 52755 (col. 3)).

Data presented by California and others during the adoption of California's LEV program emission standards show that the use of California Phase II gasoline will reduce vehicle emission levels during exhaust testing compared to testing using federal certification fuel, thus having a direct impact on the ability of manufacturers to meet the standards. In the NPRM, EPA stated a belief that it cannot allow the use of California Phase II gasoline to demonstrate compliance with Tier 1 standards because that would not demonstrate compliance with the mandatory federal standards, but solicited comment on this issue. EPA is finalizing its proposed requirement that federal fuel must be used to certify Tier 1 vehicles.

There are several logistical reasons to allow manufacturers to use California Phase II as a certification fuel in the National LEV program. Allowing use of the same certification fuel in the California and federal programs will reduce the manufacturers' cost of demonstrating compliance, while still ensuring that the CAA-mandated exhaust standards are met. Moreover, under OTC state adopted LEV programs, all the OTC States would be required to allow the use of California Phase II gasoline for emission compliance. Consequently, using California Phase II

[47] For purposes of this discussion, the FTP is the old on-cycle test procedure. The FTP, as revised, is the on-cycle test procedure with the new dynamometer. The SFTP is the test procedure for the off-cycle driving patterns.

gasoline for certification demonstrations in OTC States will not reduce the environmental benefits of National LEV relative to the benefits of OTC state-by-state adoption of CAL LEV programs.

The use of California Phase II gasoline for certification and compliance testing does not mean that in-use fuels will need to be changed to conform to the test fuel. In-use fuels, which are not being changed as a result of National LEV, are discussed later (section IV.B.7.).

c. NMOG vs. *NMHC.* Today's rule adopts California's NMOG measurement procedure to measure hydrocarbon (HC) emissions for the National LEV standards, as described in more detail in the NPRM (60 FR 52755). The measurement of oxygenated HC is more accurate under the NMOG procedures as compared to the current federal method. Moreover, vehicles that meet the TLEV, LEV, or ULEV NMOG standard will clearly be in compliance with the federal Tier 1 NMHC standard.

d. Reactivity Adjustment Factors. The National LEV program adopts California's approach of using RAFs to adjust vehicle emission test results to reflect differences in the impact on ozone formation between an alternative-fueled vehicle and a vehicle fueled with conventional gasoline. The reasons for using RAFs for alternative-fueled vehicles are described fully in the NPRM (60 FR 52756 (col. 1)). California has already developed RAFs for some fuel types—including California Phase II gasoline—and has a process in place to develop RAFs for fuels that do not yet have them. Additionally, California allows manufacturers to use this process to develop their own engine family-specific RAFs and RAFs for fuel types for which California has not yet developed them. In the National LEV program, the Agency will use the RAFs already adopted by California for alternative-fueled vehicles certifying to the National LEV standards, and intends to incorporate RAFs that California develops for other fuels, as California develops and adopts them. EPA will also allow manufacturers certifying to the National LEV standards to develop their own RAFs, subject to Agency approval, using the California process for RAF development.

EPA received comments both supporting and opposing the adoption of California's RAF provisions. The Agency has determined that the application of RAFs adopted in California for certification of vehicles to the National LEV standards on a nationwide basis, as proposed, is within the scope of EPA's authority under the CAA, and is reasonable and appropriate to further the goal of harmonization of the federal and California motor vehicle emissions control programs. See the Response to Comments documents for further discussion.

6. On-Board Diagnostics Systems Requirements

The National LEV program requires on-board emissions diagnostics systems that meet California's second phase OBD requirements (OBD II), except that compliance with the tampering protection provisions of the California OBD II regulations is not required. For reasons specified in the **Federal Register** notice of court decisions regarding Agency regulations,[48] the Agency has vacated and subsequently deleted OBD-related tampering protection requirements from the federal OBD regulations. In the National LEV proposal, EPA specifically excluded the anti-tampering provisions of the California OBD II requirements from the National LEV regulations. The Agency has maintained this approach in these final regulations. The incorporation of California OBD II into these regulations specifically excludes paragraph (d), the anti-tampering provisions (see Appendix XIII in 40 CFR part 86, paragraph (e)). Therefore National LEV carries no requirement that vehicles comply with the tampering protection provisions of the California OBD II regulations. With the exception of the additional provisions discussed in the following paragraph, the OBD requirements for National LEV program vehicles are finalized as they were proposed. For a discussion of the California OBD II requirements and the rationale for EPA's adoption of them, see the NPRM (60 FR 52755).

In response to comments received by EPA (see Response to Comments for additional detail), the Agency has added language to these final regulations specifying that all vehicles certified under this program must meet the requirements of sections 202(m) (4) and (5) of the CAA. Commenters asserted that, even if EPA were not to include the OBD II anti-tampering requirements with the National LEV regulations, EPA would, nevertheless, be in violation of CAA sections 202(m)(4) and 202(m)(5), should a vehicle be certified nationally that contained California's OBD II anti-tampering measures. As EPA is taking no action in this rulemaking that would change manufacturer obligations or options regarding the use of anti-tampering measures, EPA does not address this claim in this rulemaking. In a separate proceeding dealing with California's request for a waiver of preemption for its OBD II program under section 209 of the Act, the Agency has considered the issue of whether a vehicle certified to all of California's OBD II requirements, including compliance with the tampering protection provisions of OBD II, is in violation of section 202 (m)(4) or (m)(5). (*See* Docket No. A–90–28, 61 FR 53371 (October 11, 1996)). However, EPA intends to ensure that no vehicle certified under the National LEV program violates sections 202(m) (4) or (5) of the Act. Thus, EPA has added language to the final regulations making clear that any manufacturer attempting to certify a vehicle under the National LEV program will not be permitted to do so if the vehicle violates sections 202(m) (4) or (5). Thus, if it is determined that California's tampering protection provisions violate sections 202(m) (4) or (5), vehicles with such equipment will not be permitted under the National LEV program.

EPA also received a comment stating that EPA's Service Information Availability (SIA) regulation (40 CFR 86.094–38(g)) will be circumvented by this rulemaking. However, the National LEV regulations do not circumvent EPA's SIA regulations. Such SIA regulations apply fully to all vehicles certified under the National LEV program, as is true for all part 86 regulations not specifically superseded by subpart R.

The commenter also stated that EPA should not allow states outside California to adopt California regulations, including OBD II. The CAA does not give EPA authority to prevent states from adopting California's regulations. To the contrary, the CAA specifically gives states the right to decide whether to adopt California's program. Under section 177, states have full authority to promulgate California emission standards and other procedures. Two states have had such regulations in effect for several years and four more have recently adopted such regulations. EPA has only an indirect role in this state process and cannot prevent any state from adopting California regulations. EPA notes that section 177 of the Act provides stringent guidelines for states that wish to implement California's emissions control standards: state standards must be identical to California standards; states may not cause the creation of a ''third vehicle;'' and states may not limit the manufacture or sale of a motor vehicle that has been certified as meeting California's standards. Thus, as long as California's anti-tampering provisions remain in place, states may

[48] 59 FR 51114 (October 7, 1994).

be somewhat constrained by CAA section 177 to accept California's anti-tampering requirements.

On the other hand, the National LEV program that EPA is approving today specifically excludes the anti-tampering requirements from its regulations, thus providing manufacturers with the ability not to include such provisions in their vehicles. It also contains specific language stating that all vehicles certified under this program must meet the requirements of CAA sections 202(m) (4) and (5). Thus, the National LEV program actually provides considerably more protection for the commenters than would the state LEV programs which the National LEV program would replace.

7. In-Use Fuel

In the proposal, EPA reiterated a set of three principles agreed upon by representatives of the auto industry, some segments of the oil industry, and the OTC States:

(1) Adoption of the National LEV program does not impose unique gasoline requirements on any state. Gasoline specified for use by any state will have the same effect on the National LEV program as on the OTC LEV program.

(2) Testing is needed to evaluate the effects of non-California gasoline on emissions control systems.

(3) If testing results show a significant effect, EPA will conduct a multi-party process to resolve the issue without adversely affecting SIP credits or actual emission reductions when compared to OTC LEV using fuels available in the OTR or imposing obligations on manufacturers different from the obligations they would have had under OTC LEV.

One area where discussions have already started relates to current auto and oil industry studies that address, among other things, the possibility that changes in the malfunction indicator light (MIL) illumination criteria for National LEV on-board diagnostics systems might be appropriate. Provided that the above criteria were met and the manufacturers agreed, the National LEV program would not preclude a future EPA rulemaking to change the MIL illumination criteria for the OBD systems. EPA has recently issued a discussion paper summarizing its current understanding of sulfur effects on OBD catalyst monitoring on LEVs and will continue working with interested parties in developing a resolution of this issue.[49]

The Agency's approach to in-use fuels for the National LEV program remains essentially the same as was presented in the proposal. EPA is adopting the National LEV program on the condition that it does not require a change in federal fuel regulations. Thus, section 86.1705–97(g)(5) requires auto manufacturers to design National LEV vehicles to operate on fuels that are otherwise required under applicable federal regulations.

EPA retains its authority to adopt new fuel requirements for reasons other than the sale or design of vehicles sold because of the National LEV program.

8. Hybrid Electric Vehicles

The National LEV program adopts California's approach to regulating emissions from HEVs, which is discussed fully in the NPRM (60 FR 52756). HEVs are powered by batteries, but also use a small combustion engine for additional range. The emissions from HEVs range from none, when running off the battery, to levels similar to TLEVs, when using the combustion engine. For certification, HEVs will be tested with the engine operating at worst case conditions over the standard test cycle. An HEV must meet the TLEV, LEV, or ULEV emission standards based on emissions from its combustion engine. This ensures that in the worst case situation, HEVs will still comply with the least stringent set of LEV standards. However, some HEVs will have to demonstrate compliance with different, somewhat less stringent, useful life standards for certification, depending upon the type of HEV being certified. In addition, an HEV's contribution to the manufacturer's NMOG fleet average will be calculated to account for the emissions benefits of its battery-powered operations. This approach is consistent with California's methodology for calculating a manufacturer's compliance with the NMOG fleet average standards.

The Agency is also adopting California's definitions of the following terms: electric vehicle, hybrid electric vehicle, series hybrid electric vehicle, and parallel hybrid electric vehicle. One commenter on the NPRM stated that these definitions are unnecessarily narrow and could adversely affect the United States fuel cell industry. The Agency acknowledges the commenter's concerns, but believes that the vehicle for change in this case rests with CARB. CARB staff have acknowledged the need to amend the current regulations as they pertain to HEVs given the rapid advancement of technology in the last five years, and are consequently preparing to revise and update their program to deal with these types of vehicles more appropriately. Although the timing of CARB's final action is not certain, EPA intends to make changes to the National LEV regulations to incorporate CARB's finalized actions if and when it becomes appropriate to do so. The Response to Comments document contains additional discussion regarding this issue.

C. Low Volume and Small Volume Manufacturers

Today's rule adopts a new term, ''low volume manufacturer,'' to mean a manufacturer that meets the California definition of a small volume manufacturer[50] and that has no more than 40,000[51] sales nationwide of LDVs and LLDTs per model year, based on the average sales over the last three model years. This definition will be used solely to determine the NMOG fleet average applicable to low volume manufacturers and whether a manufacturer must comply with the five percent cap on OTR sales of Tier 1 vehicles and TLEVs. Under today's rule, low volume manufacturers will not have to meet an NMOG average until MY2001, when they must meet an NMOG average of 0.075 g/mi in both the NTR and the 37 States trading regions. This treatment is consistent with the California LEV program's treatment of these manufacturers. The Agency will continue to apply the federal small volume manufacturer provisions, which provide relief from emission data and durability showings and reduce the amount of information required to be submitted, to small volume manufacturers (as defined in current federal regulations). Further explanation of and rationale for the low volume manufacturer provisions are provided in the NPRM (60 FR 52756–52757).

D. Legal Authority

EPA has statutory authority to promulgate the National LEV standards under sections 202(a) and 301(a) of the CAA, as discussed more fully in the NPRM (60 FR 52757–52758). Section 202(a)(1) directs the Administrator to prescribe standards for control of air pollutant emissions from motor vehicles. This is an affirmative grant of

[49] OBD & Sulfur White Paper, March 1997, (Docket No. A–95–26, IV–B–06).

[50] California defines a small-volume manufacturer as a manufacturer with sales in California of no more than 3000 vehicles that meet the CARB definitions of passenger cars, light-duty trucks, and medium-duty vehicles per model year, based on the average sales over the last three model years.

[51] EPA had requested comment on the appropriate level for a national annual sales limit. The Agency chose 40,000 as the level that will preclude post-NLEV attempts to ''game'' the program while still allowing manufacturers to proceed with current vehicle distribution decisions.

authority to the Administrator that allows her to set voluntary, as well as mandatory, motor vehicle air pollution standards. Today's voluntary standards are not precluded by section 202(b)(1)(C), which states that it is the intent of Congress that EPA not modify the mandatory ''Tier 1'' standards, promulgated under section 202(g), prior to MY2004. In addition, section 301(a) authorizes the Administrator to promulgate regulations necessary to carry out her functions under the Act. The voluntary standards proposed here fall within the Administrator's duty to implement the broad air pollution reduction purposes of the Act.

Section 202(a)(1) gives the Administrator authority to promulgate regulatory standards for emissions of air pollutants from motor vehicles. This subsection provides:

> [T]he Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class * * * of new motor vehicles * * *, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

This is a broad grant of authority to the Administrator to prescribe standards, including voluntary standards, to regulate emissions that contribute to air pollution. Section 202(a) of the Act expressly allows—in fact, it requires—EPA to promulgate emission standards for motor vehicles. The language of section 202(a) does not indicate that such standards be limited to mandatory standards.

The National LEV program will regulate HCs, CO and NO_X. These three pollutants are among the most significant contributors to air pollution in the United States and, thus, ''may reasonably be anticipated to endanger public health or welfare.'' The strong CAA focus on controlling these pollutants indicates Congress' concern about the harm they cause and the need for their reduction.

Section 202(a) authorizes EPA to issue the fleet average NMOG standard (and the five percent cap on Tier 1 and TLEV sales in the OTR), as well as the emission standards individual vehicles must meet. That section's reference to ''standards applicable to the emission of any air pollutant'' includes requirements that are applicable to fleets of vehicles. ''Standards'' does not merely mean the emission levels to which individual vehicles are tested. For example, section 202(g) requires the Agency to promulgate ''standards which provide that emissions from a percentage of each manufacturer's sales volume of such vehicles and trucks shall comply [with specified levels].'' Thus, the Agency may promulgate standards, such as fleet averages, phase-ins, and averaging, banking, and trading programs, that are fulfilled through compliance over an entire fleet, or a portion thereof, rather than through compliance by individual vehicles.

The Administrator's authority under section 202(a)(1) is limited only by the requirement that such standards be ''in accordance with the provisions of'' section 202. As discussed in the NPRM, nothing in section 202 bars EPA from adopting emission standards that would be binding if and only if a manufacturer were to opt into them. Nor is any provision of section 202 inconsistent with a voluntary approach, so as to implicitly bar EPA's action.

The voluntary standards do not conflict with section 202(b)(1)(C), which prohibits EPA from changing the Tier 1 emissions standards prior to MY2004. Section 202(b)(1)(C) states that ''[i]t is the intent of Congress that the numerical emission standards specified in subsections (a)(3)(B)(ii), (g), (h), and (i) shall not be modified by the Administrator * * * for any model year before the model year 2004.'' This language indicates Congress' intent to prohibit modification of the mandatory federal Tier 1 standards for NMHC, NO_X, CO and PM. The promulgation of National LEV would not modify the Tier 1 standards because the program merely creates a set of voluntary standards, authorized under section 202(a), that manufacturers are permitted, but not required, to accept. EPA would not be modifying the Tier 1 standards itself. The Tier 1 standards will remain in effect, but manufacturers could choose to meet them by opting into National LEV. For manufacturers that do not opt into National LEV, the Tier 1 standards will be fully applicable. Congress did not intend to prevent manufacturers from voluntarily agreeing to meet reduced emission standards.

Some comments state that section 202(b)(1)(C) does not distinguish between voluntary and mandatory standards. However, such comments are inapposite. Section 202(b)(1)(C) does not prevent voluntary standards; on the contrary, it merely prohibits modifications to the Tier 1 standards. Since the National LEV program does not modify the mandatory Tier 1 standards, which remain fully effective, it is not prohibited by section 202(b)(1)(C). In fact, though the court in *Virginia* v. *EPA*, No. 95–1163 (D.C. Cir. March 11, 1997), found that section 202(b)(1)(C) forbids EPA from ''requir[ing], mandat[ing], order[ing], or impos[ing] conditions demanding that any state enact particular motor vehicle emission standards,'' *slip op.* at 32, the court specifically declined to make any determinations regarding the proposed National LEV program, noting that the ''program is voluntary,'' *slip op.* at 10, n.4. This language implicitly distinguishes the National LEV program from the mandated program struck down in that case.

Moreover, the voluntary standards approach does not violate the intent of section 202(b)(1)(C) because it would expand, not restrict, motor vehicle manufacturers' options. Congress passed section 202(b)(1)(C) to protect manufacturers from EPA actions mandating a more restrictive national motor vehicle emissions program. However, in the context of the states' adoption of California LEV programs, these voluntary regulations actually have the effect of allowing manufacturers more flexibility in meeting their legal requirements. Were the voluntary standards program not promulgated, manufacturers would have to meet state LEV programs in the Northeast. The promulgation of the voluntary standards provides manufacturers with another method of meeting emission requirements in the Northeast. It would be an absurd result for section 202(b)(1)(C), which was enacted to protect manufacturers from regulations requiring tighter emission standards, to be interpreted to prevent manufacturers from volunteering into a program that would relieve them from meeting state regulations requiring such tighter standards.

Regarding comments that parties other than manufacturers are affected by the National LEV program, EPA's authority to require automobiles to meet emissions requirements under section 202(a) is directed towards automobile manufacturers. Though other parties may be indirectly affected by regulations promulgated under section 202, only manufacturers are directed to act in a certain manner by these regulations. Manufacturers are, of course, always permitted to build vehicles that meet a more stringent standard. In fact, manufacturers currently produce many vehicles that meet California's emission standards (50-state vehicle families). The effect of the National LEV program on other parties is no different than the effect on such parties if a manufacturer decided, in the absence of this program, to build vehicles to more stringent standards. The decision as to what emissions level a vehicle will meet is the choice of the

manufacturer based on marketing and other business decisions.

Moreover, this national emissions program creates significant benefits to consumers throughout the nation. Numerous states throughout the nation contain areas that are not in attainment with the National Ambient Air Quality Standard for ozone. Reductions in other pollutants also help produce cleaner air in areas throughout the nation regardless of their ozone status. Congress recognized that a central national program for control of emissions from automobiles is the best way to manage emissions from new motor vehicles. This is why Congress specifically preempted states from promulgating their own emission reduction programs for new motor vehicles in section 209 of the Act. The only exception in the Act is for California, which has special environmental concerns that are explicitly recognized by Congress. Other states may only use the federal auto emissions program or standards identical to California's standards. Manufacturers have stated, in fact, that even this limited ability of individual states to ''piggyback'' on California's regulations can cause significant commerce and cost concerns. Thus, the federal National LEV program appears to be consistent with the intent of Congress to encourage consistent vehicle regulations throughout the United States.

Section 301(a) provides a further source of EPA authority to promulgate the voluntary standards. Section 301(a) authorizes the Administrator ''to prescribe such regulations as are necessary to carry out his functions under this chapter.'' The primary purpose of the CAA is to protect and enhance the quality of the Nation's air resources by reducing air pollution. Controlling emissions from mobile sources is a key means for achieving the Act's purpose, and Congress recognized this in enacting the mobile source provisions. In addition, in numerous places throughout the Act, Congress demonstrated its concern that these goals be achieved in an efficient and cost-effective manner, minimizing the costs of air pollution control to the extent possible. In promulgating these voluntary standards, the Administrator is advancing the basic pollution reduction goals of the CAA in a manner that supports state efforts and is relatively cost-effective compared to OTC state-by-state adoption of CAL LEV programs. Because the decision to be subject to these standards is voluntary, EPA is simply providing an opportunity for an alternate means of compliance, rather than mandating new requirements for manufacturers. These actions are consistent with section 202 and the rest of the Act, and are well within the Agency's broad authority under section 301(a).

E. Enforceability and Prohibited Acts

As discussed in the NPRM, once manufacturers have opted into the voluntary program, the program will become fully enforceable against them. Manufacturers will be liable for compliance with these regulations to the same extent they are liable for compliance with other federal motor vehicle regulations. The manufacturers will have to comply with virtually the same testing regime (certification, SEA, and in-use recall testing) and the same warranty requirements as for other standards. Any manufacturer that has opted into the program and subsequently fails to comply with the requirements of the program will be subject to sanctions under sections 203, 204 and 205 of the Act.

Manufacturers and other violators do not have a defense regarding the applicability of these sections to the voluntary program because such applicability is explicitly found in the regulations. Under section 307(b), any challenge to the National LEV provisions must be made within 60 days of publication of the final rule. Failure to challenge these regulations within the 60 day period for judicial review will prevent any person from subsequently challenging the enforceability of these regulations. In addition, in their opt-in notifications, manufacturers will have committed not to challenge EPA's legal authority to establish and enforce the National LEV program, and to seek to certify vehicles only in compliance with the National LEV requirements.

V. National LEV Will Produce Creditable Emissions Reductions

The National LEV NPRM included an extensive discussion of the criteria for National LEV to be an ''acceptable LEV-equivalent program'' for purposes of satisfying the OTC LEV SIP call. In light of the OTC LEV court decision invalidating the OTC SIP call (see III.C.3. above), there is no longer any federal legal requirement for National LEV to be an acceptable LEV-equivalent program. Nevertheless, it is still useful to look at the factors that EPA proposed to consider in making its determination. These factors bear on whether National LEV will be acceptable to both the OTC States and the manufacturers, and whether EPA will be able to grant states SIP credits for National LEV.

EPA proposed to define an acceptable LEV-equivalent program as a program that (1) would achieve VOC and NO_X emissions reductions from mobile sources in the OTR equivalent to or greater than those that would be achieved by OTC LEV, and (2) would be enforceable. It is still important for EPA to consider these factors in promulgating the National LEV program, although the factors now have a different legal significance. The first criterion, emissions equivalency, is no longer a legal requirement. Nonetheless, EPA anticipates that when the OTC States decide whether to commit to National LEV, they will be interested in whether National LEV would achieve emissions reductions equivalent to the reductions that the OTC States would achieve absent National LEV. The second criterion, enforceability, retains legal significance; for EPA to credit states for SIP purposes with emissions reductions from National LEV, National LEV must be enforceable for its anticipated duration.

As to the first criterion, EPA today finds that National LEV, as set forth in today's rule, and OTC LEV, as set forth in the OTC LEV SIP call, would produce equivalent VOC and NO_X emissions reductions. With respect to the second criterion, EPA finds that National LEV is enforceable with respect to the elements of the program that are completed in this rule. In promulgating the final outstanding provisions of National LEV for OTC State commitments and related issues, EPA will have to ensure that the complete program is adequately enforceable for states to rely on National LEV for emissions reductions and for EPA to grant states SIP credits on this basis.

This rule also establishes the criteria for a subsequent finding that National LEV is in effect. Once manufacturers have opted into and the OTC States have committed to National LEV, if the criteria for an in-effect finding are met, EPA will find that the program is in effect and will publish that finding in a **Federal Register** notice. Once EPA has found National LEV in effect, the National LEV emissions standards will be enforceable against covered manufacturers for the duration of the program.[52]

[52] As discussed in the proposal, a number of parties have suggested that advancing motor vehicle pollution control technology is an important benefit of OTC LEV and should be a criterion for determining whether National LEV is an acceptable LEV-equivalent program. Although EPA agrees that advancing technology is an important policy goal, and EPA believes that the National LEV program could be a part of an agreement that would provide important opportunities to promote ATVs, the

Continued

A. Emissions Reductions From National LEV

There is no longer any federal legal requirement for the emission reductions from National LEV to be equivalent to those from OTC LEV. Nevertheless, to help the parties evaluate the relative merits of National LEV compared to OTC state-by-state adoption of the CAL LEV program, EPA is here presenting its conclusion that the NO_X and VOC emissions reductions from new motor vehicles within the OTR under National LEV would be equivalent to those produced by each OTC State's adoption of the CAL LEV program within the timeframe provided by the OTC LEV SIP call, based on EPA's modeling of the two programs. All of EPA's analyses of this issue lead to the same conclusion: given current assumptions about future vehicle performance and given the best currently available information about the migration of people and vehicles, it is reasonable to conclude that the NO_X and VOC emissions benefits in the OTR of the National LEV program and each OTC State's adoption of the CAL LEV program are essentially equivalent. EPA has reviewed the comments on equivalency of the two approaches and continues to believe that EPA's analyses and conclusion are correct. More detailed discussions of EPA's approach to the modeling and the results and responses to specific comments are presented in the NPRM (60 FR 52759–52760), memoranda to the Subcommittee cited in the NPRM, the RIA for the OTC LEV final rule and for this final rule, and the Response to Comments document for this final rule.

To date, all of EPA's analysis of this issue has compared National LEV with OTC LEV, which presumes that every OTC State would adopt the CAL LEV program effective MY1999. Because the discussion below presents the results of this analysis, and because OTC LEV is simply shorthand for adoption of CAL LEV by each OTC State within the timeframe specified in the OTC LEV SIP call, the discussion below continues to reference the equivalence of National LEV and OTC LEV. Although the two approaches as implemented would likely have different start dates than what EPA has modeled, EPA does not believe that will undermine the finding that National LEV would produce acceptable emission reductions as compared to OTC state-by-state adoption of CAL LEV. EPA believes it is unrealistic for National LEV to start with MY1997, but it is also impossible for most OTC States to have CAL LEV programs effective MY1999. Thus, both programs would likely be implemented with start dates later than what was modeled. In the SNPRM, EPA will discuss the relative emissions effects of these changed circumstances. Nonetheless, EPA's conclusion that the two programs as designed produce equivalent emissions in the OTR is still useful information. EPA believes that the underlying modelling contains valid assumptions regarding the potential emissions reductions from a national versus a regional approach to motor vehicle emission control. Thus, EPA's basic modelling approach remains applicable, regardless of any changes in program start dates. Also, EPA's equivalency conclusion provides a baseline for any subsequent reevaluations of the relative benefits of the two approaches; as long as any changes in start dates do not disproportionately reduce the emissions benefits from National LEV, National LEV would continue to reduce emissions in the OTR at least equivalent to the emissions that would be reduced by OTC state-by-state adoption of CAL LEV. This information will be important to OTC States as they decide whether to commit to accept National LEV in lieu of a State CAL LEV program.

Table 7 contains the results of EPA's current analysis of the comparative emissions reductions, as presented in the RIA. This analysis includes the effects of vehicle migration, as discussed below. The OTC LEV case shown here assumes that a ZEV sales mandate exists only in states that have already adopted this mandate (and that it exists at the level specified in the states' regulations that were adopted as of September, 1995).[53] However, even if it is assumed that there are ZEV sales mandates throughout the OTR at these same levels, it does not result in a change in EPA's conclusion that the emissions benefits of the OTC LEV program, including ZEV mandates in all OTC States, and the National LEV program are essentially equivalent.

TABLE 7.—OZONE SEASON WEEKDAY EMISSIONS FOR HIGHWAY VEHICLES IN THE OTR (TONS/DAY)

Year	Pollutant	OTC LEV	National LEV
2005	NMOG	1,491	1,483
	NO_X	2,385	2,389
2007	NMOG	1,361	1,353
	NO_X	2,218	2,212
2015	NMOG	1,152	1,144
	NO_X	1,943	1,894

Two factors would clearly be most important to the equivalency determination. As discussed in section IV.A.3., the National LEV program was designed to begin in the OTR with MY1997, two years earlier than the OTC LEV program was required to begin. In addition, beginning with MY2001, vehicles that migrate into the OTR from

regulatory portion of the National LEV program does not address ATVs, EPA does not believe that advancing technology is or should be a legally-required criterion for approval of a LEV-equivalent program, and given the court decision invalidating the OTC LEV SIP call, there is no longer any legal requirement for National LEV to be a LEV-equivalent program. *Virginai* v. *EPA,* No. 95–1163 (D.C. Cir. March 11, 1997). Nevertheless, EPA recognizes that including some advanced technology component is important for all the parties to reach agreement on an MOU and could provide additional environmental benefits beyond emissions reduction equivalency.

To meet the parties' interests in promoting the development of ATVs, the auto manufacturers and the OTC States had agreed on language for an ''ATV component,'' which was to be included as an attachment to the MOV they were negotiating if they were to finalize that agreement. EPA supports the approach the OTC States and auto manufacturers have been discussing to introduce and establish ATVs in the OTR and urges the parties to complete those efforts.

The ATV component that the OTC States and auto manufacturers included in their initialed MOUs is a unique agreement that would use an on-going, cooperative relationship to focus on shared visions, commitments and responsibilities. The parties would identify and address the means to achieve a viable ATV market, including infrastructure development, vehicle technology improvements, and incentive programs. The ATV component would rely on California's program to force technology development, and would ensure that technology takes hold in the OTR by having the parties jointly identify vehicle sales estimates and then work in an integrated manner to develop and execute the tasks necessary to establish and maintain a sustainable, viable market for ATVs at the retail level. The ATV component anticipates that OTC States, major motor vehicle manufacturers, other states, EPA, the Department of Energy, fuel providers, converters, fleet operators, and other manufacturers of specialty motor vehicles would each have roles to play to facilitate the introduction of ATVs. The ATV component presents the parties with an important opportunity to show that government/industry partnerships can achieve important environmental benefits and do so in a way that provides the parties with greater flexibility, while still holding them responsible for achieving the end goal.

The ATV component defines an ATV as a vehicle that is certified by CARB for sale in California or certified by EPA for sale outside of California and that is (1) a dual-fuel, bi-fuel, or dedicated alternatively fueled vehicle certified as a TLEV or more stringent when operated on the alternative fuel, (2) certified as a ULEV or ILEV using any fuel, or (3) a dedicated electric vehicle or HEV.

EPA would work with each state individually to determine the appropriate SIP credit for the ATV component once the program is implemented. As ATVs are bought in individual states, EPA and the state would be able to calculate the emissions benefits for the life of the ATVs. In addition, EPA would also work with states to determine whether and what SIP credit is appropriate for specific measures (such as commitments to buy a specified number of ATVs).

[53] The modeling was essentially completed prior to CARB's change to its ZEV mandate regulations, so the modeling is based on ZEV mandates as they existed prior to CARB's changes.

other states would be substantially cleaner under the National LEV program than under the OTC LEV program because the National LEV program applies nationally. For the National LEV program to show equivalent emissions reductions to the OTC LEV program, these two factors would have to outweigh the additional benefits attributable to the OTC LEV program due to its lower fleet average NMOG standard.

EPA's analysis indicates that, in comparing National LEV starting in 1997 with OTC LEV starting in 1999, the impact of the earlier start date for the National LEV program was not enough by itself to compensate for National LEV's higher fleet average NMOG standard, except in the earlier years of the program. This analysis is based on existing EPA models and standard assumptions about the future performance of vehicles under both programs.

The effects of vehicle migration are more difficult to assess. Because actual state-by-state vehicle migration data were not available, EPA used human migration data as a surrogate. Using state-by-state human migration data from the Internal Revenue Service, EPA estimated the annual migration rate of people into and out of the OTR. Assuming that vehicles migrate at the same rate as people, EPA then constructed a simple model to determine what percentage of vehicles in the OTR vehicle fleet in any year would have been originally sold outside the OTR, taking into account annual in and out migration rates as well as motor vehicle scrappage rates. Using this approach, EPA determined that approximately 6.5 percent of the motor vehicle fleet in the OTR originated outside the OTR. While a number of commenters questioned EPA's approach to assessing the impact of migration, none presented an alternative basis for making this assessment or data indicating that EPA's assessment is incorrect. When the National LEV and OTC LEV programs are compared including this migration assumption, the emissions reductions associated with the two programs are equivalent.

The OTC States and auto manufacturers had agreed that EPA should periodically reevaluate the equivalency of National LEV and OTC LEV. Because equivalency with OTC LEV is no longer a legal criterion for National LEV, it is not clear that such a periodic reevaluation is still necessary. EPA plans to take comment on this issue in the SNPRM on the issue of OTC State commitments to the program. The initialled MOUs provide that at least every three years, or pursuant to an OTC request, EPA would perform a modeling evaluation of the emissions reductions of National LEV compared to OTC LEV. This periodic evaluation would rely on the mobile source emissions model (MOBILE5a) used in the original equivalency determination, unless the OTC States, manufacturers, and EPA agreed to use an updated methodology. The initialled MOUs further provide that EPA would assess whether National LEV provides emissions benefits equivalent to the benefits identified in the original OTC LEV recommendation, taking into account changes in EPA regulations and their implementation affecting National LEV vehicles.

If EPA does conduct future comparisons, EPA does not believe it is accurate or necessary to compare the *actual* emissions reductions produced by National LEV to *modeled* emissions reductions projected to be produced by OTC state-by-state adoption of CAL LEV programs. To the extent that actual reductions under the two approaches could vary according to vehicle mix or other factors not currently anticipated, it is impossible to predict what actual emissions reductions would have been under OTC state-by-state adoption of CAL LEV programs. Any comparison between actual and modeled reductions would be inherently invalid because the projections would be determined using different baselines.

B. Enforceability of National LEV

EPA proposed that enforceability would be a legal criterion for EPA to find that National LEV would be an acceptable LEV-equivalent program that would relieve the OTC States of their obligations under the OTC LEV SIP call. Although the OTC LEV SIP call has been vacated, *Virginia* v. *EPA,* No. 95–1163 (D.C. Cir., March 11, 1997), National LEV still must be enforceable for EPA to grant States credits for SIP purposes. There are two aspects to ensuring National LEV is enforceable. First, the National LEV program emissions standards and requirements must be enforceable against those manufacturers that have opted into the program and are operating under its provisions. Second, the program itself must be sufficiently stable to make it likely to achieve the expected emissions reductions. To achieve the expected emissions reductions from National LEV, the off ramps must not be triggered and the program must remain in effect for its expected lifetime. As discussed below, EPA believes that National LEV meets the first aspect of enforceability—the program requirements are legally enforceable against manufacturers in the program. Also, the program elements finalized today would contribute to a stable National LEV program. However, ensuring that the National LEV program will be stable over time also depends on program elements relating to OTC State commitments to National LEV that will not be finalized until after EPA provides further notice and comment. At the time of the proposal, the OTC States and the auto manufacturers had not yet finalized agreement on the mechanisms through which the States would commit to the National LEV program or the substance of the OTC State commitments regarding State section 177 programs. Violation of such commitments would allow manufacturers to opt out of National LEV. In expectation that the OTC States and the auto manufacturers would soon finalize agreement on these elements of the program, EPA deferred taking comment on the strength of such commitments, the likelihood that an off ramp might be triggered, or the overall stability of the National LEV program. Thus, a few key elements necessary for the stability of National LEV are still outstanding, pending further notice and opportunity for public comment.

As discussed in the NPRM (60 FR 52760), EPA believes that National LEV is fully enforceable against those manufacturers that have bound themselves to comply with the program. Once a manufacturer opts into the National LEV program, it must comply with the applicable standards. Because the National LEV regulations are promulgated under CAA sections 202 and 301, a manufacturer that chooses to be covered by these regulations would be subject to the same enforcement procedures as exist for the current mandatory federal motor vehicle program. For example, violations of the National LEV standards provisions would be subject to sanctions under CAA sections 204 and 205. The certification, SEA, recall, and warranty provisions of the current federal motor vehicle program also apply to the National LEV standards, as well as all other federal motor vehicle requirements not explicitly superseded by National LEV requirements. The applicability of federal enforcement provisions ensures that National LEV will be an enforceable program. As a result, as long as manufacturers continue to be subject to the National LEV program, the standards and requirements of the program will be clearly enforceable.

In addition to National LEV being legally enforceable, there will also be strong practical disincentives to manufacturers either challenging the

enforceability of the standards or even taking advantage of a potential offramp, unless the triggering event is something the manufacturers consider a substantial burden. The manufacturers strongly support National LEV as an alternative to individual State CAL LEV programs. Because manufacturers would have to comply with backstop CAL LEV programs in one or more States upon an opt-out, manufacturers will be reluctant to destabilize National LEV. To date, the States of Connecticut, Massachusetts, New Jersey, New York, Rhode Island, and Vermont have submitted SIP revisions that require a CAL LEV program either as the primary program or as a backstop if National LEV is not in effect. EPA is confident that one or more of these States would retain a CAL LEV program as a backstop if National LEV were in effect, as several States have indicated that this is their intent. This would ensure that if National LEV were not in effect, manufacturers would have to comply with CAL LEV in one or more States. This level of State adoption of backstops provides a sufficient measure of program stability to help make National LEV enforceable.

The only circumstances that would allow the National LEV program to terminate prematurely would be an OTC State's failure to meet whatever commitments it makes regarding adoption of motor vehicle programs under section 177 of the Act or certain EPA changes to Stable Standards. These circumstances allowing the program to terminate prematurely are limited, and EPA expects that the OTC States will commit to the National LEV program in a way that will make premature termination unlikely to occur due to their actions. EPA is not at this time evaluating the likelihood that the National LEV program will remain in effect for the intended duration of the program (i.e., until EPA promulgates enforceable federal standards that are at least as stringent as the National LEV standards) because EPA has not yet evaluated the OTC States' commitments. However, EPA believes that, at least with regard to an opt-out triggered by a change in the Stable Standards, premature program termination is highly unlikely.

EPA is confident that the Agency is unlikely to change any of the Stable Standards in a manner that would give the auto manufacturers the right to opt out of National LEV. As discussed in section IV.A., manufacturers would be allowed to opt out of National LEV if EPA made certain types of changes to the Core Stable Standards at any time during the program, or changes to the Non-Core Stable Standards effective prior to MY2007. The Core Stable Standards are requirements that EPA does not have the authority to mandate and thus could not impose absent a voluntary program. In agreeing to specify a larger set of Stable Standards to include the Non-Core Stable Standards, which are requirements EPA has authority to modify, the Agency very carefully evaluated each proposed Non-Core Stable Standard. EPA considered how recently each standard or requirement had been updated, the possibility that increased stringency would be technologically feasible and cost-effective in the time frame of the National LEV program, and the focus of the Agency's future regulatory efforts in terms of the most promising areas for significant emissions reductions. As discussed in more detail in the NPRM, elsewhere in this preamble, and in the Response to Comments document, EPA's technical analysis revealed no significant shortcomings in the adopted Non-Core Stable Standards that would require new, more stringent standards applicable prior to MY2007, aside from those potentially mandated by the CAA and thus specifically excluded from triggering an offramp (e.g. cold CO past MY2000).

In addition, EPA will retain substantial flexibility to make many types of changes to the designated Stable Standards without triggering an offramp. In addition to changes to which the manufacturers do not object, for the Non-Core Stable Standards, EPA could make modifications that do not affect stringency or that harmonize the federal standard with the California standard without providing an opportunity for opt-out. Finally, EPA would always have the ability to make changes to the Non-Core Stable Standards if the need to make such changes outweighs the benefits of the National LEV program. Such a situation would only arise, however, if the emissions benefits from the change significantly outweighed the benefits from National LEV, in which case it is highly unlikely that any state would suffer air quality detriment.

C. Finding National LEV in Effect

As proposed, the National LEV regulations specify criteria for EPA to find that the program is in effect, and hence enforceable against the manufacturers that have opted in. EPA will find that the National LEV program is in effect if all manufacturers listed in the regulations have submitted opt-in notifications in accordance with the requirements specified in the regulations.[54] EPA's finding that the program is in effect would be published in the **Federal Register**, but would not require further notice and comment rulemaking. Upon finding National LEV in effect, the National LEV requirements will be enforceable, and to the extent that manufacturers have conditioned their opt-ins upon EPA making such a finding, the opt-ins will become fully and unconditionally binding. In today's rule, EPA is not setting any deadline for the Agency to make this in effect finding, but EPA will address the question of a deadline in a subsequent final rule after it has provided further notice and opportunity to comment on the OTC State commitments and related issues.

Further Agency rulemaking to find that National LEV is in effect will be unnecessary because EPA is establishing the criteria for the finding through this notice and comment rulemaking, and EPA's finding that the criteria are satisfied is an easily verified objective determination. As discussed in more detail in the NPRM (60 FR 52762), a determination that the listed manufacturers have opted in in accordance with the National LEV regulations requires only a straightforward evaluation of whether each of the listed manufacturers has submitted an opt-in notification containing the requisite language and signed by a person with the specified authority.

D. SIP Credits

EPA will allocate SIP credits for National LEV on a state-by-state basis. EPA will work with each individual state, including states outside the OTR, to determine how appropriately to credit areas within the state for emissions reductions produced by the National LEV program. For calculating SIP credits, EPA will apply the same policy guidance to National LEV as it would apply to a state's adoption of CAL LEV.

VI. Other Applicable Federal Requirements and Harmonization With California Requirements

A. Introduction

Section IV. described the provisions of the National LEV program, including the structure of the program, the voluntary emissions standards (exhaust and fleet average NMOG), and

[54] Before National LEV comes into effect, however, OTC States may need to take further action to commit to the National LEV program, pusuant to their agreement with the auto manufacturers. EPA will take comment on the details of such state actions in the SNPRM on OTC State commitments.

provisions for low volume manufacturers. As noted in that section, the federal new motor vehicle emissions control program (including other standards and requirements, and certification, compliance, and enforcement program elements) continues to apply to vehicles produced and sold by manufacturers that opt into the National LEV program. Significant elements of the federal program that apply to National LEV vehicles include the requirements for evaporative emissions, ORVR, Cold CO, the certification short test (CST), and federal high altitude compliance. Similarly, EPA would use the current federal compliance program to implement the National LEV program, including the fees program, SEA, emissions recall program, federal emissions warranties, and federal emissions defect reporting requirements. EPA would retain the authority to add regulatory requirements to the motor vehicle program, (e.g., as may be required under section 202(l) of the CAA to address air toxics) or to modify existing requirements as required by current law (e.g., as may be required under section 202(j) for cold CO). By adopting the set of Stable Standards, EPA is recognizing that it does not intend to modify certain existing regulations except in limited circumstances.

Given the manufacturers' voluntary commitment to National LEV, EPA committed to reduce the compliance burden for manufacturers in the National LEV program by working with CARB to harmonize federal and California motor vehicle standards and test procedures to the extent possible. This would allow manufacturers to design and test vehicles to one set of specifications for sale nationwide, rather than designing and testing to two sets (California's and EPA's). While the National LEV program itself goes a long way towards this objective by addressing program elements such as the exhaust emission standards, the test fuel, and test procedures, EPA has expended considerable effort towards reconciling differences between federal and California requirements in the balance of the mandatory federal program as well. EPA believes that the National LEV program, plus harmonization of other federal and California standards, is a smarter, cheaper way to regulate that increases environmental and public health benefits. The balance of this section describes the results of these harmonization efforts and some other aspects of the federal program. To further the objective of reducing duplicative testing and compliance requirements on the manufacturers, EPA will seek consistency with California in future regulatory actions where practicable.

B. Harmonization of Federal and California Standards

The bulk of the harmonization that is occurring between the California and federal standards is taking place with respect to the National LEV tailpipe standards and related requirements, including OBD requirements. These standards and harmonization efforts are discussed in section IV., above. Following is a discussion of other applicable federal requirements and the status of harmonization efforts.

1. Onboard Refueling Vapor Recovery and Evaporative Emissions

EPA believes that federal and California ORVR and evaporative emissions standards will be completely harmonized. EPA and CARB had already begun the process of harmonizing their respective ORVR and evaporative test procedures when the National LEV proposal was published. CARB set policy at its June 29, 1995, public hearing to adopt the EPA ORVR program for California and to proceed with a set of evaporative emissions technical amendments, including several revisions designed to harmonize the federal and California evaporative emissions requirements. Following the hearing, CARB adopted final amendments to their evaporative emissions test procedures, dated April 24, 1996, and effective on June 24, 1996, which allow automobile manufacturers to certify MY1997 and later vehicles using the federal fuel and temperature test conditions. CARB also notes that the ongoing effort to streamline the evaporative test procedures should result in one test procedure for both agencies, and that the revised test procedure will incorporate the federal fuel and temperature test conditions in the CARB procedures. EPA published a direct final rule in August 1995 adopting federal evaporative emissions technical amendments that are compatible with those being pursued by CARB (60 FR 43880, August 23, 1995).

In the proposal for this rulemaking, EPA stated its intent to evaluate the relative stringency of the federal and CARB evaporative emissions testing specifications for test temperature and test fuel, a question that was unresolved at the time the proposal was published. EPA indicated that use of CARB's test conditions, should they prove to be less stringent, could constitute an unacceptable relaxation of the existing federal evaporative emissions requirement. As part of its evaluation, EPA hired a contractor to generate test data for both running loss and hot soak emissions. The testing program has been completed, and a final report has been submitted to the docket for this rule (see ADDRESSES). EPA has determined that the data currently available indicates that the federal fuel and temperature conditions are more stringent in terms of producing more vapor under prescribed test conditions. Based on the data currently available, CARB agrees that the federal fuel and temperature conditions are as stringent as the CARB conditions in terms of producing more vapor under specific test conditions. On that basis, EPA is continuing to require federal fuel and temperature for evaporative emissions testing. EPA understands that under CARB's recent modifications to its evaporative emission regulations that CARB now explicitly allows the use of the EPA conditions for certification, and that vehicles so certified would undergo in-use compliance testing using the federal conditions as well. While EPA believes that the federal fuel and temperature produce more vapor than the CARB fuel and temperature under prescribed test conditions and CARB now accepts the federal test conditions for purposes of certification, CARB intends to perform additional tests in the future to provide additional data on the impact of the test fuel and temperature on evaporative emissions in real life. If the results of such testing demonstrate that California's evaporative emissions reductions suffer as a result of the harmonized policy, CARB may re-evaluate the policy for corrective action.

Use of the federal evaporative test conditions means that National LEV vehicles certified to TLEV, LEV, or ULEV standards using the California Phase II test fuel option that are undergoing both evaporative and exhaust emissions testing will require a switch from California Phase II fuel for exhaust testing to federal fuel for evaporative emissions testing. The Agency anticipates that the incremental burden of the policy will be minimized because broader definitions of evaporative emissions families allow manufacturers to test far fewer vehicles for evaporative emissions than for tailpipe emissions. In addition, the fuel switch will frequently occur anyway because the same vehicles tested for ORVR will be tested for evaporative emissions, and both California and federal ORVR require federal fuel as the test fuel. Finally, the vehicle manufacturers have indicated that the

fuel switch is an acceptable trade-off for the benefits of harmonizing the evaporative test conditions between EPA and CARB.

The auto manufacturers have recently presented a proposal to both EPA and CARB for combining and streamlining the evaporative emissions and ORVR procedures. Both agencies are actively evaluating this proposal, which has as its goal a simpler procedure that saves government and industry resources while preserving air quality benefits nationally and in California. If these efforts are productive, EPA might propose regulations that would affect evaporative emissions and ORVR testing of the light-duty fleet during model years covered by the National LEV rule. The Agency does not anticipate a conflict between such an action and the designation of the current evaporative emissions and ORVR procedures as Non-Core Stable Standards. EPA would not pursue such a rulemaking to increase stringency in the programs, but rather to simplify and make less costly the test procedures applicable to both manufacturers and EPA, and EPA would expect manufacturers to support, rather than object to, any resulting changes.

2. Cold CO

California has adopted EPA's Cold CO requirements by reference, so the requirements are currently harmonized. EPA notes, however, that CARB has a compliance requirement with a complete set of emission standards, including an additional CO standard, during testing at 50 degrees. Because the 50 degree standards are part of the California LEV program, they are included as part of the compliance obligation for National LEVs.

3. Certification Short Test

The CST is one requirement for which differences in California and federal requirements are necessary due to differences in state-adopted Inspection and Maintenance (I/M) programs. As noted in the preamble to the NPRM (60 FR 52764), the Agency has a statutory obligation under section 206(a) of the CAA to promulgate procedures for manufacturers to demonstrate at the time of new vehicle certification that their LDV and LDT designs, when properly used and maintained, will pass the emissions short test procedures approved by EPA for use in state and local I/M programs. State and local I/M programs can choose their emission short test procedures from a variety of different options maintained in the federal regulations. Because California need not maintain the menu of available short test options that is required of EPA under section 207(b) of the CAA, there is no adequate California counterpart to the federal CST to serve as the basis for harmonization. Thus, harmonization is not possible, and National LEV vehicles will be subject to the same CST requirements as any other federally certified LDVs.

4. High Altitude Requirements

In the NPRM, EPA noted its statutory obligation under section 206(f) of the CAA to require LDVs and LDTs to comply with mandatory section 202 standards at all altitudes; this requirement is incorporated in the current (Tier 1) emission standards. The National LEV proposal preamble noted that even if manufacturers were voluntarily complying with more stringent tailpipe emission standards, NLEVs would nonetheless still be required to demonstrate compliance with the Tier 1 standards, the cold CO requirements, and the evaporative emissions requirements at high altitude using the appropriate federal certification test fuel for the given test procedure, as defined in 40 CFR 86.113. The Agency received no comments on this aspect of the proposal, and, for the reasons described here and in the NPRM (60 FR 52764), the proposed approach is retained in the final rule.

C. Federal Compliance Requirements

1. Selective Enforcement Auditing and Quality Audit Programs

Pursuant to CAA section 206(b), vehicles certified to meet any of the National LEV emission standards and requirements will be subject to those standards and requirements in an SEA. Section 206(b) authorizes the Administrator to test new vehicles to determine whether vehicles being manufactured do, in fact, conform to the regulations with respect to which a certificate of conformity was issued. National LEV vehicles will also be subject to SEAs to show compliance with National LEV standards and all other applicable federal emission standards and requirements.

SEA authority serves as an important enforcement tool and provides the Agency with the ability to ensure that NLEVs are in compliance with the emissions standards. It also allows EPA to ensure that manufacturers are not gaming the averaging, banking, and trading provisions by maximizing credit generation or minimizing credit usage through certifying engine families to unrealistic emissions standards. In addition, the SEA program serves as an incentive for manufacturers to do their own emissions testing and remedy any potential problems on their own before they are identified by the Agency. This helps to provide cleaner vehicles at the earliest possible time.

During an SEA, a manufacturer will test an engine family configuration certified to the National LEV standards by testing new vehicles off the production line using the same test procedures and conditions as used in the certification process for that family. When an SEA shows an audit failure of a configuration certified to National LEV standards, the certificate of conformity for the selected configuration may be suspended, and depending on the required remedy for the nonconformity, revoked. This is the same approach EPA has used for audit failures of configurations certified to conventional federal standards.[55]

In the NPRM, EPA noted that the promulgation of National LEV standards and the harmonization of other federal and California requirements will allow manufacturers to certify an increasing number of engine families to both California and National LEV standards (50-state engine families). This provides an opportunity for EPA to utilize its enforcement resources more efficiently and reduce the testing burden on manufacturers by coupling the SEA and corresponding CARB requirements for 50-state families and configurations. Thus, EPA proposed to use emissions testing done by the manufacturers on 50-state engine families under the California Quality Audit (CQA) Program as a basis for potential SEA actions, where such testing was conducted in a manner substantially similar to comparable federal requirements.

Allowing EPA to use data produced under the CQA Program builds on the harmonization of the California and National LEV programs to take advantage of new efficiencies possible in EPA enforcement. Additionally, this new use of data will reduce regulatory testing burdens on the manufacturers. Under the current SEA program, EPA's only recourse upon discovering 50-state non-compliance through CARB-required testing is to issue the manufacturer an SEA test order for the vehicle configuration. The manufacturer would then have to conduct duplicate testing for that configuration. If the configuration (which CARB had already determined to be in non-compliance) failed the audit, EPA would suspend and/or possibly revoke the certificate of conformity. The manufacturer would then have to develop a fix for the non-conformity and conduct and pass a re-

[55] See the NPRM (60 FR 52764–52766) for a more detailed explanation of the SEA procedures.

audit to comply with EPA requirements, as well as comply with CARB's remedial action plan. By adopting the authority to use CQA data in the SEA program, EPA is eliminating these additional testing requirements.

The regulations adopted in today's final rule will work in the following manner. If CARB has determined that a 50-state engine family or configuration is in non-compliance, based on manufacturer testing required by CARB, EPA would be able to take appropriate action without requiring the manufacturer to conduct duplicate testing. EPA would evaluate test data received from CARB or directly from a manufacturer for a family or configuration that CARB has determined to be in non-compliance with any applicable standard. If testing were conducted in a manner substantially similar to comparable federal requirements, EPA would evaluate the test data with respect to the 40 percent Acceptable Quality Level (AQL) sampling plans found in Appendices X and XI to 40 CFR part 86 to determine compliance with applicable federal standards. EPA believes the random sampling manufacturers use to select vehicles for CARB-required testing will provide a representative family or configuration sample, which can be appropriately evaluated with respect to the 40 percent AQL criteria. If the test data for the family or configuration does not meet the 40 percent AQL, EPA would determine the family or configuration to be in non-compliance, and EPA would have authority to suspend and/or revoke the certificate of conformity for the 50-state family or configuration. Additionally, subsequent to a suspension or revocation, the rule allows EPA to reinstate or reissue a certificate, upon a manufacturer's written request, after the manufacturer has agreed to comply with remedial action required by CARB, if EPA believes the action is an effective remedy for the entire family or configuration. The manufacturer would not have to conduct a re-audit of the suspended/revoked configuration.

EPA's authority for this approach is provided by CAA section 206(b)(2)(A)(i), which allows EPA to suspend or revoke a certificate based on tests conducted under section 206(b)(1). Section 206(b)(1) authorizes tests to be conducted by the Administrator directly, or by the manufacturer, in accordance with conditions specified by the Administrator. In 40 CFR part 86, EPA prescribes procedures for testing whether new motor vehicles conform to the regulations with respect to which EPA issued the certificate of conformity. Most of these procedures are the same as the procedures specified by California in the Assembly-Line Test Procedures Quality Audit. EPA has modified the regulations for manufacturer SEA testing to prescribe the procedures detailed in the regulations or substantially similar procedures, which could encompass testing performed under the CQA program. Substantially similar procedures must produce results that are reliable and probative indicators of the likely outcome of an SEA based on the Part 86 testing requirements detailed in the SEA regulations. Even if CARB specifies additional details in the course of testing by the manufacturer, as long as the test that the manufacturer actually conducts is still in accordance with procedures substantially similar to those detailed by EPA, such a test will be in accordance with the conditions specified by the Administrator. Thus, EPA may rely on such tests as a basis to suspend or revoke a certificate of conformity.

Because EPA's regulatory authority to suspend or revoke certificates is based on testing conducted by EPA or the manufacturer, EPA will only suspend or revoke certificates in the manner described above if the manufacturer has conducted the testing. The manufacturer testing need not be pursuant to a federal test order, however. Also, EPA is aware that all emissions testing done under the auspices of the CQA program will not necessarily be done using procedures substantially similar to comparable federal requirements, making EPA's use of some of this data in its SEA program infeasible. Therefore, EPA will work cooperatively with CARB and manufacturers in considering all information provided by the manufacturer prior to making a decision whether to suspend, revoke, and reissue certificates of conformity based on data generated under the CQA program. As with any suspension or revocation of a certificate of conformity, a manufacturer that disagrees with EPA's decision to suspend or revoke a certificate may request a public hearing within 15 days of EPA's suspension or revocation decision.

2. Imports

As proposed, EPA is not listing independent commercial importers (ICIs) among the manufacturers that would have to opt into the National LEV program for EPA to find it in effect. Instead, ICIs will have the opportunity to voluntarily certify their vehicles to meet National LEV standards if their customers so desire. However, ICIs are prohibited from participating in averaging, banking, or trading programs. ICIs not certifying vehicles to National LEV standards will continue to be required to meet the emissions standards applicable to the year in which the vehicle was originally manufactured.

EPA continues to believe that ICIs should not be required to opt into the National LEV program since they generally do not build new motor vehicles.[56] Additionally, due to the very limited number of vehicles, of various model years, that ICIs handle, ICIs would be unable to participate in the averaging, banking, and trading provisions, which require that a manufacturer has substantial control over the certification categories (TLEVs, LEVs, etc.) of the vehicles in its fleet.

3. In-Use and Warranty Requirements

As described in the NPRM, the federal provisions regarding in-use (recall) testing will be used to determine compliance with the National LEV standards. These provisions are set out in 40 CFR part 85, subpart S. The vehicle age and mileage limitations on recall testing, as required by sections 202(d)(1) and 207(c) are not affected by today's action.[57] It is not appropriate to substitute California's entire in-use testing and recall program requirements for the corresponding federal provisions as part of the National LEV program because the two recall programs have different enforcement goals based on differences in statutory authority. In addition, EPA must account for the differences arising from a compliance program applied on a national versus a State-specific level. However, EPA and California will continue to cooperate wherever possible in their enforcement activities to reduce any unnecessary duplication and to provide efficient and timely sharing of information.

There is no additional burden on manufacturers attributable to operation of two enforcement programs because when testing NLEVs to determine their compliance with the in-use standards, EPA will use, when appropriate, those test procedures utilized in the National LEV certification process. As discussed above, these procedures will generally be similar to California's procedures. Thus, manufacturers will not need to comply with two different sets of enforcement testing procedures.

[56] Comments supported not requiring ICIs to opt in to the National LEV program.

[57] EPA does not require any recall testing beyond seven years or 75,000 miles, whichever comes first, for vehicles with a useful life period of ten years or 100,000 miles, or beyond seven years or 90,000 miles, whichever comes first, for vehicles with a useful life of 11 years or 120,000 miles.

In response to manufacturers' concerns over potential in-use fuel effects on National LEV vehicles, EPA has stated that it would allow extra vehicle preconditioning if necessary. It is not currently possible to determine an appropriate level of additional preconditioning, given the uncertainty as to in-use fuel effects on National LEV vehicles and the question as to whether current levels of preconditioning are in fact sufficient to alleviate these effects. Therefore, EPA is not including a specific level of additional preconditioning in today's action. However, EPA's regulations allow additional preconditioning for unusual circumstances when such need is demonstrated by a manufacturer.[58] Detrimental effects on National LEV vehicles from commercially available fuel sold in the 49 States could likely be considered an unusual circumstance. Thus, under these regulations EPA expects to work with manufacturers to determine the appropriate level of any necessary additional vehicle preconditioning.

As discussed in the proposal, the federal warranty and defect reporting requirements will apply to National LEV vehicles as they would to other vehicles certified under the federal motor vehicle program.

VII. Structure of National LEV Regulations

The requirements applicable to NLEVs are drawn largely from two different and complex sources—the current federal motor vehicle program and California's existing LEV program. Given this, the Agency initially chose in the NPRM to structure the regulations such that they referenced, rather than repeated, the two sources as much as possible. To accomplish this, the Agency created 40 CFR part 86 subpart R to serve as the ''road map'' of National LEV requirements. This new subpart has several objectives. First, it details the general applicability and provisions of the National LEV program, including how auto manufacturers opt into the program and under what circumstances they can opt out of the program. Second, it details the specific emission standards, fleet average NMOG standards, and averaging, banking, and trading provisions that apply to vehicles certified under the program. As noted in section IV.B.1., the emission standards are identical to those currently in place in California, but are explicitly included in the regulations. Because of differences from the provisions in California, the NMOG average is also explicitly included in subpart R. While the averaging, banking, and trading provisions are modeled after California's, there are enough differences in applying such a program nationally that they too are included specifically in the new subpart. Third, subpart R details the regulatory requirements from the California LEV program that apply to National LEV. The provisions in the existing federal program generally remain applicable to the National LEV program, except in specific instances, detailed in subpart R, where the California provisions are used instead.

Incorporation of provisions from the California LEV program is slightly more complex, and has evolved since the NPRM. In general, the Agency has used the method of ''incorporation by reference'' (IBR). The IBR method allows federal agencies to publish regulations in the **Federal Register** by referring to materials already published elsewhere, rather than repeating that information. The legal effect of an IBR is that the material is treated as if it were published in the **Federal Register**. This material, like any other properly issued regulation, has the force and effect of law. Material is eligible for IBR if several conditions are met, including the criteria that the material be reasonably available to those affected by the regulation and that the volume of material published in the **Federal Register** is substantially reduced. Each use of the IBR method must be approved by the Director of the Federal Register.

The Agency has incorporated by reference in the National LEV regulations a number of California regulatory documents. These documents are maintained by the **Federal Register** and in the public docket (see **ADDRESSES**) as a single bound document titled ''California Regulatory Requirements Applicable to the National Low Emission Vehicle Program, October, 1996.'' The National LEV regulations detail the specific California documents that have been incorporated, as well as the specific sections within those documents that do not apply to National LEV, in an appendix to part 86. Only those California documents that can be regarded as finalized regulatory documents with the full force of law can be incorporated by reference.

In the NPRM the Agency used the IBR method extensively to incorporate CARB regulatory provisions. Since then, however, the Agency noted some problems with this approach, including a lack of clarity regarding exactly what in the federal and CARB regulations applied or did not apply to the National LEV program. Such problems arose in particular when CARB regulations referenced federal regulations, but applied them in a modified fashion (CARB regulatory documents that are more ''stand-alone'' do not present these problems and have been incorporated by reference as described above). These issues were resolved in today's final regulations by explicitly including in subpart R some of the text of CARB regulations and specifying how and under what circumstances that text should apply.

VIII. Technical Correction to Maintenance Instructions

This final rule also makes a technical correction to regulations mandating that manufacturers provide purchasers with instructions regarding the proper maintenance and use of vehicles. On August 9, 1995, EPA published in the **Federal Register** (60 FR 40474) a rule requiring that information for use in emission-related repairs be made available to the service and repair industry (''the service information rule''). The regulations promulgated in that rule were placed in paragraph (g) of 40 CFR § 86.094–38, which provides the requirements for Maintenance Instructions for 1994 and later model year vehicles. Paragraphs (a) through (f) of that section were to be unchanged from the preexisting requirements for Maintenance Instructions provided in § 86.087–38. However, EPA inadvertantly did not include a reference to the preexisting regulations when it promulgated § 86.094–38 (a) through (f). Specifically, EPA generally would use the designation ''[Reserved]. For guidance see § 86.087–38 (a)–(f)'' to indicate the incorporation of earlier regulatory language. However, the promulgated rule states only that § 86.094–38 (a)–(f) are ''[Reserved],'' without reference to the earlier regulatory language. This may have caused some confusion regarding whether the preexisting regulations were still in effect beginning in the 1994 model year. This technical amendment clarifies that EPA did not intend to remove the preexisting requirements for maintenance instructions when it promulgated the service information rule.

EPA is promulgating this technical amendment as a final rule under the good cause exception in section 553(b)(B) of the Administrative Procedure Act, 5 U.S.C. 553(b)(B). Notice and public procedure for this technical amendment are unnecessary and contrary to the public interest because this amendment merely corrects an obviously unintended error in the

[58] *See* 40 CFR 86.132–96(d).

regulations. At no time during the service information rulemaking did EPA state its intention to remove the preexisting maintenance instructions requirements from the regulations; nor was such a significant change contemplated or requested. Therefore, this technical change merely clarifies that regulations already in existence were not inadvertantly deleted in the service information rule. EPA does not expect any objection to this technical correction. Moreover, because these regulations are applicable to current model year families, EPA believes it is in the public interest to promulgate this technical amendment as soon as possible.

IX. Administrative Requirements

A. Administrative Designation

Under Executive Order 12866 (58 FR 51735), the Agency must determine whether the regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a ''significant regulatory action'' because of annual impacts on the economy that are likely to exceed $100 million. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Regulatory Flexibility Act

EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities. Only manufacturers of motor vehicles, a group which does not contain a substantial number of small entities, will have to comply with the requirements of this rule.

C. Unfunded Mandates Reform Act

Under sections 202 and 205 of the Unfunded Mandates Reform Act of 1995 (UMRA), EPA generally must prepare a written statement to accompany any proposed or final rule that includes a federal mandate that may result in expenditures by state, local, or tribal governments in the aggregate, or by the private sector, of $100 million or more in any one year.

EPA has determined that the written statement requirements of sections 202 and 205 of UMRA do not apply to today's rule, and thus does not require EPA to conduct further analyses pursuant to those requirements. National LEV is not a federal mandate because it does not impose any enforceable duties and because it is a voluntary program. Because National LEV would not impose a federal mandate on any party, section 202 does not apply to this rule. Even if these unfunded mandates provisions did apply to this rule, they are met by the Regulatory Impact Analysis prepared pursuant to Executive Order 12866 and contained in the docket.

Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule. EPA has not prepared such a plan because small governments would not be significantly or uniquely impacted by the rule.

D. Congressional Review of Agency Rulemaking

Under section 801(a)(1)(A) of the Administrative Procedure Act (APA) as amended by the Small Business Regulatory Enforcement Reform Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the General Accounting Office prior to publication of the rule in today's **Federal Register**. OMB has designated this a ''major rule'' as defined in section 804(2) of the APA, as amended.

E. Reporting and Recordkeeping Requirements

The Information Collection Request (ICR) in this rule has been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An ICR document has been prepared by EPA (ICR No. 1761.02) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division, EPA, 401 M St., SW (Mail Code 2137), Washington, DC 20460 or by calling (202) 260–2740. The information requirements are not effective until OMB approves them.

The information collection would be conducted to support the averaging, banking and trading provisions included in the National LEV program. These averaging, banking and trading provisions would give automobile manufacturers a measure of flexibility in meeting the fleet average NMOG standards. EPA would use the reported data to calculate credits and debits and otherwise ensure compliance with the applicable production levels. When a manufacturer has opted into the voluntary National LEV program, reporting would be mandatory as per the regulations included in this rulemaking. This rulemaking would not change the requirements regarding confidentiality claims for submitted information, which are generally set out in 40 CFR part 2.

The information collection burden associated with this rule (testing, record keeping and reporting requirements) is estimated to average 241.3 hours annually for a typical manufacturer. It is expected that approximately 25 manufacturers will provide an annual report to EPA. However, the hours spent annually on information collection activities by a given manufacturer depends upon manufacturer-specific variables, such as the number of engine families, production changes, emissions defects, and so forth.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This estimate also includes the time needed to: Review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., S.W., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., N.W., Washington, D.C. 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number in any correspondence.

X. Statutory Authority

The promulgation of these regulations is authorized by sections 202, 203, 204, 205, 206, 207, 208 and 301 of the Clean Air Act as amended by the Clean Air Act Amendments of 1990 (CAAA) (42 U.S.C. 7521, 7522, 7523, 7524, 7525, 7541, 7542, and 7601).

XI. Judicial Review

Under section 307(b)(1) of the Act, EPA hereby finds that these regulations are of national applicability. Accordingly, judicial review of this action is available only by filing of a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of publication in the **Federal Register**. Under section 307(b)(2) of the Act, the requirements which are the subject of today's rule may not be challenged later in judicial proceedings brought by EPA to enforce these requirements. This rulemaking and any petitions for review are subject to the provisions of section 307(d) of the Clean Air Act.

List of Subjects

40 CFR Part 85

Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 86

Administrative practice and procedure, Confidential business information, Incorporation by reference, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements.

Dated: May 2, 1997.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 85—CONTROL OF AIR POLLUTION FROM MOTOR VEHICLES AND MOTOR VEHICLE ENGINES

1. The authority citation for part 85 is revised to read as follows:

Authority: 42 U.S.C. 7521, 7522, 7524, 7525, 7541, 7542, and 7601(a).

Subpart P—[Amended]

2. Section 85.1515 is amended by revising paragraph (c) to read as follows:

§ 85.1515 Emission standards and test procedures applicable to imported nonconforming motor vehicles and motor vehicle engines.

* * * * *

(c) Nonconforming motor vehicles or motor vehicle engines of 1994 OP model year and later conditionally imported pursuant to § 85.1505 or § 85.1509 shall meet all of the emission standards specified in 40 CFR part 86 for the model year in which the motor vehicle or motor vehicle engine is modified. At the option of the ICI, the nonconforming motor vehicle may comply with the emissions standards in 40 CFR 86.1708–97 or 86.1709–97, as applicable to a light-duty vehicle or light light-duty truck, in lieu of the otherwise applicable emissions standards specified in 40 CFR part 86 for the model year in which the nonconforming motor vehicle is modified. The provisions of 40 CFR 86.1710–97 do not apply to imported nonconforming motor vehicles. The useful life specified in 40 CFR part 86 for the model year in which the motor vehicle or motor vehicle engine is modified is applicable where useful life is not designated in this subpart.

* * * * *

PART 86—CONTROL OF AIR POLLUTION FROM NEW AND IN-USE MOTOR VEHICLES AND NEW AND IN-USE MOTOR VEHICLE ENGINES: CERTIFICATION AND TEST PROCEDURES

3. The authority citation for part 86 is revised to read as follows:

Authority: 42 U.S.C. 7401–7671(q).

4. Section 86.1 is amended by revising the entry for ASTM E29–90 in the table in paragraph (b)(1) and by adding an entry after the existing entry to the table in paragraph (b)(4), to read as follows:

§ 86.1 Reference materials.

* * * * *

(b) * * *

(1) * * *

Document number and name	40 CFR part 86 reference
* * * *	* * *
ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.	86.609–84; 86.609–96; 86.609–97; 86.609–98; 86.1009–84; 86.1009–96; 86.1442; 86.1708–97; 86.1709–97; 86.1710–97; 86.1728–97.

* * * * *

(4) * * *

Document number and name	40 CFR part 86 reference
* * * *	* * *
California Regulatory Requirements Applicable to the National Low Emission Vehicle Program, October, 1996	86.608–97; 86.608–98; 86.612–97; 86.1008–97; 86.1012–97; 86.1702–97; 86.1708–97; 86.1709–97; 86.1717–97; 86.1735–97; 86.1771–97; 86.1775–97; 86.1776–97; 86.1777–97; Appendix XVI; Appendix XVII.

Subpart A—[Amended]

5. Section 86.082–2 is amended by revising paragraph (a) to read as follows:

§ 86.082–2 Definitions.

(a) The definitions of this section apply to this subpart and also to subparts B, D, I, and R of this part.

* * * * *

6. Section 86.085–37 is amended by revising paragraph (b)(1) introductory text to read as follows:

§ 86.085–37 Production vehicles and engines.

* * * * *

(b)(1) Any manufacturer of light-duty vehicles or light-duty trucks obtaining certification under this part shall notify the Administrator, on a yearly basis, of the number of vehicles domestically produced for sale in the United States and the number of vehicles produced and imported for sale in the United States during the preceding year. Such information shall also include the number of vehicles produced for sale pursuant to § 88.204–94(b) of this chapter. A manufacturer may elect to provide this information every 60 days instead of yearly by combining it with the notification required under § 86.079–36. The notification must be submitted 30 days after the close of the reporting period. A manufacturer may combine the information required under § 86.1712(b) with the information included in paragraphs (b)(1) (i) through (iv) of this section into the report required under this section. The vehicle production information required shall be submitted as follows:

* * * * *

7. Section 86.090–2 is amended by revising the definition for ''Flexible fuel vehicle (or engine)'' and adding a new definition in alphabetical order for ''Dual fuel vehicle (or engine)'' to read as follows:

§ 86.090–2 Definitions.

* * * * *

Dual fuel vehicle (or engine) means any motor vehicle (or motor vehicle engine) engineered and designed to be operated on two different fuels, but not on a mixture of fuels.

* * * * *

Flexible fuel vehicle (or engine) means any motor vehicle (or motor vehicle engine) engineered and designed to be operated on any mixture of two or more different fuels.

* * * * *

8. Section 86.094–38 is amended by adding introductory text and revising paragraphs (a) through (f), to read as follows:

§ 86.094–38 Maintenance instructions.

Section 86.094–38 includes text that specifies requirements that differ from those specified in § 86.087–38. Where a paragraph in § 86.087–38 is identical and applicable to § 86.094–38, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.087–38.''.

(a) through (f) [Reserved]. For guidance see § 86.087–38.

* * * * *

9. Section 86.096–30 is amended by adding paragraphs (a)(19) through (a)(22) to read as follows:

§ 86.096–30 Certification.

* * * * *

(a) * * *

(19) For all light-duty vehicles and light light-duty trucks certified to standards under §§ 86.1710 through 86.1712, the provisions of paragraphs (a)(19) (i) through (iv) of this section apply.

(i) All certificates issued are conditional upon manufacturer compliance with all provisions of §§ 86.1710 through 86.1712 both during and after model year production.

(ii) Failure to meet the requirements of § 86.1710 (a) through (d) will be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the vehicles sold in violation of the fleet average NMOG standard shall not be covered by the certificate.

(iii) The manufacturer shall bear the burden of establishing to the satisfaction of the Administrator that the conditions upon which the certificate was issued were satisfied.

(iv) For recall and warranty purposes, vehicles not covered by a certificate because of a violation of this condition of the certificate will continue to be held to the standards stated in the certificate that would have otherwise applied to the vehicles.

(20) For all light-duty vehicles and light light-duty trucks certified to standards under §§ 86.1710 through 86.1712, the provisions of paragraphs (a)(20) (i) through (iv) of this section apply.

(i) All certificates issued are conditional upon manufacturer compliance with all provisions of §§ 86.1710 through 86.1712 both during and after model year production.

(ii) Failure to comply fully with the prohibition against a manufacturer selling credits that it has not generated or are not available, as specified in § 86.1710(e), will be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the vehicles sold in violation of this prohibition shall not be covered by the certificate.

(iii) The manufacturer shall bear the burden of establishing to the satisfaction of the Administrator that the conditions upon which the certificate was issued were satisfied.

(iv) For recall and warranty purposes, vehicles not covered by a certificate because of a violation of this condition of the certificate will continue to be held to the standards stated in the certificate that would have otherwise applied to the vehicles.

(21) For all light-duty vehicles and light light-duty trucks certified to standards under §§ 86.1710 through 86.1712, the provisions of paragraphs (a)(21) (i) through (iv) of this section apply.

(i) All certificates issued are conditional upon manufacturer compliance with all provisions of §§ 86.1710 through 86.1712 both during and after model year production.

(ii) Failure to comply fully with the prohibition against offering for sale Tier 1 vehicles and TLEVs in the Northeast Trading Region, as defined in § 86.1702, after model year 2000 if vehicles with the same engine families are not certified and offered for sale in California in the same model year, as specified in § 86.1711(a), will be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the vehicles sold in violation of this prohibition shall not be covered by the certificate.

(iii) The manufacturer shall bear the burden of establishing to the satisfaction of the Administrator that the conditions upon which the certificate was issued were satisfied.

(iv) For recall and warranty purposes, vehicles not covered by a certificate because of a violation of this condition of the certificate will continue to be held to the standards stated in the certificate that would have otherwise applied to the vehicles.

(22) For all light-duty vehicles and light light-duty trucks certified to standards under §§ 86.1710 through 86.1712, the provisions of paragraphs (a)(22) (i) through (iv) of this section apply.

(i) All certificates issued are conditional upon manufacturer compliance with all provisions of §§ 86.1710 through 86.1712 both during and after model year production.

(ii) Failure to comply fully with the prohibition against selling Tier 1 vehicles and TLEVs in the Northeast Trading Region, as defined in § 86.1702, in excess of five percent of the industry-wide fleet, as specified in § 86.1711(b),

will be considered a failure to satisfy the conditions upon which the certificate was issued and the vehicles sold in violation of this prohibition shall not be covered by the certificate.

(iii) The manufacturer shall bear the burden of establishing to the satisfaction of the Administrator that the conditions upon which the certificate was issued were satisfied.

(iv) For recall and warranty purposes, vehicles not covered by a certificate because of a violation of this condition of the certificate will continue to be held to the standards stated in the certificate that would have otherwise applied to the vehicles.

* * * * *

10. A new § 86.097–1 is added to subpart A to read as follows:

§ 86.097–1 General applicability.

Section 86.097–1 includes text that specifies requirements that differ from those specified in § 86.094–1. Where a paragraph in § 86.094–1 is identical and applicable to § 86.097–1, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.094–1.''.

(a) through (b) [Reserved]. For guidance see § 86.094–1.

(c) National Low Emission Vehicle Program for light-duty vehicles and light light-duty trucks. A manufacturer may elect to certify 1997 and later model year light-duty vehicles and light light-duty trucks to the provisions of the National Low Emission Vehicle Program contained in subpart R of this part. Subpart R of this part is applicable only to those manufacturers that opt into the National Low Emission Vehicle Program, under the provisions of that subpart, and that have not exercised a valid opt-out from the NLEV Program that has gone into effect under the provisions of § 86.1705 (d) and (e). All provisions of this subpart are applicable to vehicles certified pursuant to subpart R of this part, except as specifically noted in subpart R of this part.

(d) [Reserved]

(e) through (f) [Reserved]. For guidance see § 86.094–1.

Subpart B—[Amended]

11. Section 86.101 is amended by adding a paragraph (c) to read as follows:

§ 86.101 General applicability.

* * * * *

(c) *National Low Emission Vehicle Program for light-duty vehicles and light light-duty trucks.* A manufacturer may elect to certify 1997 and later model year light-duty vehicles and light light-duty trucks to the provisions of the National Low Emission Vehicle Program contained in subpart R of this part. Subpart R of this part is applicable only to those manufacturers that opt into the National Low Emission Vehicle Program, under the provisions of subpart R of this part, and that have not exercised a valid opt-out from the NLEV Program, which opt out has gone into effect under the provisions of § 86.1705(d) and (e). All provisions of this subpart are applicable to vehicles certified pursuant to subpart R of this part, except as specifically noted in subpart R of this part.

Subpart G—[Amended]

12. Section 86.601–84 is amended by designating the existing text as introductory text, by adding paragraph (a), and by adding and reserving paragraph (b) to read as follows:

§ 86.601–84 Applicability.

* * * * *

(a) *Section numbering; construction.* (1) The model year of initial applicability is indicated by the two digits following the hyphen of the section number. A section remains in effect for subsequent model years until it is superseded.

(2) A section reference without a model year suffix shall be interpreted to be a reference to the section applicable to the appropriate model year.

(b) [Reserved]

13. Section 86.602–97 is added to subpart G to read as follows:

§ 86.602–97 Definitions.

Section 86.602–97 includes text that specifies requirements that differ from those specified in § 86.602-84. Where a paragraph in § 86.602–84 is identical and applicable to § 86.602–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.602–84.''

(a) through (b)(8) [Reserved]. For guidance see § 86.602–84.

(b)(9) *Executive Officer* means the Executive Officer of the California Air Resources Board or his or her authorized representative.

(10) *Executive Order* means the document the Executive Officer grants a manufacturer for an engine family that certifies the manufacturer has verified that the engine family complies with all applicable standards and requirements pursuant to Title 13 of the California Code of Regulations.

(11) *50-state engine family* means an engine family that meets both federal and California Air Resources Board motor vehicle emission control regulations and has received a federal certificate of conformity as well as an Executive Order.

14. Section 86.602–98 is amended by adding paragraphs (b)(9) through (b)(11) to read as follows:

§ 86.602–98 Definitions.

* * * * *

(b) * * *

(9) *Executive Officer* means the Executive Officer of the California Air Resources Board or his or her authorized representative.

(10) *Executive Order* means the document the Executive Officer grants a manufacturer for an engine family that certifies the manufacturer has verified that the engine family complies with all applicable standards and requirements pursuant to Title 13 of the California Code of Regulations.

(11) *50-state engine family* means an engine family that meets both federal and California Air Resources Board motor vehicle emission control regulations and has received a federal certificate of conformity as well as an Executive Order.

15. Section 86.603–97 is added to subpart G to read as follows:

§ 86.603–97 Test orders.

Section 86.603–97 includes text that specifies requirements that differ from those specified in § 86.603–88. Where a paragraph in § 86.603–88 is identical and applicable to § 86.603–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.603–88.''

(a) through (e) [Reserved]. For guidance see § 86.603–88.

(f) In the event evidence exists indicating an engine family is in noncompliance, the Administrator may, in addition to other powers provided by this section, issue a test order specifying the engine family the manufacturer is required to test.

16. Section 86.603–98 is amended by adding paragraph (f) to read as follows:

§ 86.603–98 Test orders.

* * * * *

(f) In the event evidence exists indicating an engine family is in noncompliance, the Administrator may, in addition to other powers provided by this section, issue a test order specifying the engine family the manufacturer is required to test.

17. Section 86.608–97 is added to subpart G to read as follows:

§ 86.608–97 Test procedures.

Section 86.608–97 includes text that specifies requirements that differ from

those specified in §§ 86.608–90 and 86.608–96. Where a paragraph in § 86.608–90 or § 86.608–96 is identical and applicable to § 86.608–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.608–90.'' or ''[Reserved]. For guidance see § 86.608–96.''

(a) The prescribed test procedures are the Federal Test Procedure, as described in subpart B and/or subpart R of this part, whichever is applicable, the cold temperature CO test procedure as described in subpart C of this part, and the Certification Short Test procedure as described in subpart O of this part. Where the manufacturer conducts testing based on the requirements specified in Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), the prescribed test procedures are the procedures cited in the previous sentence, or substantially similar procedures, as determined by the Administrator. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program are incorporated by reference (see § 86.1). For purposes of Selective Enforcement Audit testing, the manufacturer shall not be required to perform any of the test procedures in subpart B of this part relating to evaporative emission testing, except as specified in paragraph (a)(2) of this section.

(1) [Reserved]. For guidance see § 86.608–96.

(2) The following exceptions to the test procedures in subpart B and/or subpart R of this part are applicable to Selective Enforcement Audit testing:

(i) For mileage accumulation, the manufacturer may use test fuel meeting the specifications for mileage and service accumulation fuels of § 86.113, or, for vehicles certified to the National LEV standards, the specifications of § 86.1771. Otherwise, the manufacturer may use fuels other than those specified in this section only with the advance approval of the Administrator.

(ii) [Reserved]. For guidance see § 86.608–90.

(iii) The manufacturer may perform additional preconditioning on Selective Enforcement Audit test vehicles other than the preconditioning specified in § 86.132, or § 86.1773 for vehicles certified to the National LEV standards, only if the additional preconditioning had been performed on certification test vehicles of the same configuration.

(a)(2)(iv) through (a)(2)(vii) [Reserved]. For guidance see § 86.608–90.

(a)(2)(viii) The manufacturer need not comply with § 86.142, or § 86.1775, since the records required therein are provided under other provisions of this subpart G.

(a)(2)(ix) through (a)(3) [Reserved]. For guidance see § 86.608–90.

(a)(4) [Reserved]. For guidance see § 86.608–96.

(b) through (i) [Reserved]. For guidance see § 86.608–90.

18. Section 86.608–98 is amended by revising paragraphs (a) introductory text, (a)(2) introductory text, (a)(2)(i), (a)(2)(iii), and (a)(2)(viii), to read as follows:

§ 86.608–98 Test procedures.

(a) The prescribed test procedures are the Federal Test Procedure, as described in subpart B and/or subpart R of this part, whichever is applicable, the cold temperature CO test procedure as described in subpart C of this part, and the Certification Short Test procedure as described in subpart O of this part. Where the manufacturer conducts testing based on the requirements specified in Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), the prescribed test procedures are the procedures cited in the previous sentence, or substantially similar procedures, as determined by the Administrator. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program are incorporated by reference (see § 86.1). For purposes of Selective Enforcement Audit testing, the manufacturer shall not be required to perform any of the test procedures in subpart B of this part relating to evaporative emission testing, other than refueling emissions testing, except as specified in paragraph (a)(2) of this section.

* * * * *

(2) The following exceptions to the test procedures in subpart B and/or subpart R of this part are applicable to Selective Enforcement Audit testing:

(i) For mileage accumulation, the manufacturer may use test fuel meeting the specifications for mileage and service accumulation fuels of § 86.113, or, for vehicles certified to the National LEV standards, the specifications of § 86.1771. Otherwise, the manufacturer may use fuels other than those specified in this section only with the advance approval of the Administrator.

* * * * *

(iii) The manufacturer may perform additional preconditioning on Selective Enforcement Audit test vehicles other than the preconditioning specified in § 86.132, or § 86.1773, for vehicles certified to the National LEV standards only if the additional preconditioning was performed on certification test vehicles of the same configuration.

* * * * *

(viii) The manufacturer need not comply with § 86.142, § 86.155, or § 86.1775, since the records required therein are provided under other provisions of this subpart G.

* * * * *

19. Section 86.609–97 is added to subpart G to read as follows:

§ 86.609–97 Calculation and reporting of test results.

Section 86.609–97 includes text that specifies requirements that differ from those specified in §§ 86.609-84 and 86.609–96. Where a paragraph in § 86.609–84 or § 86.609–96 is identical and applicable to § 86.609–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.609-84.'' or ''[Reserved]. For guidance see § 86.609–96.''

(a) through (b) [Reserved]. For guidance see § 86.609–96.

(c) *Final deteriorated test results*—(1) *For each test vehicle.* The final deteriorated test results for each test vehicle tested according to subpart B, subpart C, or subpart R of this part are calculated by first multiplying or adding, as appropriate, the final test results by or to the appropriate deterioration factor derived from the certification process for the engine or evaporative/refueling family and model year to which the selected configuration belongs, and then by multiplying by the appropriate reactivity adjustment factor, if applicable, and rounding to the same number of decimal places contained in the applicable emission standard. Rounding is done in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications. This procedure is incorporated by reference (see § 86.1). For the purpose of this paragraph (c), if a multiplicative deterioration factor as computed during the certification process is less than one, that deterioration factor is one. If an additive deterioration factor as computed during the certification process is less than zero, that deterioration factor will be zero.

(c)(2) [Reserved]. For guidance see § 86.609–96.

(d) [Reserved]. For guidance see § 86.609–84.

20. Section 86.609–98 is amended by revising paragraph (c)(1) to read as follows:

§ 86.609–98 Calculation and reporting of test results.

* * * * *

(c) * * *

(1) *For each test vehicle.* The final deteriorated test results for each light-duty vehicle tested for exhaust emissions and/or refueling emissions according to subpart B, subpart C, or subpart R of this part are calculated by first multiplying or adding, as appropriate, the final test results by or to the appropriate deterioration factor derived from the certification process for the engine or evaporative/refueling family and model year to which the selected configuration belongs, and then by multiplying by the appropriate reactivity adjustment factor, if applicable, and rounding to the same number of decimal places contained in the applicable emission standard. Rounding is done in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications. This procedure has been incorporated by reference (see § 86.1). For the purpose of this paragraph (c), if a multiplicative deterioration factor as computed during the certification process is less than one, that deterioration factor is one. If an additive deterioration factor as computed during the certification process is less than zero, that deterioration factor will be zero.

* * * * *

21. Section 86.612–97 is added to subpart G to read as follows:

§ 86.612–97 Suspension and revocation of certificates of conformity.

(a) The certificate of conformity is immediately suspended with respect to any vehicle failing pursuant to § 86.610(b) effective from the time that testing of that vehicle is completed.

(b)(1) *Selective Enforcement Audits.* The Administrator may suspend the certificate of conformity for a configuration that does not pass a Selective Enforcement Audit pursuant to § 86.610–98(c) based on the first test, or all tests, conducted on each vehicle. This suspension will not occur before ten days after failure to pass the audit.

(2) *California Assembly-Line Quality Audit Testing.* The Administrator may suspend the certificate of conformity for a 50-state family or configuration tested in accordance with procedures prescribed under § 86.608 that the Executive Officer has determined to be in non-compliance with one or more applicable pollutants based on the requirements specified in Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), if the results of vehicle testing conducted by the manufacturer do not meet the acceptable quality level criteria pursuant to § 86.610. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1). A vehicle that is tested by the manufacturer pursuant to California Assembly-Line Quality Audit Test Procedures, in accordance with procedures prescribed under § 86.608, and determined to be a failing vehicle will be treated as a failed vehicle described in § 86.610(b), unless the manufacturer can show that the vehicle would not be considered a failed vehicle using the test procedures specified in § 86.608. This suspension will not occur before ten days after the manufacturer receives written notification that the Administrator has determined the 50-state family or configuration exceeds one or more applicable federal standards.

(c)(1) *Selective Enforcement Audits.* If the results of vehicle testing pursuant to the requirements of this subpart indicates the vehicles of a particular configuration produced at more than one plant do not conform to the regulations with respect to which the certificate of conformity was issued, the Administrator may suspend the certificate of conformity with respect to that configuration for vehicles manufactured by the manufacturer in other plants of the manufacturer.

(2) *California Assembly-Line Quality Audit Testing.* If the Administrator determines that the results of vehicle testing pursuant to the requirements specified in Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) and the procedures prescribed in § 86.608 indicate the vehicles of a particular 50-state engine family or configuration produced at more than one plant do not conform to applicable federal regulations with respect to which a certificate of conformity was issued, the Administrator may suspend, pursuant to paragraph (b)(2) of this section, the certificate of conformity with respect to that engine family or configuration for vehicles manufactured in other plants of the manufacturer. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(d) The Administrator will notify the manufacturer in writing of any suspension or revocation of a certificate of conformity in whole or in part: Except, that the certificate of conformity is immediately suspended with respect to any vehicle failing pursuant to § 86.610(b) and as provided for in paragraph (a) of this section.

(e)(1) *Selective Enforcement Audits.* The Administrator may revoke a certificate of conformity for a configuration when the certificate has been suspended pursuant to paragraph (b)(1) or (c)(1) of this section if the proposed remedy for the nonconformity, as reported by the manufacturer to the Administrator, is one requiring a design change(s) to the engine and/or emission control system as described in the Application for Certification of the affected configuration.

(2) *California Assembly-Line Quality Audit Testing.* The Administrator may revoke a certificate of conformity for an engine family or configuration when the certificate has been suspended pursuant to paragraph (b)(2) or (c)(2) of this section if the proposed remedy for the nonconformity, as reported by the manufacturer to the Executive Officer and/or the Administrator, is one requiring a design change(s) to the engine and/or emission control system as described in the Application for Certification of the affected engine family or configuration.

(f) Once a certificate has been suspended for a failed vehicle as provided for in paragraph (a) of this section, the manufacturer must take the following actions:

(1) Before the certificate is reinstated for that failed vehicle—

(i) Remedy the nonconformity; and

(ii) Demonstrate that the vehicle's final deteriorated test results conform to the applicable emission standards or family particulate emission limits, as defined in this part 86 by retesting the vehicle in accordance with the requirements of this subpart.

(2) Submit a written report to the Administrator within thirty days after successful completion of testing on the failed vehicle, which contains a description of the remedy and test results for the vehicle in addition to other information that may be required by this subpart.

(g) Once a certificate has been suspended pursuant to paragraph (b) or (c) of this section, the manufacturer must take the following actions before the Administrator will consider reinstating such certificate:

(1) Submit a written report to the Administrator which identifies the reason for the noncompliance of the vehicles, describes the proposed remedy, including a description of any proposed quality control and/or quality assurance measures to be taken by the manufacturer to prevent the future occurrence of the problem, and states the date on which the remedies will be implemented.

(2) Demonstrate that the engine family or configuration for which the certificate of conformity has been suspended does in fact comply with the requirements of this subpart by testing vehicles selected from normal production runs of that engine family or configuration at the plant(s) or the facilities specified by the Administrator, in accordance with:

(i) The conditions specified in the initial test order pursuant to § 86.603 for a configuration suspended pursuant to paragraph (b)(1) or (c)(1) of this section; or

(ii) The conditions specified in a test order pursuant to § 86.603 for an engine family or configuration suspended pursuant to paragraph (b)(2) or (c)(2) of this section.

(3) If the Administrator has not revoked the certificate pursuant to paragraph (e) of this section and if the manufacturer elects to continue testing individual vehicles after suspension of a certificate, the certificate is reinstated for any vehicle actually determined to have its final deteriorated test results in conformance with the applicable standards through testing in accordance with the applicable test procedures.

(4) In cases where the Administrator has suspended a certificate of conformity for a 50-state engine family or configuration pursuant to paragraph (b)(2) or (c)(2) of this section, manufacturers may request in writing that the Administrator reinstate the certificate of an engine family or configuration when, in lieu of the actions described in paragraphs (g) (1) and (2) of this section, the manufacturer has agreed to comply with Chapter 3 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), provided an Executive Order is in place for the engine family or configuration. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(h) Once a certificate for a failed engine family or configuration has been revoked under paragraph (e) (1) or (2) of this section and the manufacturer desires to introduce into commerce a modified version of that engine family or configuration, the following actions will be taken before the Administrator may issue a certificate for the new engine family or configuration:

(1) If the Administrator determines that the proposed change(s) in vehicle design may have an effect on emission performance deterioration and/or fuel economy, he/she shall notify the manufacturer within five working days after receipt of the report in paragraph (g)(1) of this section or after receipt of information pursuant to paragraph (g)(4) of this section whether subsequent testing under this subpart will be sufficient to evaluate the proposed change(s) or whether additional testing will be required.

(2) After implementing the change(s) intended to remedy the nonconformity, the manufacturer shall demonstrate:

(i) If the certificate was revoked pursuant to paragraph (e)(1) of this section, that the modified vehicle configuration does in fact conform with the requirements of this subpart by testing vehicles selected from normal production runs of that modified vehicle configuration in accordance with the conditions specified in the initial test order pursuant to § 86.603. The Administrator shall consider this testing to satisfy the testing requirements of § 86.079–32 or § 86.079–33 if the Administrator had so notified the manufacturer. If the subsequent testing results in a pass decision pursuant to the criteria in § 86.610–96(c), the Administrator shall reissue or amend the certificate, if necessary, to include that configuration: *Provided,* that the manufacturer has satisfied the testing requirements specified in paragraph (h)(1) of this section. If the subsequent audit results in a fail decision pursuant to the criteria in § 86.610(c), the revocation remains in effect. Any design change approvals under this subpart are limited to the modification of the configuration specified by the test order.

(ii) If the certificate was revoked pursuant to paragraph (e)(2) of this section, that the modified engine family or configuration does in fact conform with the requirements of this subpart by testing vehicles selected from normal production runs of that modified engine family or configuration in accordance with the conditions specified in a test order pursuant to § 86.603. The Administrator shall consider this testing to satisfy the testing requirements of § 86.079–32 or § 86.079–33 if the Administrator had so notified the manufacturer. If the subsequent testing results in a pass decision pursuant to § 86.610(c), the Administrator shall reissue or amend the certificate as necessary: *Provided,* That the manufacturer has satisfied the testing requirements specified in paragraph (h)(1) of this section. If the subsequent testing results in a fail decision pursuant to § 86.610(c), the revocation remains in effect. Any design change approvals under this subpart are limited to the modification of engine family or configuration specified by the test order.

(3) In cases where the Administrator has revoked a certificate of conformity for a 50-state engine family or configuration pursuant to paragraph (e)(2) of this section, manufacturers may request in writing that the Administrator reissue the certificate of an engine family or configuration when, in lieu of the actions described in paragraphs (h) (1) and (2) of this section, the manufacturer has complied with Chapter 3 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), provided an Executive Order is in place for the engine family or configuration. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(i) A manufacturer may at any time subsequent to an initial suspension of a certificate of conformity with respect to a test vehicle pursuant to paragraph (a) of this section, but not later than fifteen (15) days or such other period as may be allowed by the Administrator after notification of the Administrator's decision to suspend or revoke a certificate of conformity in whole or in part pursuant to paragraph (b), (c) or (e) of this section, request that the Administrator grant such manufacturer a hearing as to whether the tests have been properly conducted or any sampling methods have been properly applied.

(j) After the Administrator suspends or revokes a certificate of conformity pursuant to this section or notifies a manufacturer of his intent to suspend, revoke or void a certificate of conformity under § 86.084–30(d), and prior to the commencement of a hearing under § 86.614, if the manufacturer demonstrates to the Administrator's satisfaction that the decision to suspend, revoke or void the certificate was based on erroneous information, the Administrator shall reinstate the certificate.

(k) To permit a manufacturer to avoid storing non-test vehicles when conducting testing of an engine family or configuration subsequent to suspension or revocation of the certificate of conformity for that engine family or configuration pursuant to

paragraph (b), (c), or (e) of this section, the manufacturer may request that the Administrator conditionally reinstate the certificate for that engine family or configuration. The Administrator may reinstate the certificate subject to the condition that the manufacturer consents to recall all vehicles of that engine family or configuration produced from the time the certificate is conditionally reinstated if the engine family or configuration fails the subsequent testing and to remedy any nonconformity at no expense to the owner.

Subpart K—[Amended]

22. Section 86.1001–84 is amended by designating the existing text as introductory text, by adding paragraph (a), and by adding and reserving paragraph (b) to read as follows:

§ 86.1001–84 Applicability.

* * * * *

(a) *Section numbering; construction.* (1) The model year of initial applicability is indicated by the two digits following the hyphen of the section number. A section remains in effect for subsequent model years until it is superseded.

(2) A section reference without a model year suffix shall be interpreted to be a reference to the section applicable to the appropriate model year.

(b) [Reserved]

23. Section 86.1002–97 is added to subpart K to read as follows:

§ 86.1002–97 Definitions.

(a) The definitions in this section apply to this subpart.

(b) As used in this subpart, all terms not defined in this section have the meaning given them in the Act.

Acceptable quality level (AQL) means the maximum percentage of failing engines or vehicles, that for purposes of sampling inspection, can be considered satisfactory as a process average.

Axle ratio means all ratios within ±3% of the axle ratio specified in the configuration in the test order.

Compliance level means an emission level determined during a Production Compliance Audit pursuant to subpart L of this part.

Configuration means a subclassification, if any, of a heavy-duty engine family for which a separate projected sales figure is listed in the manufacturer's Application for Certification and which can be described on the basis of emission control system, governed speed, injector size, engine calibration, and other parameters which may be designated by the Administrator, or a subclassification of a light-duty truck engine family/emission control system combination on the basis of engine code, inertia weight class, transmission type and gear rations, axle ratio, and other parameters which may be designated by the Administrator.

Executive Officer means the Executive Officer of the California Air Resources Board or his or her authorized representative.

Executive Order means the document the Executive Officer grants a manufacturer for an engine family that certifies the manufacturer has verified the engine family complies with all applicable standards and requirements pursuant to Title 13 of the California Code of Regulations.

50-state engine family means an engine family that meets both federal and California Air Resources Board motor vehicle emission control regulations and has received a federal certificate of conformity as well as an Executive Order.

Inspection criteria means the pass and fail numbers associated with a particular sampling plan.

Test engine means an engine in a test sample.

Test sample means the collection of vehicles or engines of the same configuration which have been drawn from the population of engines or vehicles of that configuration and which will receive exhaust emission testing.

Test vehicle means a vehicle in a test sample.

24. Section 86.1002–2001 is amended by adding paragraphs (b)(8) through (b)(11) to read as follows:

§ 86.1002–2001 Definitions.

* * * * *

(b) * * *

(8) *Axle ratio* means all ratios within ±3% of the axle ratio specified in the configuration in the test order.

(9) *Executive Officer* means the Executive Officer of the California Air Resources Board or his or her authorized representative.

(10) *Executive Order* means the document the Executive Officer grants a manufacturer for an engine family that certifies the manufacturer has verified the engine family complies with all applicable standards and requirements pursuant to Title 13 of the California Code of Regulations.

(11) *50-state engine family* means an engine family that meets both federal and California Air Resources Board motor vehicle emission control regulations and has received a federal certificate of conformity as well as an Executive Order.

25. Section 86.1003–97 is added to subpart K to read as follows:

§ 86.1003–97 Test orders.

Section 86.1003–97 includes text that specifies requirements that differ from those specified in § 86.1003–90. Where a paragraph in § 86.1003–90 is identical and applicable to § 86.1003–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.1003–90.''

(a) through (f) [Reserved]. For guidance see § 86.1003–90.

(g) In the event evidence exists indicating an engine family is in noncompliance, the Administrator may, in addition to other powers provided by this section, issue a test order specifying the engine family the manufacturer is required to test.

26. Section 86.1003–2001 is amended by adding paragraph (g) to read as follows:

§ 86.1003–2001 Test orders.

* * * * *

(g) In the event evidence exists indicating an engine family is in noncompliance, the Administrator may, in addition to other powers provided by this section, issue a test order specifying the engine family the manufacturer is required to test.

27. Section 86.1008–97 is added to subpart K to read as follows:

§ 86.1008–97 Test procedures.

Section 86.1008–97 includes text that specifies requirements that differ from those specified in §§ 86.1008–90 and 86.1008–96. Where a paragraph in § 86.1008–90 or § 86.1008–96 is identical and applicable to § 86.1008–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.1008–90.'' or ''[Reserved]. For guidance see § 86.1008–96.''

(a)(1) [Reserved]. For guidance see § 86.1008–96.

(2) For light-duty trucks, the prescribed test procedures are the Federal Test Procedure, as described in subpart B and/or subpart R of this part, whichever is applicable, the idle CO test procedure as described in subpart P of this part, the cold temperature CO test procedure as described in subpart C of this part, and the Certification Short Test procedure as described in subpart O of this part. Where the manufacturer conducts testing based on the requirements specified in Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), the prescribed test procedures are the procedures cited in the previous sentence, or substantially similar procedures, as determined by

the Administrator. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program are incorporated by reference (see § 86.1). For purposes of Selective Enforcement Audit testing, the manufacturer shall not be required to perform any of the test procedures in subpart B of this part relating to evaporative emission testing, except as specified in paragraph (a)(3) of this section. The Administrator may select and prescribe the sequence of any Certification Short Tests. Further, the Administrator may, on the basis of a written application by a manufacturer, approve optional test procedures other than those in subparts B, C, P, and O of this part for any motor vehicle which is not susceptible to satisfactory testing using the procedures in subparts B, C, P, and O of this part.

(3) When testing light-duty trucks the following exceptions to the test procedures in subpart B and/or subpart R of this part are applicable:

(i) For mileage accumulation, the manufacturer may use test fuel meeting the specifications for mileage and service accumulation fuels of § 86.113–94, or, for vehicles certified to the National LEV standards, the specifications of § 86.1771. Otherwise, the manufacturer may use fuels other than those specified in this section only with the advance approval of the Administrator.

(ii) [Reserved]. For guidance see § 86.1008–90.

(iii) The manufacturer may perform additional preconditioning on Selective Enforcement Audit test vehicles other than the preconditioning specified in § 86.132, or § 86.1773 for vehicles certified to the National LEV standards, only if the additional preconditioning had been performed on certification test vehicles of the same configuration.

(a)(3)(iv) through (a)(3)(vii) [Reserved]. For guidance see § 86.1008–90.

(a)(3)(viii) The manufacturer need not comply with § 86.142 or § 86.1775, since the records required therein are provided under other provisions of this subpart.

(a)(3)(ix) [Reserved]. For guidance see § 86.1008–90.

(a)(4) [Reserved]. For guidance see § 86.1008–96.

(5) [Reserved]. For guidance see § 86.1008–90.

(6) [Reserved]. For guidance see § 86.1008–96.

(b) through (i) [Reserved]. For guidance see § 86.1008–90.

28. Section 86.1008–2001 is amended by revising paragraphs (a)(2), (a)(3) introductory text, (a)(3)(i), (a)(3)(iii), and (a)(3)(viii) to read as follows:

§ 86.1008–2001 Test procedures.

(a) * * *

(2) For light-duty trucks, the prescribed test procedures are the Federal Test Procedure as described in subpart B and/or subpart R of this part, whichever is applicable, the idle CO test procedure as described in subpart P of this part, the cold temperature CO test procedure as described in subpart C of this part, and the Certification Short Test procedure as described in subpart O of this part. For purposes of Selective Enforcement Audit Testing, the manufacturer shall not be required to perform any of the test procedures in subpart B of this part relating to evaporative emission testing, other than refueling emissions testing, except as specified in paragraph (a)(3) of this section. The Administrator may select and prescribe the sequence of any CSTs. Further, the Administrator may, on the basis of a written application by a manufacturer, approve optional test procedures other than those in subparts B, C, P, O, and R of this part for any motor vehicle which is not susceptible to satisfactory testing using the procedures in subparts B, C, P, O, and R of this part.

(3) When testing light-duty trucks, the following exceptions to the test procedures in subpart B and/or subpart R of this part are applicable to Selective Enforcement Audit testing:

(i) For mileage accumulation, the manufacturer may use test fuel meeting the specifications for mileage and service accumulation fuels of § 86.113, or, for vehicles certified to the National LEV standards, the specifications of § 86.1771. Otherwise, the manufacturer may use fuels other than those specified in this section only with the advance approval of the Administrator.

* * * * *

(iii) The manufacturer may perform additional preconditioning on SEA test vehicles other than the preconditioning specified in § 86.132, or § 86.1773 for vehicles certified to the National LEV standards, only if the additional preconditioning was performed on certification test vehicles of the same configuration.

* * * * *

(viii) The manufacturer need not comply with § 86.142, § 86.155, or § 86.1775 since the records required therein are provided under other provisions of this subpart K.

* * * * *

29. Section 86.1009–97 is added to subpart K to read as follows:

§ 86.1009–97 Calculation and reporting of test results.

Section 86.1009–97 includes text that specifies requirements that differ from those specified in §§ 86.1009–84 and 86.1009–96. Where a paragraph in § 86.1009–84 or § 86.1009–96 is identical and applicable to § 86.1009–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.1009–84.'' or ''[Reserved]. For guidance see § 86.1009–96.''.

(a) and (b) [Reserved]. For guidance see § 86.1009–96.

(c) *Final deteriorated test results.* (1) The final deteriorated test results for each heavy-duty engine or light-duty truck tested according to subpart B, C, D, I, N, P, or R of this part are calculated by first multiplying or adding, as appropriate, the final test results by or to the appropriate deterioration factor derived from the certification process for the engine family control system combination and model year to which the selected configuration belongs, and then by multiplying by the appropriate reactivity adjustment factor, if applicable. If the multiplicative deterioration factor as computed during the certification process is less than one, that deterioration factor will be one. If the additive deterioration factor as computed during the certification process is less than zero, that deterioration factor will be zero.

(c)(2) [Reserved]

(c)(3) through (c)(4) [Reserved]. For guidance see § 86.1009–96.

(d) [Reserved]. For guidance see § 86.1009–84.

30. Section 86.1009–2001 is amended by revising paragraph (c)(1) to read as follows:

§ 86.1009–2001 Calculation and reporting of test results.

* * * * *

(c) * * *

(1) The final deteriorated test results for each light-duty truck, heavy-duty engine, or heavy-duty vehicle tested according to subpart B, C, D, I, M, N, P, or R of this part are calculated by first multiplying or adding, as appropriate, the final test results by or to the appropriate deterioration factor derived from the certification process for the engine or evaporative/refueling family and model year to which the selected configuration belongs, and then by multiplying by the appropriate reactivity adjustment factor, if applicable. For the purpose of this paragraph (c), if a multiplicative deterioration factor as computed during the certification process is less than one, that deterioration factor will be one. If

an additive deterioration factor as computed during the certification process is less than zero, that deterioration factor will be zero.

* * * * *

31. Section 86.1012–97 is added to subpart K to read as follows:

§ 86.1012–97 Suspension and revocation of certificates of conformity.

(a) The certificate of conformity is immediately suspended with respect to any engine or vehicle failing pursuant to § 86.1010(b) effective from the time that testing of that engine or vehicle is completed.

(b)(1) *Selective Enforcement Audits.* The Administrator may suspend the certificate of conformity for a configuration that does not pass a Selective Enforcement Audit pursuant to § 86.1010(c) based on the first test, or all tests, conducted on each engine or vehicle. This suspension will not occur before ten days after failure to pass the audit.

(2) *California Assembly-Line Quality Audit Testing.* The Administrator may suspend the certificate of conformity for a 50-state engine family or configuration tested in accordance with procedures prescribed under § 86.1008 that the Executive Officer has determined to be in non-compliance with one or more applicable pollutants based on Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), if the results of vehicle testing conducted by the manufacturer do not meet the acceptable quality level criteria pursuant to § 86.1010. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1). A vehicle that is tested by the manufacturer in accordance with procedures prescribed under § 86.1008 and determined to be a failing vehicle pursuant to Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) will be treated as a failed vehicle described in § 86.1010(b), unless the manufacturer can show that the vehicle would not be considered a failed vehicle using the test procedures specified in § 86.1008. This suspension will not occur before ten days after the manufacturer receives written notification that the Administrator has determined the 50-state engine family or configuration exceeds one or more applicable federal standards.

(c)(1) *Selective Enforcement Audits.* If the results of engine or vehicle testing pursuant to the requirements of this subpart indicate that engines or vehicles of a particular configuration produced at more than one plant do not conform to the regulations with respect to which the certificate of conformity was issued, the Administrator may suspend the certificate of conformity with respect to that configuration for engines or vehicles manufactured by the manufacturer in other plants of the manufacturer.

(2) *California Assembly-Line Quality Audit Testing.* If the Administrator determines that the results of vehicle testing pursuant to Chapter 1 or Chapter 2 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) and the procedures prescribed in § 86.1008 indicate the vehicles of a particular 50-state engine family or configuration produced at more than one plant do not conform to applicable regulations with respect to which a certificate of conformity was issued, the Administrator may suspend, pursuant to paragraph (b)(2) of this section, the certificate of conformity with respect to that engine family or configuration for vehicles manufactured by the manufacturer in other plants of the manufacturer. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(d) The Administrator will notify the manufacturer in writing of any suspension or revocation of a certificate of conformity in whole or in part: Except, that the certificate is immediately suspended with respect to any failed engines or vehicles as provided for in paragraph (a) of this section.

(e)(1) *Selective Enforcement Audits.* The Administrator may revoke a certificate of conformity for a configuration when the certificate has been suspended pursuant to paragraph (b)(1) or (c)(1) of this section if the proposed remedy for the nonconformity, as reported by the manufacturer to the Administrator is one requiring a design change(s) to the engine and/or emission control system as described in the Application for Certification of the affected configuration.

(2) *California Assembly-Line Quality Audit Testing.* The Administrator may revoke a certificate of conformity for an engine family or configuration when the certificate has been suspended pursuant to paragraph (b)(2) or (c)(2) of this section if the proposed remedy for the nonconformity, as reported by the manufacturer to the Executive Officer and/or the Administrator, is one requiring a design change(s) to the engine and/or emission control system as described in the Application for Certification of the affected engine family or configuration.

(f) Once a certificate has been suspended for a failed engine or vehicle as provided for in paragraph (a) of this section, the manufacturer must take the following actions:

(1) Before the certificate is reinstated for that failed engine or vehicle—

(i) Remedy the nonconformity; and

(ii) Demonstrate that the engine or vehicle's final deteriorated test results conform to the applicable emission standards or family particulate emission limits, as defined in this part 86 by retesting the engine or vehicle in accordance with the requirements of this subpart.

(2) Submit a written report to the Administrator within thirty days after successful completion of testing on the failed engine or vehicle, which contains a description of the remedy and test results for the engine or vehicle in addition to other information that may be required by this subpart.

(g) Once a certificate has been suspended pursuant to paragraph (b) or (c) of this section, the manufacturer must take the following actions before the Administrator will consider reinstating such certificate:

(1) Submit a written report to the Administrator which identifies the reason for the noncompliance of the vehicles, describes the proposed remedy, including a description of any proposed quality control and/or quality assurance measures to be taken by the manufacturer to prevent the future occurrence of the problem, and states the date on which the remedies will be implemented.

(2) Demonstrate that the engine family or configuration for which the certificate of conformity has been suspended does in fact comply with the requirements of this subpart by testing engines or vehicles selected from normal production runs of that engine family or configuration at the plant(s) or the facilities specified by the Administrator, in accordance with:

(i) The conditions specified in the initial test order pursuant to § 86.1003 for a configuration suspended pursuant to paragraph (b)(1) or (c)(1) of this section; or

(ii) The conditions specified in a test order pursuant to § 86.1003 for an engine family or configuration suspended pursuant to paragraph (b)(2) or (c)(2) of this section.

(3) If the Administrator has not revoked the certificate pursuant to paragraph (e) of this section and if the

manufacturer elects to continue testing individual engines or vehicles after suspension of a certificate, the certificate is reinstated for any engine or vehicle actually determined to have its final deteriorated test results in conformance with the applicable standards through testing in accordance with the applicable test procedures.

(4) In cases where the Administrator has suspended a certificate of conformity for a 50-state engine family or configuration pursuant to paragraph (b)(2) or (c)(2) of this section, manufacturers may request in writing that the Administrator reinstate the certificate of an engine family or configuration when, in lieu of the actions described in paragraphs (g) (1) and (2) of this section, the manufacturer has complied with Chapter 3 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), provided an Executive Order is in place for the engine family or configuration. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(h) Once a certificate for a failed engine family or configuration has been revoked under paragraph (e) (1) or (2) of this section and the manufacturer desires to introduce into commerce a modified version of that engine family or configuration the following actions will be taken before the Administrator may issue a certificate for the new engine family or configuration:

(1) If the Administrator determines that the proposed change(s) in engine or vehicle design may have an effect on emission performance deterioration and/or fuel economy, he/she shall notify the manufacturer within 5 working days after receipt of the report in paragraph (g)(1) of this section or after receipt of information pursuant to paragraph (g)(4) of this section whether subsequent testing under this subpart will be sufficient to evaluate the proposed change(s) or whether additional testing will be required.

(2) After implementing the change(s) intended to remedy the nonconformity, the manufacturer shall demonstrate:

(i) If the certificate was revoked pursuant to paragraph (e)(1) of this section, that the modified configuration does in fact conform with the requirements of this subpart by testing engines or vehicles selected from normal production runs of that modified configuration in accordance with the conditions specified in the initial test order pursuant to § 86.1003. The Administrator shall consider this testing to satisfy the testing requirements of § 86.079–32 or § 86.079–33 if the Administrator had so notified the manufacturer. If the subsequent testing results in a pass decision pursuant to the criteria in § 86.1010(c), the Administrator shall reissue or amend the certificate, if necessary, to include that configuration: *Provided*, that the manufacturer has satisfied the testing requirements specified in paragraph (h)(1) of this section. If the subsequent audit results in a fail decision pursuant to the criteria in § 86.1010(c), the revocation remains in effect. Any design change approvals under this subpart are limited to the modification of the configuration specified by the test order.

(ii) If the certificate was revoked pursuant to paragraph (e)(2) of this section, that the modified engine family or configuration does in fact conform with the requirements of this subpart by testing vehicles selected from normal production runs of that modified engine family or configuration in accordance with the conditions specified in a test order pursuant to § 86.1003. The Administrator shall consider this testing to satisfy the testing requirements of § 86.079–32 or § 86.079–33 if the Administrator had so notified the manufacturer. If the subsequent testing results in a pass decision pursuant to § 86.1010(c), the Administrator shall reissue or amend the certificate as necessary: *Provided*, that the manufacturer has satisfied the testing requirements specified in paragraph (h)(1) of this section. If the subsequent testing results in a fail decision pursuant to § 86.1010(c), the revocation remains in effect. Any design change approvals under this subpart are limited to the modification of the engine family or configuration specified by the test order.

(3) In cases where the Administrator has revoked a certificate of conformity for a 50-state engine family or configuration pursuant to paragraph (e)(2) of this section, manufacturers may request in writing that the Administrator reissue the certificate for an engine family or configuration when, in lieu of the actions described in paragraphs (h) (1) and (2) of this section, the manufacturer has complied with Chapter 3 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), provided an Executive Order is in place for the engine family or configuration. The California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) are incorporated by reference (see § 86.1).

(i) through (k) [Reserved]

(l) At any time subsequent to an initial suspension of a certificate of conformity for a test engine or vehicle pursuant to paragraph (a) of this section, but not later than fifteen (15) days or such other period as may be allowed by the Administrator after notification of the Administrator's decision to suspend or revoke a certificate of conformity in whole or in part pursuant to paragraphs (b), (c), (d), (e), or (h) of this section, a manufacturer may request a hearing as to whether the tests have been properly conducted or any sampling methods have been properly applied.

(m) After the Administrator suspends or revokes a certificate of conformity pursuant to this section or notifies a manufacturer of his intent to suspend, revoke or void a certificate of conformity under paragraph § 86.087–30(e), and prior to the commencement of a hearing under § 86.1014, if the manufacturer demonstrates to the Administrator's satisfaction that the decision to suspend, revoke or void the certificate was based on erroneous information, the Administrator shall reinstate the certificate.

(n) To permit a manufacturer to avoid storing non-test engines or vehicles when conducting testing of an engine family or configuration subsequent to suspension or revocation of the certificate of conformity for that engine family or configuration pursuant to paragraph (b), (c), or (e) of this section, the manufacturer may request that the Administrator conditionally reinstate the certificate for that engine family or configuration. The Administrator may reinstate the certificate subject to the condition that the manufacturer consents to recall all engines or vehicles of that engine family or configuration produced from the time the certificate is conditionally reinstated if the engine family or configuration fails the subsequent testing and to remedy any nonconformity at no expense to the owner.

32. Section 86.1014–97 is added to subpart K to read as follows:

§ 86.1014–97 Hearings on suspension, revocation and voiding of certificates of conformity.

Section 86.1014–97 includes text that specifies requirements that differ from those specified in § 86.1014–84. Where a paragraph in § 86.1014–84 is identical and applicable to § 86.1014–97, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.1014–84''.

(a) through (c)(2)(ii) introductory text [Reserved]. For guidance see § 86.1014–84.

(c)(2)(ii)(A) Whether tests have been properly conducted, specifically, whether the tests were conducted in accordance with applicable regulations and whether test equipment was properly calibrated and functioning; and

(c)(2)(ii) (B) through (aa) [Reserved]. For guidance see § 86.1014–84.

33. A new subpart R consisting of §§ 86.1701–97 through 86.1780–97 is added to part 86 to read as follows:

Subpart R—General Provisions for the Voluntary National Low Emission Vehicle Program for Light-Duty Vehicles and Light-Duty Trucks

Sec.

86.1701–97 General applicability.
86.1702–97 Definitions.
86.1703–97 Abbreviations.
86.1704–97 Section numbering; construction.
86.1705–97 General provisions; opt-in; opt-out.
86.1706–97 National LEV program in effect.
86.1707–97 [Reserved]
86.1708–97 Exhaust emission standards for 1997 and later light-duty vehicles.
86.1709–97 Exhaust emission standards for 1997 and later light light-duty trucks.
86.1710–97 Fleet average non-methane organic gas exhaust emission standards for light-duty vehicles and light light-duty trucks.
86.1711–97 Limitations on sale of Tier 1 vehicles and TLEVs; five percent cap.
86.1712–97 Maintenance of records; submittal of information.
86.1713–97 Light-duty exhaust durability programs.
86.1714–97 Small-volume manufacturers certification procedures.
86.1715–97 [Reserved]
86.1716–97 Prohibition of defeat devices.
86.1717–97 Emission control diagnostic system for 1997 and later light-duty vehicles and light-duty trucks.
86.1718–97 through 86.1720–97 [Reserved]
86.1721–97 Application for certification.
86.1722–97 [Reserved]
86.1723–97 Required data.
86.1724–97 Test vehicles and engines.
86.1725–97 Maintenance.
86.1726–97 Mileage and service accumulation; emission measurements.
86.1727–97 [Reserved]
86.1728–97 Compliance with emission standards.
86.1729–97 through 86.1733–97 [Reserved]
86.1734–97 Alternative procedure for notification of additions and changes.
86.1735–97 Labeling.
86.1736–97 through 86.1769–97 [Reserved]
86.1770–97 All-Electric Range Test requirements.
86.1771–97 Fuel specifications.
86.1772–97 Road load power test weight and inertia weight class determination.
86.1773–97 Test sequence; general requirements.
86.1774–97 Vehicle preconditioning.
86.1775–97 Exhaust sample analysis.
86.1776–97 Records required.
86.1777–97 Calculations; exhaust emissions.
86.1778–97 Calculations; particulate emissions.
86.1779–97 General enforcement provisions.
86.1780–97 Prohibited acts.

Subpart R—General Provisions for the Voluntary National Low Emission Vehicle Program for Light-Duty Vehicles and Light-Duty Trucks

§ 86.1701–97 General applicability.

(a) The provisions of this subpart may be adopted by vehicle manufacturers pursuant to the provisions specified in § 86.1705. The provisions of this subpart are generally applicable to 1997 and later model year light-duty vehicles and light light-duty trucks to be sold in the Northeast Trading Region, and 2001 and later model year light-duty vehicles and light light-duty trucks to be sold in the United States. In cases where a provision applies only to certain vehicles based on model year, vehicle class, motor fuel, engine type, vehicle emission category, intended sales destination, or other distinguishing characteristics, such limited applicability is cited in the appropriate section or paragraph. The provisions of this subpart shall be referred to as the ''National Low Emission Vehicle Program'' or ''National LEV'' or ''NLEV.''

(b) All requirements of 40 CFR parts 85 and 86, unless specifically superseded by the provisions of this subpart, shall apply to vehicles under the National LEV Program. Compliance with the provisions of this subpart will be deemed compliance with some of the requirements of 40 CFR parts 85 and 86, as set forth elsewhere in this subpart.

(c) The requirements of this subpart apply to new vehicles manufactured by covered manufacturers for model years prior to the first model year for which a mandatory federal exhaust emissions program for light-duty vehicles and light light-duty trucks is at least as stringent as the National LEV program with respect to NMOG, NO_X, and CO exhaust emissions, as determined by the Administrator.

§ 86.1702–97 Definitions.

(a) The definitions in subpart A of this part apply to this subpart, except where the same term is defined differently in paragraph (b) of this section.

(b) The following definitions shall apply to this subpart:

Advanced technology vehicle (ATV) means any light-duty vehicle or light light-duty truck that is covered by a federal certificate of conformity or an Executive Order, as defined in § 86.1002, which is either:

(1) A dual fuel, flexible fuel, or dedicated alternatively fueled vehicle certified as a TLEV or more stringent when operated on the alternative fuel;

(2) A ULEV or Inherently Low-Emission Vehicle (ILEV), as defined in 40 CFR 88.302, either conventionally or alternatively fueled;

(3) An HEV or ZEV.

Alcohol fuel means either methanol or ethanol as those terms are defined in this subpart.

All-electric range test means a test sequence used to determine the range of an electric vehicle or of a hybrid electric vehicle without the use of its auxiliary power unit. The All-Electric Range Test cycle is defined in § 86.1770.

Averaging sets are the categories of LDVs and LDTs for which the manufacturer calculates a fleet average NMOG value. The four averaging sets for fleet average NMOG value calculation purposes are:

(1) Class A delivered to a point of first sale in the Northeast Trading Region;

(2) Class A delivered to a point of first sale in the 37 States;

(3) Class B delivered to a point of first sale in the Northeast Trading Region; and

(4) Class B delivered to a point of first sale in the 37 States.

Battery assisted combustion engine vehicle means any vehicle which allows power to be delivered to the driven wheels solely by a combustion engine, but which uses a battery pack to store energy which may be derived through remote charging, regenerative braking, and/or a flywheel energy storage system or other means which will be used by an electric motor to assist in vehicle operation.

Battery pack means any electrical energy storage device consisting of any number of individual battery modules which is used to propel electric or hybrid electric vehicles.

Certification level means the official exhaust emission result from an emission-data vehicle which has been adjusted by the applicable mass deterioration factor and is submitted to the Administrator for use in determining compliance with an emission standard for the purpose of certifying a particular engine family. For those engine families which are certified using reactivity adjustment factors developed by the manufacturer pursuant to Appendix XVII of this part, the exhaust NMOG certification level shall include adjustment by the ozone deterioration factor.

Class A comprises LDVs and LDTs 0–3750 lbs LVW that are subject to the provisions of this subpart.

Class B comprises LDTs 3751–5750 lbs LVW that are subject to the provisions of this subpart.

Continually regenerating trap oxidizer system means a trap oxidizer system that does not utilize an automated regeneration mode during normal driving conditions for cleaning the trap.

Conventional gasoline means any certification gasoline which meets the specifications of § 86.113(a). The ozone-forming potential of conventional gasoline vehicle emissions shall be determined by using the methods and gasoline specifications contained in Appendix XVII of this part.

Core Stable Standards means the standards and requirements in § 86.1705(g)(1) (i) through (vi).

Covered manufacturer means an original equipment manufacturer (OEM), as defined at 40 CFR 85.1502(9), that meets the conditions specified under § 86.1705(a).

Covered vehicle or engine means a vehicle specified in § 86.1701(a), or an engine in such a vehicle, that is manufactured by a covered manufacturer.

Credits means fleet average NMOG credits as calculated from the amount that the manufacturer's applicable fleet average NMOG value is below the applicable fleet average NMOG standard, times the applicable production for a given model year. NMOG credits have units of g/mi.

Debits means fleet average NMOG debits as calculated from the amount that the manufacturer's applicable fleet average NMOG value is above the applicable fleet average NMOG standard, times the applicable production for a given model year. NMOG debits have units of g/mi.

Dedicated ethanol vehicle means any ethanol-fueled motor vehicle that is engineered and designed to be operated solely on ethanol.

Dedicated methanol vehicle means any methanol-fueled motor vehicle that is engineered and designed to be operated solely on methanol.

Diesel engine means any engine powered with diesel fuel, gaseous fuel, or alcohol fuel for which diesel engine speed/torque characteristics and vehicle applications are retained.

Electric vehicle means any vehicle which operates solely by use of a battery or battery pack. This definition also includes vehicles which are powered mainly through the use of an electric battery or battery pack, but which use a flywheel that stores energy produced by the electric motor or through regenerative braking to assist in vehicle operation.

Element of design means any control system (i.e., computer software, electronic control system, emission control system, computer logic), and/or control system calibrations and/or the results of systems interaction, and/or hardware items on a motor vehicle or motor vehicle engine.

Ethanol means any fuel for motor vehicles and motor vehicle engines that is composed of either commercially available or chemically pure ethanol (CH_3CH_2OH) and gasoline as specified in § 86.1771 (Fuel Specifications). The required fuel blend is based on the type of ethanol-fueled vehicle being certified and the particular aspect of the certification procedure being conducted.

Ethanol vehicle means any motor vehicle that is engineered and designed to be operated using ethanol as a fuel.

Executive Officer of the California Air Resources Board (ARB), as used in the referenced materials listed in § 86.1 and Appendix XIII of this part, means the Administrator of the Environmental Protection Agency (EPA).

Fleet average NMOG value is the fleet average NMOG value calculated for a particular averaging set, based upon the applicable production for that averaging set.

49 states is the region comprised of the United States excluding California.

Fuel-fired heater means a fuel burning device which creates heat for the purpose of warming the passenger compartment of a vehicle but does not contribute to the propulsion of the vehicle.

Gaseous fuels means liquefied petroleum gas, compressed natural gas, or liquefied natural gas fuels for use in motor vehicles.

Hybrid electric vehicle (HEV) means any vehicle which is included in the definition of a ''series hybrid electric vehicle,'' a ''parallel hybrid electric vehicle,'' or a ''battery assisted combustion engine vehicle.''

Low emission vehicle (LEV) means any vehicle certified to the low emission vehicle standards specified in this subpart.

Low volume manufacturer, for a particular model year, means any vehicle manufacturer that: Is considered a ''small volume manufacturer'' by the State of California according to the State of California regulatory definition of ''small volume manufacturer'', contained in the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), which is incorporated by reference (see § 86.1); and has nationwide sales of light-duty vehicles and light light-duty trucks less than or equal to 40,000 units per model year based on the average number of vehicles sold by the manufacturer for each of the three most recent model years. For manufacturers certifying for the first time, model-year sales shall be based on projected sales.

Methane reactivity adjustment factor means a factor applied to the mass of methane emissions from natural gas fueled vehicles for the purpose of determining the gasoline equivalent ozone-forming potential of the methane emissions.

Methanol means any fuel for motor vehicles and motor vehicle engines that is composed of either commercially available or chemically pure methanol (CH_3OH) and gasoline as specified in § 86.1771 (Fuel Specifications). The required fuel blend is based on the type of methanol-fueled vehicle being certified and the particular aspect of the certification procedure being conducted.

Methanol vehicle means any motor vehicle that is engineered and designed to be operated using methanol as a fuel.

Natural gas means either compressed natural gas or liquefied natural gas.

Natural gas vehicle means any motor vehicle that is engineered and designed to be operated using either compressed natural gas or liquefied natural gas.

Non-Core Stable Standards means the standards and requirements in § 86.1705(g)(1)(vii) through (xii).

Non-methane organic gases (NMOG) means the sum of oxygenated and non-oxygenated hydrocarbons contained in a gas sample as measured in accordance with Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1).

Non-regeneration emission test means a complete emission test which does not include a regeneration.

Northeast Trading Region (NTR) means the region comprised of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia, and the District of Columbia.

Organic material non-methane hydrocarbon equivalent (or OMNMHCE) for methanol-fueled vehicles means the sum of the carbon mass contribution of non-oxygenated hydrocarbons (excluding methane), methanol, and formaldehyde as contained in a gas sample, expressed as gasoline-fueled hydrocarbons. For ethanol-fueled vehicles, organic material non-methane hydrocarbon equivalent (OMNMHCE) means the sum of carbon mass contribution of non-oxygenated

hydrocarbons (excluding methane), methanol, ethanol, formaldehyde and acetaldehyde as contained in a gas sample, expressed as gasoline-fueled hydrocarbons.

Ozone deterioration factor means a factor applied to the mass of NMOG emissions from TLEVs, LEVs, or ULEVs which accounts for changes in the ozone-forming potential of the NMOG emissions from a vehicle as it accumulates mileage.

Parallel hybrid electric vehicle means any vehicle which allows power to be delivered to the driven wheels by either a combustion engine and/or by a battery powered electric motor.

Periodically regenerating trap oxidizer system means a trap oxidizer system that utilizes, during normal driving conditions for cleaning the trap, an automated regeneration mode which can be easily detected.

Point of first sale is the location where the completed LDV or LDT is purchased, also known as the final product purchase location. The point of first sale may be a retail customer, dealer, or secondary manufacturer. In cases where the end user purchases the completed vehicle directly from the manufacturer, the end user is the point of first sale.

Production is the number of vehicles and/or trucks that a manufacturer produces in a given model year that are subject to the provisions of this subpart and are included in the same averaging set.

Reactivity adjustment factor means a fraction applied to the mass of NMOG emission from a vehicle powered by a fuel other than conventional gasoline for the purpose of determining a gasoline-equivalent NMOG emission value. The reactivity adjustment factor is defined as the ozone-forming potential of the exhaust from a vehicle powered by a fuel other than conventional gasoline divided by the ozone-forming potential of conventional gasoline vehicle exhaust.

Regeneration means the process of oxidizing accumulated particulate matter. It may occur continually or periodically.

Regeneration emission test means a complete emission test which includes a regeneration.

Regeneration interval means the interval from the start of a regeneration to the start of the next regeneration.

Series hybrid electric vehicle means any vehicle which allows power to be delivered to the driven wheels solely by a battery powered electric motor, but which also incorporates the use of a combustion engine to provide power to the battery and/or electric motor.

37 States is the trading region comprised of the United States excluding California and the Northeast Trading Region.

Transitional low emission vehicle (TLEV) means any vehicle certified to the transitional low emission vehicle standards specified in this subpart.

Trap oxidizer system means an emission control system which consists of a trap to collect particulate matter and a mechanism to oxidize the accumulated particulate.

Type A hybrid electric vehicle means an HEV which achieves a minimum range of 60 miles over the All-Electric Range Test as defined in § 86.1770.

Type B hybrid electric vehicle means an HEV which achieves a range of 40–59 miles over the All-Electric Range Test as defined in § 86.1770.

Type C hybrid electric vehicle means an HEV which achieves a range of 0–39 miles over the All-Electric Range test and all other HEVs excluding ''Type A'' and ''Type B'' HEVs as defined in § 86.1770.

Ultra-low emission vehicle (ULEV) means any vehicle certified to the ultra-low emission vehicle standards specified in this subpart.

Zero-emission vehicle (ZEV) means any vehicle which is certified to produce zero emissions of any criteria pollutants under any and all possible operational modes and conditions. Incorporation of a fuel fired heater shall not preclude a vehicle from being certified as a ZEV provided the fuel fired heater cannot be operated at ambient temperatures above 40 degrees Fahrenheit and the heater is demonstrated to have zero evaporative emissions under any and all possible operational modes and conditions.

§ 86.1703–97 Abbreviations.

(a) The abbreviations in subpart A of this part apply to this subpart.

(b) In addition, the following abbreviations shall apply to this subpart:

HEV—hybrid electric vehicle.
LEV—low emission vehicle.
NMOG—non-methane organic gases.
NTR—Northeast Trading Region.
TLEV—transitional low emission vehicle.
ULEV—ultra low emission vehicle.
ZEV—zero emission vehicle.

§ 86.1704–97 Section numbering; construction.

(a) The model year of initial applicability is indicated by the last two digits of the six-digit group of the section number. A section remains in effect for subsequent model years until it is superseded.

(b) A section reference without a model year suffix shall be interpreted to be a reference to the section applicable to the appropriate model year.

§ 86.1705–97 General provisions; opt-in; opt-out.

(a) Covered manufacturers must comply with the provisions in this subpart, and in addition, must comply with the requirements of 40 CFR parts 85 and 86. A manufacturer shall be a covered manufacturer if:

(1) The manufacturer (or, in the case of joint ventures or similar cooperative arrangements between two or more manufacturers, the participating manufacturers) has opted into the program pursuant to paragraph (c) of this section;

(2) Where a manufacturer has included the condition on opt-in provided for in paragraph (c) of this section, that condition has been satisfied; and

(3) The manufacturer has not validly opted out, pursuant to paragraphs (d) and (e) of this section, or the manufacturer has validly opted out but that opt-out has not become effective under paragraph (d) of this section.

(b) Covered manufacturers must comply with the standards and requirements specified in this subpart beginning in model year 1997. A manufacturer not listed in § 86.1706(c) that opts into the program after EPA issues a finding pursuant to § 86.1706(a) that the program is in effect must comply with the standards and requirements of this subpart beginning in the model year that includes January 1 of the calendar year after the calendar year in which that manufacturer opts in. Light-duty vehicles and light light-duty trucks sold by covered manufacturers must comply with the provisions of this subpart.

(c)(1) To opt into the National LEV program, a motor vehicle manufacturer must submit a written statement to the Administrator signed by a person or entity within the corporation or business with authority to bind the corporation or business to its election and holding the position of vice president for environmental affairs or a position of comparable or greater authority. The statement must unambiguously and unconditionally (apart from the permissible condition specified in paragraph (c)(2) of this section) indicate the manufacturer's agreement to opt into the program and be subject to the provisions in this subpart, and include the following language:

[xx company,] its subsidiaries, successors and assigns hereby opts into the voluntary National LEV program, as defined in 40 CFR part 86, subpart R,

and agrees to be legally bound by all of the standards, requirements and other provisions of the National LEV program. [xx company] commits not to challenge EPA's authority to establish or enforce the National LEV program, and commits not to seek to certify any vehicle except in compliance with the regulations in subpart R.

(2) The opt-in statement may indicate that the manufacturer opts into the program subject to the condition that the Administrator finds under § 86.1706(a) that the National LEV program is in effect with the following language: ''This opt-in is subject only to the condition that the Administrator make a finding pursuant to 40 CFR 86.1706(a) that the National LEV program is in effect.''

(3) A manufacturer shall be considered to have opted in upon the Administrator's receipt of the opt-in notification and satisfaction of the condition set forth in paragraph (c)(2) of this section, if applicable.

(d) A covered manufacturer may opt out of the National LEV program only if one of the following specified conditions allowing opt-out occurs. A manufacturer must exercise the opt-out option within 180 days of the occurrence allowing opt-out, or the opt-out option expires. This time period for opt-out is extended by an additional thirty days if any manufacturer submits an opt-out notification to the Administrator within the 180 day time period. A valid opt-out shall become effective upon the times indicated in paragraphs (d)(2) (iii) and (iv) of this section or on a date specified by the manufacturer, whichever is later. The following are the conditions allowing opt-out:

(1) [Reserved]

(2) EPA promulgates a final rule or other final agency action making a revision not specified in paragraph (g)(3) or (g)(4) of this section to a standard or requirement listed in paragraph (g)(1) of this section and the covered manufacturer objects to the revision.

(i) Only a covered manufacturer that objects to a revision may opt out if EPA adopts that revision, except that if such a manufacturer opts out, other manufacturers that did not object to the revision may also opt out on the basis of that revision. An objection shall be sufficient for this purpose only if it was filed during the public comment period on the proposed revision and the objection specifies that the revision is sufficiently significant to allow opt-out under this paragraph (d).

(ii) An opt-out under this paragraph (d) shall be extinguished if, prior to the effective date of the opt-out specified in paragraphs (d)(2)(iii) and (iv) of this section, the Administrator signs a rule to withdraw the revision to which the manufacturer objected.

(iii) A valid opt-out based on a revision to a Core Stable Standard shall become effective starting the model year that includes January 1 of the second calendar year following the calendar year in which the manufacturer opted out or the first model year to which EPA's revised regulations apply, whichever is sooner.

(iv) A valid opt-out based on a revision to a Non-Core Stable Standard shall become effective starting the first model year to which EPA's revised regulations apply.

(e)(1) To opt out of the National LEV program, a covered manufacturer must notify the Administrator as provided in paragraph (c)(1) of this section, except that the notification shall specify the condition under paragraph (d) of this section allowing opt-out, include evidence that this condition has occurred, and indicate the manufacturer's intent to opt out of the program and no longer be subject to the provisions in this subpart. For an opt-out pursuant to paragraph (d)(2) of this section, the manufacturer must specify the revision triggering the opt-out and shall also provide evidence that the triggering revision does not harmonize the standard or requirement with a comparable California standard or requirement, if applicable, or that the triggering revision has increased the stringency of the revised standard or requirement, if applicable. The notification shall include the following language: ''[xx company,] its subsidiaries, successors and assigns hereby opt out of the voluntary National LEV program, as defined in 40 CFR part 86, subpart R.''

(2) Within sixty days of receipt of an opt-out notification, EPA shall determine whether the opt-out is valid by determining whether the alleged condition allowing opt-out has occurred and whether the opt-out complies with the requirements under paragraph (d) of this section and this paragraph (e). For an opt-out based on paragraph (d)(2) of this section, EPA may determine that the opt-out is valid provided that EPA does not withdraw the revision objected to prior to the effective date of the opt-out. If EPA then withdraws the revision, EPA may find that the opt-out is no longer valid. An EPA determination regarding the validity of an opt-out is not a rule, but is a nationally applicable final agency action subject to judicial review pursuant to section 307(b) of the Clean Air Act (42 U.S.C. 7607(b)).

(3) A manufacturer that has submitted an opt-out notification to EPA remains a covered manufacturer under paragraph (a) of this section until EPA or a reviewing court determines that the opt-out is valid and the opt-out has come into effect under paragraph (d) of this section.

(4) In the event that a manufacturer petitions for judicial review of an EPA determination that an opt-out is invalid, the manufacturer remains a covered manufacturer until final judicial resolution of the petition. Pending resolution of the petition, and after the date that the opt-out would have come into effect under paragraph (d) of this section if EPA had determined the opt-out was valid, the manufacturer may certify vehicles to any standards in this part 86 applicable to vehicles certified in that model year and sell such vehicles without regard to the limitations contained in § 86.1711. However, if the opt-out is finally determined to be invalid, the manufacturer will be liable for any failure to comply with §§ 86.1710 through 86.1712, except for failure to comply with the limitations contained in § 86.1711(b).

(f) A manufacturer that has opted out and is no longer a covered manufacturer under this subpart shall be subject to all provisions that would apply to a manufacturer that had not opted into the National LEV program, including all applicable standards and requirements promulgated under title II of the Clean Air Act (42 U.S.C. 7521 *et seq.*) and any state standards in effect pursuant to section 177 of the Clean Air Act (42 U.S.C. 7507). Vehicles certified under the National LEV program must continue to meet the standards to which they were certified, regardless of whether the manufacturer of those vehicles remains a covered manufacturer. A manufacturer that has opted out remains responsible for any debits outstanding on the effective date of opt-out, pursuant to § 86.1710(d)(3).

(g)(1) The following are the emissions standards and requirements that, if revised, may provide covered manufacturers the opportunity to opt out pursuant to paragraph (d)(2) of this section:

(i) The tailpipe emissions standards for NMOG, NO_X, CO, HCHO, and PM specified in § 86.1708 (b) and (c) and § 86.1709 (b) and (c);

(ii) Fleet average NMOG standards and averaging, banking and trading provisions specified in § 86.1710;

(iii) Provisions regarding limitations on sale of Tier 1 vehicles and TLEVs contained in § 86.1711;

(iv) The compliance test procedure (Federal Test Procedure) as specified in subparts A and B of this part, as used for determining compliance with the exhaust emission standards specified in § 86.1708 (b) and (c) and § 86.1709 (b) and (c);

(v) The compliance test fuel, as specified in § 86.1771;

(vi) The definition of low volume manufacturer specified in § 86.1702;

(vii) The on-board diagnostic system requirements specified in § 86.1717;

(viii) The light-duty vehicle refueling emissions standards and provisions specified in §§ 86.098–8(d) and subsequent model year provisions, and the light-duty truck refueling emissions standards and provisions specified in § 86.001–9(d) and subsequent model year provisions;

(ix) The cold temperature carbon monoxide standards and provisions for light-duty vehicles specified in § 86.096–8(k) and subsequent model year provisions, and for light light-duty trucks specified in § 86.097–9(k) and subsequent model year provisions;

(x) The evaporative emissions standards and provisions for light-duty vehicles specified in § 86.096–8(b) and subsequent model year provisions, and the evaporative emissions standards and provisions for light light-duty trucks specified in § 86.097–9(b) and subsequent model year provisions;

(xi) The reactivity adjustment factors and procedures specified in § 86.1777(d);

(xii) The Supplemental Federal Test Procedure, standards and phase-in schedules specified in § 86.000–8(e) and subsequent model year provisions, § 86.000–9(e) and subsequent model year provisions, § 86.127 (f) and (g), § 86.129 (e) and (f), § 86.130(e), § 86.131(f), § 86.132 (n) and (o), § 86.158, § 86.159, § 86.160, § 86.161, § 86.162, § 86.163, § 86.164, and Appendix I, paragraphs (g) and (h), to this part.

(2) The standards and requirements listed in paragraphs (g)(1) (i) through (vi) of this section are the ''Core Stable Standards''; the standards and requirements listed in paragraphs (g)(1) (vii) through (xii) of this section are the ''Non-Core Stable Standards.''

(3) The following types of revisions to the Stable Standards listed in paragraphs (g)(1) (i) through (xii) of this section do not provide covered manufacturers the right to opt out of the National LEV program:

(i) Revisions to which covered manufacturers do not object;

(ii) Revisions to a Non-Core Stable Standard that do not increase the overall stringency of the standard or requirement;

(iii) Revisions to a Non-Core Stable Standard that harmonize the standard or requirement with the comparable California standard or requirement for the same model year (even if the harmonization increases the stringency of the standard or requirement);

(iv) Revisions to a Non-Core Stable Standard that are effective after model year 2006;

(v) Revisions to cold temperature carbon monoxide standards and provisions for light-duty vehicles (as specified in § 86.096–8(k) and subsequent model year provisions) and for light light-duty trucks (as specified in § 86.097–9(k) and subsequent model year provisions) that are effective after model year 2000;

(vi) Revisions to the reactivity adjustment factors specified in § 86.1777 applicable to gasoline meeting the specifications of § 86.1771(a)(1), if such revisions maintain these reactivity adjustment factors at values not greater than 1.0.

(4) Promulgation of mandatory standards and requirements that end the effectiveness of the National LEV program pursuant to § 86.1701(c) does not provide an opportunity to opt out of the National LEV program.

(5) Adoption of the National LEV program does not impose gasoline or other in-use fuel requirements and is not intended to require any new federal or state regulation of fuels. Vehicles under National LEV will be able to operate on any fuels, including conventional gasoline, that, in the absence of the National LEV program, could be sold under federal or state law.

§ 86.1706–97 National LEV program in effect.

(a)(1) EPA shall find that the NLEV program is in effect and shall subsequently publish this determination if the following conditions have been met:

(i) All manufacturers listed in paragraph (b) of this section have lawfully opted in pursuant to § 86.1705; and

(ii) No valid opt-out has become effective pursuant to § 86.1705.

(2) A finding pursuant to paragraph (a)(1) of this section shall become effective at time of signature by the Administrator.

(b) List of manufacturers of light-duty vehicles and light-duty trucks:

American Suzuki Motor Corporation
BMW of North America, Inc.
Chrysler Corporation
Fiat Auto U.S.A., Inc.
Ford Motor Company
General Motors Corporation
Hyundai Motor America
Isuzu Motors America, Inc.
Jaguar Motors Ltd.
Kia Motors America, Inc.
Land Rover North America, Inc.
Mazda (North America) Inc.
Mercedes-Benz of North America
Mitsubishi Motor Sales of America, Inc.
Nissan North America, Inc.
Porsche Cars of North America, Inc.
Rolls-Royce Motor Cars Inc.
Saab Cars USA, Inc.
Subaru of America, Inc.
Toyota Motor Sales, U.S.A., Inc.
Volkswagen of America, Inc.
Volvo North America Corporation

§ 86.1707–97 [Reserved]

§ 86.1708–97 Exhaust emission standards for 1997 and later light-duty vehicles.

(a) Light-duty vehicles certified under the provisions of this subpart shall comply with the applicable exhaust emission standards in this section. In addition to the exhaust emission standards in this section, light-duty vehicles certified under the provisions of this subpart shall comply with all applicable emission standards and requirements in § 86.096–8 and subsequent model year provisions.

(1) Light-duty vehicles that meet the exhaust emission standards in this section are deemed to be in compliance with all the exhaust emission standards in § 86.096–8(a)(1)(i) and subsequent model year provisions, except for the emission standards and test procedures for total hydrocarbon (THC), particulate matter (PM), and high altitude conditions. Diesel light-duty vehicles that meet the PM standard in this section are deemed to be in compliance with the PM standard in § 86.096–8 and subsequent model year provisions.

(b)(1) *Standards.* (i) Exhaust emissions from 1997 and later model year light-duty vehicles classified as TLEVs, LEVs, and ULEVs shall not exceed the standards in Tables R97–1 and R97–2 in rows designated with the applicable vehicle emission category. These standards shall apply equally to certification and in-use vehicles, except as provided in paragraph (c) of this section. The tables follow:

TABLE R97–1.—INTERMEDIATE USEFUL LIFE STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Vehicle emission category	NMOG	CO	NO_X	HCHO
TLEV	0.125	3.4	0.4	0.015
LEV	0.075	3.4	0.2	0.015
ULEV	0.040	1.7	0.2	0.008

TABLE R97–2.—FULL USEFUL LIFE STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Vehicle emission category	NMOG	CO	NO_X S	HCHO	PM (diesels only)
TLEV	0.156	4.2	0.6	0.018	0.08
LEV	0.090	4.2	0.3	0.018	0.08
ULEV	0.055	2.1	0.3	0.011	0.04

(ii) *Diesel vehicles.* The particulate matter (PM) standards in paragraph (b)(1)(i) of this section are applicable to diesel light-duty vehicles only. For diesel vehicles certifying to the standards set forth in paragraph (b)(1)(i) of this section, ''NMOG'' shall mean non-methane hydrocarbons.

(iii) *NMOG standards for flexible-fuel and dual-fuel light-duty vehicles.* Flexible-fuel and dual-fuel light-duty vehicles shall be certified to exhaust emission standards for NMOG established both for the operation of the vehicle on an available fuel other than gasoline and for the operation of the vehicle on gasoline as specified in § 86.1771.

(A) The applicable NMOG emission standards for flexible-fuel and dual-fuel light-duty vehicles when certifying the vehicle for operation on fuels other than gasoline shall be the NMOG standards in paragraph (b)(1)(i) of this section.

(B) The applicable NMOG emission standards for flexible-fuel and dual-fuel light-duty vehicles when certifying the vehicle for operation on gasoline shall be the NMOG standards in Tables R97–3 and R97–4 in the rows designated with the applicable vehicle emission category, as follows:

TABLE R97–3.—INTERMEDIATE USEFUL LIFE NMOG STANDARDS (G/MI) FOR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT-DUTY VEHICLES CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Vehicle emission category	NMOG
TLEV	0.25
LEV	0.125
ULEV	0.075

TABLE R97–4.—FULL USEFUL LIFE NMOG STANDARDS (G/MI) FOR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT-DUTY VEHICLES CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Vehicle emission category	NMOG
TLEV	0.31
LEV	0.156
ULEV	0.090

(iv) *Highway NO_X.* The maximum projected NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR part 600, subpart B, shall not be greater than 1.33 times the applicable light-duty vehicle standards shown in Tables R97–1 and R97–2. Both the projected emissions and the Highway Fuel Economy Test standard shall be rounded to the nearest 0.1 g/mi in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, before being compared. These procedures are incorporated by reference (see § 86.1).

(v) *Hybrid electric vehicle requirements.* Deterioration factors for hybrid electric vehicles shall be based on the emissions and mileage accumulation of the auxiliary power unit. For certification purposes only, Type A hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors), and shall not be required to demonstrate compliance with 100,000 mile emission standards. For certification purposes only, Type B hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors) and 100,000 mile emission standards (using 75,000 mile deterioration factors). For certification purposes only, Type C hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors) and 100,000 mile emission standards (using 100,000 mile deterioration factors).

(vi) *50 degree F requirements.* Light-duty vehicles shall comply with the emission standards for NMOG, CO, NO_X, and HCHO in paragraph (b)(1)(i) of this section at 50° F, according to the procedure specified in § 86.1773. Hybrid electric, natural gas, and diesel fueled vehicles are not required to comply with the provisions of this paragraph (b)(1)(vi).

(2) [Reserved]

(c) *Intermediate in-use emission standards.* (1) 1997 through 1999 model year light-duty vehicles certified as LEVs and 1997 through 2002 model year light-duty vehicles certified as ULEVs shall meet the applicable intermediate and full useful life in-use standards in paragraphs (c)(2) or (c)(3) of this section, according to the following provisions:

(i) In-use compliance with standards beyond the intermediate useful life shall be waived for LEVs and ULEVs through the 1998 model year.

(ii) The applicable in-use emission standards for vehicle emission categories and model years not shown in Tables R97–5, R97–6, and R97–7 shall be the intermediate and full useful life standards in paragraph (b) of this section.

(2) Light-duty vehicles, including flexible-fuel and dual-fuel light-duty vehicles when operated on an available fuel other than gasoline, shall meet all intermediate and full useful life in-use standards for the applicable vehicle emission category and model year in Tables R97–5 and R97–6, as follows:

TABLE R97–5.—INTERMEDIATE USEFUL LIFE (50,000 MILE) IN-USE STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES

Vehicle emission category	Model year	NMOG	CO	NO_X	HCHO
LEV	1997–1999	0.100	3.4	0.3	0.015
ULEV	1997–1998	0.058	2.6	0.3	0.012
	1999–2000	0.055	2.1	0.3	0.012
	2001–2002	0.055	2.1	0.3	0.008

TABLE R97–6.—FULL USEFUL LIFE (100,000 MILE) IN-USE STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES

	Model year	NMOG	CO	NO_X	HCHO
LEV	1999	0.125	4.2	0.4	0.018
ULEV	1999–2002	0.075	3.4	0.4	0.011

(3) Flexible-fuel and dual-fuel light-duty vehicles when operated on gasoline shall meet all intermediate and full useful life in-use standards for the applicable vehicle emission category and model year in Tables R97–5 and R97–6, except that the applicable intermediate useful life NMOG standards for 1997 and 1998 model year flexible-fuel and dual-fuel light-duty vehicles when operated on gasoline shall be those in Table R97–7, as follows:

TABLE R97–7.—INTERMEDIATE USEFUL LIFE (50,000 MILE) IN-USE NMOG STANDARDS FOR 1997 AND 1998 MODEL YEAR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT-DUTY VEHICLES WHEN OPERATED ON GASOLINE

Vehicle emission category	NMOG (g/mi)
LEV	0.188
ULEV	0.100

(d) *NMOG measurement and reactivity adjustment.* NMOG emissions shall be measured in accordance with Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1). NMOG emissions shall be compared to the applicable NMOG emissions certification or in-use standard according to the following calculation procedures:

(1) For TLEVs, LEVs, and ULEVs designed to operate on any fuel other than conventional gasoline, and for flexible-fuel and dual-fuel TLEVs, LEVs, and ULEVs when operated on a fuel other than gasoline as specified in § 86.1771, manufacturers shall multiply NMOG exhaust mass emission levels by the applicable reactivity adjustment factor set forth in § 86.1777, or established by the Administrator pursuant to § 86.1777. The product of the NMOG exhaust emission levels and the reactivity adjustment factor shall be compared to the applicable certification or in-use exhaust NMOG mass emission standards established for the particular vehicle emission category to determine compliance.

(2) In addition to multiplying the exhaust NMOG mass emission levels by the applicable reactivity adjustment factor, TLEV, LEV, or ULEV natural gas vehicles shall multiply the exhaust methane mass emission level by the applicable methane reactivity adjustment factor in § 86.1777 or established by the Administrator pursuant to § 86.1777. The reactivity-adjusted NMOG value shall be added to the reactivity-adjusted methane value and then the sum shall be compared to the applicable certification or in-use exhaust NMOG mass emission standards established for the particular vehicle emission category to determine compliance.

(3) The exhaust NMOG mass emission levels for fuel-flexible and dual-fuel vehicles when operating on gasoline as specified in § 86.1771 shall not be multiplied by a reactivity adjustment factor.

§ 86.1709–97 Exhaust emission standards for 1997 and later light light-duty trucks.

(a) Light light-duty trucks certified under the provisions of this subpart shall comply with the applicable exhaust emission standards in this section. In addition to the exhaust emission standards in this section, light light-duty trucks certified under the provisions of this subpart shall comply with all applicable emission standards and requirements in § 86.097–9 and subsequent model year provisions.

(1) Light light-duty trucks that meet the exhaust emission standards in this section are deemed to be in compliance with all the exhaust emission standards in § 86.097–9(a)(1)(i) and subsequent model year provisions, except for the emission standards and test procedures for total hydrocarbon (THC), particulate matter (PM), and high altitude conditions. Diesel light light-duty trucks that meet the PM standard in this section are deemed to be in compliance with the PM standards in § 86.097–9 and subsequent model year provisions.

(2) [Reserved]

(b)(1) *Standards.* (i) Exhaust emissions from 1997 and later model year light light-duty trucks classified as TLEVs, LEVs, and ULEVs shall not exceed the standards in Tables R97–8 and R97–9 in rows designated with the applicable vehicle emission category and loaded vehicle weight. These standards shall apply equally to certification and in-use vehicles, except as provided in paragraph (c) of this section. The tables follow:

TABLE R97–8.—INTERMEDIATE USEFUL LIFE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Loaded vehicle weight	Vehicle emission category	NMOG	CO	NO_X	HCHO
0–3750	TLEV	0.125	3.4	0.4	0.015

TABLE R97–8.—INTERMEDIATE USEFUL LIFE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS CLASSIFIED AS TLEVS, LEVS, AND ULEVS—Continued

Loaded vehicle weight	Vehicle emission category	NMOG	CO	NO_X	HCHO
	LEV	0.075	3.4	0.2	0.015
	ULEV	0.040	1.7	0.2	0.008
3751–5750	TLEV	0.160	4.4	0.7	0.018
	LEV	0.100	4.4	0.4	0.018
	ULEV	0.050	2.2	0.4	0.009

TABLE R97–9.—FULL USEFUL LIFE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Loaded vehicle weight	Vehicle emission category	NMOG	CO	NO_X	HCHO	PM (diesels only)
0–3750	TLEV	0.156	4.2	0.6	0.018	0.08
	LEV	0.090	4.2	0.3	0.018	0.08
	ULEV	0.055	2.1	0.3	0.011	0.04
3751–5750	TLEV	0.200	5.5	0.9	0.023	0.10
	LEV	0.130	5.5	0.5	0.023	0.10
	ULEV	0.070	2.8	0.5	0.013	0.05

(ii) *Diesel vehicles.* The particulate matter (PM) standards in paragraph (b)(1)(i) of this section are applicable to diesel vehicles only. For diesel vehicles certifying to the standards set forth in paragraph (b)(1)(i) of this section, ''NMOG'' shall mean non-methane hydrocarbons.

(iii) *NMOG standards for flexible-fuel and dual-fuel light duty trucks.* Flexible-fuel and dual-fuel light light-duty trucks shall be certified to exhaust emission standards for NMOG established both for the operation of the vehicle on an available fuel other than gasoline and for the operation of the vehicle on gasoline as specified in § 86.1771.

(A) The applicable NMOG emission standards for flexible-fuel and dual-fuel light light-duty trucks when certifying the vehicle for operation on fuels other than gasoline shall be the NMOG standards in paragraph (b)(1)(i) of this section.

(B) The applicable NMOG emission standards for flexible-fuel and dual-fuel light light-duty trucks when certifying the vehicle for operation on gasoline shall be the NMOG standards in Tables R97–10 and R97–11 in the rows designated with the applicable vehicle emission category and loaded vehicle weight, as follows:

TABLE R97–10.—INTERMEDIATE USEFUL LIFE NMOG STANDARDS (G/MI) FOR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT LIGHT-DUTY TRUCKS CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Loaded vehicle weight	Vehicle emission category	NMOG
0–3750	TLEV	0.25
	LEV	0.125
	ULEV	0.075
3751–5750	TLEV	0.32
	LEV	0.160
	ULEV	0.100

TABLE R97–11.—FULL USEFUL LIFE NMOG STANDARDS (G/MI) FOR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT LIGHT-DUTY TRUCKS CLASSIFIED AS TLEVS, LEVS, AND ULEVS

Loaded vehicle weight	Vehicle emission category	NMOG
0–3750	TLEV	0.31
	LEV	0.156
	ULEV	0.090
3751–5750	TLEV	0.40
	LEV	0.200
	ULEV	0.130

(iv) *Highway NO_X.* The maximum projected NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR part 600, subpart B, shall be not greater than 1.33 times the applicable light light-duty truck standards shown in Tables R97–8 and R97–9. Both the projected emissions and the Highway Fuel Economy Test standard shall be rounded to the nearest 0.1 g/mi in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, before being compared. These procedures are incorporated by reference (see § 86.1).

(v) *Hybrid electric vehicle requirements.* Deterioration factors for hybrid electric vehicles shall be based on the emissions and mileage accumulation of the auxiliary power unit. For certification purposes only, Type A hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors), and shall not be required to demonstrate compliance with 100,000 mile emission standards. For certification purposes only, Type B hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors) and 100,000 mile emission standards (using 75,000 mile deterioration factors). For certification purposes only, Type C hybrid electric vehicles shall demonstrate compliance with 50,000 mile emission standards (using 50,000 mile deterioration factors) and 100,000 mile emission standards (using 100,000 mile deterioration factors).

(vi) *50 degree F requirements.* Light light-duty trucks shall comply with the emission standards for NMOG, CO, NO_X, and HCHO in paragraph (b)(1)(i) of this section at 50 degrees F, according to the procedure specified in § 86.1773. Hybrid electric vehicles, natural gas vehicles, and diesel fueled vehicles are

not required to comply with the provisions of this paragraph (b)(1)(vi).

(2) [Reserved]

(c) *Intermediate in-use emission standards.* (1) 1997 and 1998 model year light light-duty trucks certified as LEVs or ULEVs shall meet the applicable intermediate and full useful life in-use standards in paragraphs (c)(2) or (c)(3) of this section, according to the following provisions:

(i) In-use compliance with standards beyond the intermediate useful life shall be waived for LEVs and ULEVs through the 1998 model year.

(ii) The applicable in-use emission standards for vehicle emission categories and model years not shown in Tables R97–12, R97–13, and R97–14 shall be the intermediate and full useful life standards in paragraph (b) of this section.

(2) Light light-duty trucks, including flexible-fuel and dual-fuel light light-duty trucks when operated on an available fuel other than gasoline, shall meet all intermediate and full useful life in-use standards for the applicable vehicle emission category, loaded vehicle weight, and model year in Tables R97–12 and R97–13, as follows:

TABLE R97–12.—INTERMEDIATE USEFUL LIFE (50,000 MILE) IN-USE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS

Loaded vehicle weight	Vehicle emission category	Model year	NMOG	CO	NO_X	HCHO
0–3750	LEV	1997–1999	0.100	3.4	0.3	0.015
	ULEV	1997–1998	0.058	2.6	0.3	0.012
		1999–2000	0.055	2.1	0.3	0.012
		2001–2002	0.055	2.1	0.3	0.008
3751–5750	LEV	1997–1998	0.128	4.4	0.5	0.018
		1999	0.130	4.4	0.5	0.018
	ULEV	1997–1998	0.075	3.3	0.5	0.014
		1999–2002	0.070	2.8	0.5	0.014

TABLE R97–13.—FULL USEFUL LIFE (100,000 MILE) IN-USE STANDARDS (G/MI) FOR LIGHT LIGHT-DUTY TRUCKS

Loaded vehicle weight	Vehicle emission category	Model year	NMOG	CO	NO_X	HCHO
0–3750	LEV	1999	0.125	4.2	0.4	0.018
	ULEV	1999–2002	0.075	3.4	0.4	0.011
3751–5750	LEV	1999	0.160	5.5	0.7	0.018
	ULEV	1999–2002	0.100	4.4	0.7	0.014

(3) Flexible-fuel and dual-fuel light light-duty trucks when operated on gasoline shall meet all intermediate and full useful life in-use standards for the applicable vehicle emission category and model year in Tables R97–12 and R97–13, except that the applicable intermediate useful life NMOG standards for 1997 and 1998 model year flexible-fuel and dual-fuel light light-duty trucks when operated on gasoline shall be those in Table R97–14, as follows:

TABLE R97–14.—INTERMEDIATE USEFUL LIFE (50,000 MILE) IN-USE NMOG STANDARDS (G/MI) FOR 1997 AND 1998 MODEL YEAR FLEXIBLE-FUEL AND DUAL-FUEL LIGHT LIGHT-DUTY TRUCKS WHEN OPERATED ON GASOLINE

Loaded vehicle weight	Vehicle emission category	NMOG
0–3750	LEV	0.188
	ULEV	0.100
3751–5750	LEV	0.238
	ULEV	0.128

(d) *NMOG measurement and reactivity adjustment.* NMOG emissions shall be measured in accordance with Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These procedures are incorporated by reference (see § 86.1). NMOG emissions shall be compared to the applicable NMOG emissions certification or in-use standard according to the following calculation procedures:

(1) For TLEVs, LEVs, and ULEVs designed to operate on any fuel other than conventional gasoline, and for flexible-fuel and dual-fuel TLEVs, LEVs, and ULEVs when operated on a fuel other than gasoline as specified in § 86.1771, manufacturers shall multiply NMOG mass exhaust emission levels by the applicable reactivity adjustment factor set forth in § 86.1777 or established by the Administrator pursuant to § 86.1777. The product of the NMOG exhaust emission levels and the reactivity adjustment factor shall be compared to the applicable certification or in-use exhaust NMOG mass emission standards established for the particular vehicle emission category to determine compliance.

(2) In addition to multiplying the exhaust NMOG mass emission levels by the applicable reactivity adjustment factor, TLEV, LEV, or ULEV natural gas vehicles shall multiply the exhaust methane mass emission level by the applicable methane reactivity adjustment factor in § 86.1777 or established by the Administrator pursuant to § 86.1777. The reactivity-adjusted NMOG value shall be added to the reactivity-adjusted methane value and then the sum shall be compared to the applicable certification or in-use exhaust NMOG mass emission standards established for the particular vehicle emission category to determine compliance.

(3) The exhaust NMOG mass emission levels for fuel-flexible and dual-fuel vehicles when operating on gasoline as specified in § 86.1771 shall not be multiplied by a reactivity adjustment factor.

§ 86.1710–97 Fleet average non-methane organic gas exhaust emission standards for light-duty vehicles and light light-duty trucks.

(a)(1) Each manufacturer shall certify light-duty vehicles or light light-duty trucks to meet the exhaust emission standards in this subpart for TLEVs, LEVs, ULEVs, or ZEVs, or the exhaust emission standards of § 86.096–8(a)(1)(i) and subsequent model year provisions or § 86.097–9(a)(1)(i) and subsequent

model year provisions, such that, using the applicable intermediate useful life standards, the manufacturer's fleet average NMOG values for light-duty vehicles and light light-duty trucks sold in the applicable region according to the specifications of Tables R97–15 and R97–16 are less than or equal to the standards in Tables R97–15 and R97–16 in the rows designated with the applicable vehicle type, loaded vehicle weight, and model year, as follows:

TABLE R97–15.—FLEET AVERAGE NON-METHANE ORGANIC GAS STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES AND LIGHT LIGHT-DUTY TRUCKS SOLD IN THE NORTHEAST TRADING REGION

Vehicle type	Loaded vehicle weight	Model year	Fleet average NMOG
Light-duty vehicles and Light-duty trucks	All	1997	0.200
	0–3750	1998	0.200
		1999	0.148
		2000	0.095
		2001 and later	0.075
Light-duty trucks	3751–5750	1997	0.256
		1998	0.256
		1999	0.190
		2000	0.124
		2001 and later	0.100

TABLE R97–16.—FLEET AVERAGE NON-METHANE ORGANIC GAS STANDARDS (G/MI) FOR LIGHT-DUTY VEHICLES AND LIGHT LIGHT-DUTY TRUCKS SOLD IN THE 37 STATES

Vehicle type	Loaded vehicle weight	Model year	Fleet average NMOG
Light-duty vehicles and Light light-duty trucks	All	2001 and later	0.075
	0–3750		
Light light-duty trucks	3751–5750	2001 and later	0.100

(2)(i) For the purpose of calculating the HEV contribution factor for the fleet average NMOG value, a manufacturer may use adjusted values to estimate the contributions of hybrid electric vehicles (or ''HEVs'') based on the range of the HEV without the use of the engine. See § 86.1702 for definitions of HEV types for purposes of calculating adjusted NMOG emissions.

(ii) For the purpose of calculating fleet average NMOG values, vehicles that have no tailpipe emissions but use fuel-fired heaters and that are not certified as ZEVs shall be treated as Type A HEV ULEVs.

(3)(i) Each manufacturer's applicable fleet average NMOG value for all light light-duty trucks from 0–3750 lbs loaded vehicle weight and light-duty vehicles sold in the applicable region according to Tables R97–15 and R97–16 shall be calculated in units of g/mi NMOG according to the following equation, where the term ''Sold'' means sold in the applicable region according to Tables R97–15 and R97–16, and the term ''Vehicles'' means light light-duty trucks from 0–3750 lbs loaded vehicle weight and light-duty vehicles: (((No. of Vehicles Certified to the Federal Tier 1 Exhaust Emission Standards and Sold)×(0.25))+((No. of TLEVs Sold excluding HEVs)×(0.125))+((No. of LEVs Sold excluding HEVs)×(0.075))+((No. of ULEVs Sold excluding HEVs)×(0.040))+(HEV contribution factor))/(Total No. of Vehicles Sold, including ZEVs and HEVs).

(ii)(A) ''HEV contribution factor'' shall mean the NMOG emission contribution of HEVs to the fleet average NMOG value. The HEV contribution factor shall be calculated in units of g/mi as follows, where the term ''Sold'' means sold in the applicable region according to Tables R97–15 and R97–16.

(B) HEV contribution factor=(((No. of Type A HEV TLEVs Sold)×(0.100)) + ((No. of Type B HEV TLEVs Sold)×(0.113))+((No. of Type C HEV TLEVs Sold)×(0.125)))+(((No. of Type A HEV LEVs Sold)×(0.057))+((No. of Type B HEV LEVs Sold)×(0.066))+((No. of Type C HEV LEVs Sold)×(0.075)))+(((No. of Type A HEV ULEVs Sold)×(0.020))+((No. of Type B HEV ULEVs Sold)×(0.030))+((No. of Type C HEV ULEVs Sold)×(0.040))).

(iii)(A) For any model year in which a manufacturer certifies its entire fleet of light light-duty trucks from 0–3750 lbs LVW and light-duty vehicles to intermediate useful life NMOG emission standards specified in §§ 86.1708 and 86.1709 that are less than or equal to the applicable fleet average NMOG standard specified in Table R97–15, the manufacturer may choose not to calculate a separate fleet average NMOG value for each region for such vehicles for that model year.

(B) The fleet average NMOG value for a manufacturer electing under paragraph (a)(3)(iii)(A) of this section not to calculate a separate fleet average NMOG value shall be deemed to be the applicable fleet average NMOG standard specified in Table R97–15 for the applicable model year.

(C) A manufacturer making the election under paragraph (a)(3)(iii)(A) of this section may not generate credits for that model year for light light-duty trucks from 0–3750 lbs LVW and light-duty vehicles.

(4)(i) Each manufacturer's applicable fleet average NMOG value for all light light-duty trucks from 3751–5750 lbs loaded vehicle weight sold in the applicable region according to Tables R97–15 and R97–16 shall be calculated in units of g/mi NMOG according to the following equation, where the term ''Sold'' means sold in the applicable region according to Tables R97–15 and R97–16, and the term ''Vehicles'' means light light-duty trucks from 3751–5750 lbs loaded vehicle weight: (((No. of Vehicles Certified to the Federal Tier 1 Exhaust Emission Standards and Sold)×(0.32))+((No. of TLEVs Sold excluding HEVs)×(0.160))+((No. of LEVs Sold excluding HEVs)×(0.100))+((No. of ULEVs Sold excluding HEVs)×(0.050))+(HEV Contribution factor))/(Total No. of Vehicles Sold, including ZEVs and HEVs).

(ii)(A) ''HEV contribution factor'' shall mean the NMOG emission contribution of HEVs to the fleet average NMOG. The

HEV contribution factor shall be calculated in units of g/mi as follows, where the term ''Sold'' means sold in the applicable region according to Tables R97–15 and R97–16.

(B) HEV contribution factor=(((No. of Type A HEV TLEVs Sold)×(0.130)) + ((No. of Type B HEV TLEVs Sold)×(0.145))+((No. of Type C HEV TLEVs Sold)×(0.160)))+(((No. of Type A HEV LEVs Sold)×(0.075))+((No. of Type B HEV LEVs Sold)×(0.087))+((No. of Type C HEV LEVs Sold)×(0.100)))+(((No. of Type A HEV ULEVs Sold)×(0.025))+((No. of Type B HEV ULEVs Sold)×(0.037))+((No. of Type C HEV ULEVs Sold)×(0.050))).

(iii)(A) For any model year in which a manufacturer certifies its entire fleet of light light-duty trucks from 3751–5750 lbs LVW to intermediate useful life NMOG emission standards specified in § 86.1709 that are less than or equal to the applicable fleet average NMOG requirement specified in Table R97–15, the manufacturer may choose not to calculate a separate fleet average NMOG value for each region for such vehicles for that model year.

(B) The fleet average NMOG value for a manufacturer electing under paragraph (a)(4)(iii)(A) of this section not to calculate a separate fleet average NMOG value shall be deemed to be the applicable fleet average NMOG requirement specified in Table R97–15 for the applicable model year.

(C) A manufacturer making the election under paragraph (a)(4)(iii)(A) of this section may not generate credits for that model year for light light-duty trucks from 3751–3750 lbs LVW.

(5)(i) The calculation of the fleet average NMOG value pursuant to paragraphs (a)(3) and (a)(4) of this section shall exclude ATVs, as defined in § 86.1702, purchased in the NTR by state governments. In determining the quantity of vehicles to be excluded from the NMOG calculations, a manufacturer shall only be required to exclude vehicles that are reported by the purchasing government in a timely letter, containing adequate information, directed to the representative of the manufacturer listed in the manufacturer's application for certification. Such letter shall be considered timely only if it is received no later than February 1 of the calendar year following the model year of the purchased vehicles.

(ii) Adequate information includes the number of vehicles purchased, vehicle makes and models, and the associated engine families. A copy of the letter should be sent to EPA.

(6) For any model year prior to model year 2001 for which a manufacturer meets the definition of ''low volume manufacturer'' in § 86.1702, it shall be exempt from the requirements in paragraph (a)(1) of this section. The requirements in paragraph (a)(1) of this section applicable to the 2001 and later model years shall apply to low volume manufacturers.

(b) *Fleet average NMOG credit and debit calculations.* (1) For each averaging set, as defined in § 86.1702, manufacturers that achieve fleet average NMOG values lower than the fleet average NMOG standard for the corresponding model year may generate credits.

(2) For each averaging set, manufacturers that obtain applicable fleet average NMOG values exceeding the fleet average NMOG standard for the corresponding model year shall generate debits.

(3) For each averaging set, credits and debits are to be calculated according to the following equation and rounded, in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, which is incorporated by reference (see § 86.1), to the nearest whole number (intermediate calculations will not be rounded):

Number of Credits/Debits=(((Applicable Fleet Average NMOG Standard)−(Manufacturer's Applicable Fleet Average NMOG Value))×(Applicable Production)).

(4) For each region and model year, a manufacturer's available credits or level of debits shall be the sum of credits or debits derived from the respective class A and class B averaging sets for that region and model year.

(c) *Fleet average NMOG credits.* (1) Credits may be used to offset only fleet average NMOG debits of the same region (NTR or 37 States).

(2) Credits may only be used, traded or carried over to the next model year after they are earned. Credits are earned on the last day of the model year. Before trading or carrying over credits to the next model year, a manufacturer must apply available credits to offset any of its debits from the same region, where the deadline to offset such debits has not yet passed.

(3) Credits earned in any given model year shall retain full value through the subsequent model year.

(4) Unused credits that are available at the end of the second, third, and fourth model years after the model year in which the credits were generated shall be discounted to 50%, 25%, and 0% of the original value of the credits, respectively. The discounting of credits also applies to credits transferred to other parties.

(5) Credits may not be used to remedy any nonconformities determined by a Selective Enforcement Audit, recall testing, or testing performed with respect to Title 13, Chapter 2, Articles 1 and 2 of the California Code of Regulations.

(6) Prior to model year 2001, low volume manufacturers may earn credits in the NTR to transfer to other motor vehicle manufacturers for use in the NTR or to bank for their own use in the NTR in 2001 and subsequent model years. Such credits will be calculated as set forth in paragraphs (a) and (b) of this section, except that the applicable fleet average NMOG standard shall be 0.25 g/mi NMOG for the averaging set for light light-duty trucks from 0–3750 lbs LVW and light-duty vehicles or 0.32 g/mi NMOG for the averaging set for light light-duty trucks from 3751–5750 lbs LVW. Credits shall be discounted in accordance with the provisions in paragraph (c)(4) of this section.

(7) Manufacturers may earn and bank credits in the 37 states prior to model year 2001. Such credits will be calculated as set forth in paragraphs (a) and (b) of this section, except that the applicable fleet average NMOG standard shall be 0.25 g/mi NMOG for the averaging set for light light-duty trucks from 0–3750 lbs LVW and light-duty vehicles or 0.32 g/mi NMOG for the averaging set for light light-duty trucks from 3751–5750 lbs LVW.

(i) Emissions credits earned in the 37 states prior to the 2001 model year shall be treated as generated in the 2001 model year.

These credits shall be discounted in accordance with the provisions in paragraph (c)(4) of this section.

(iii) In the 2001 model year, a one-time discount rate of 10 percent shall be applied to all credits earned under the provisions of this paragraph (c)(7).

(8) There are no property rights associated with credits generated under the provisions of this section. Credits are a limited authorization to emit the designated amount of emissions. Nothing in the regulations or any other provision of law should be construed to limit EPA's authority to terminate or limit this authorization through a rulemaking.

(d) *Fleet average NMOG debits.* (1) Manufacturers shall offset any debits for a given model year by the fleet average NMOG reporting deadline for the model year following the model year in which the debits were generated. Manufacturers may offset debits by generating credits or acquiring credits

generated by another manufacturer. Any credit used to offset a debit must be from the same region (NTR or 37 States) in which the debit was incurred.

(2)(i) Failure to meet the requirements of paragraphs (a) through (d) of this section within the required timeframe for offsetting debits will be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the individual noncomplying vehicles not covered by the certificate shall be determined according to this section.

(ii) If debits are not offset within the specified time period, the number of vehicles not meeting the fleet average NMOG standards and not covered by the certificate shall be calculated by dividing the total amount of debits for the model year by the fleet average NMOG standard applicable for the model year and averaging set in which the debits were first incurred. If both averaging sets are in debit, any applicable credits will first be allocated between the averaging sets according to the manufacturer's expressed preferences. Then, the number of vehicles not covered by the certificate shall be calculated using the revised debit values.

(iii) EPA will determine the vehicles for which the condition on the certificate was not satisfied by designating vehicles in those engine families with the highest certification NMOG emission values first and continuing until a number of vehicles equal to the calculated number of noncomplying vehicles as determined above is reached. If this calculation determines that only a portion of vehicles in an engine family contribute to the debit situation, then EPA will designate actual vehicles in that engine family as not covered by the certificate, starting with the last vehicle produced and counting backwards.

(3) If a manufacturer opts out of the National LEV program pursuant to § 86.1705, the manufacturer continues to be responsible for offsetting any debits outstanding on the effective date of the opt-out within the required time period. Any failure to offset the debits will be considered to be a violation of paragraph (d)(1) of this section and may subject the manufacturer to an enforcement action for sale of vehicles not covered by a certificate, pursuant to paragraph (d)(2) of this section.

(4) For purposes of calculating tolling of the statute of limitations, a violation of the requirements of paragraph (d)(1) of this section, a failure to satisfy the conditions upon which a certificate(s) was issued and hence a sale of vehicles not covered by the certificate, all occur upon the expiration of the deadline for offsetting debits specified in paragraph (d)(1) of this section.

(e) *NMOG credit transfers.* (1) EPA may reject NMOG credit transfers if the involved manufacturers fail to submit the credit transfer notification in the annual report.

(2) A manufacturer may not sell credits that are not available for sale pursuant to the provisions in paragraph (c)(2) of this section.

(3) Except in instances of fraud on the part of the credit recipient, where a manufacturer sells credits that were not available for sale, the credits shall be treated as valid, and the manufacturer that sold the credits shall be liable for any resulting shortfall.

(4)(i) If a manufacturer transfers a credit that it has not generated pursuant to paragraph (b) of this section or acquired from another party, the manufacturer will be considered to have generated a debit in the model year that the manufacturer transferred the credit. The manufacturer must offset such debits by the deadline for the annual report for that same model year.

(ii) Failure to offset the debits within the required time period will be considered a failure to satisfy the conditions upon which the certificate(s) was issued and will be addressed pursuant to paragraph (d)(2) of this section.

§ 86.1711–97 Limitations on sale of Tier 1 vehicles and TLEVs; five percent cap.

(a) In the 2001 and subsequent model years, manufacturers may sell Tier 1 vehicles and TLEVs in the NTR only if vehicles with the same engine families are certified and offered for sale in California in the same model year, except as provided under § 86.1705(e)(4).

(b)(1) The industry-wide percentage of Tier 1 and TLEV light-duty vehicles and light light-duty trucks sold in the NTR for 2001 and subsequent model years shall not exceed five percent of the total number of light-duty vehicles and light light-duty trucks sold in the NTR in a given model year.

(2) When EPA determines that the five-percent cap requirement of this section is first exceeded, EPA will notify covered manufacturers of the exceedance during the calendar year following the model year for which there was an exceedance. The requirement in paragraph (b)(1) of this section will be enforceable starting with the model year containing January 1 of the calendar year following the calendar year in which EPA notifies manufacturers of the exceedance and for each model year thereafter.

(3)(i) An exceedance of the requirement in this section is determined according to the following equation where the term ''Vehicles'' means light-duty vehicles and light light-duty trucks, but excludes vehicles sold by a manufacturer that has opted out of the National LEV program pursuant to the provisions of § 86.1705, pending final judicial resolution of the opt-out petition:

Total number of Vehicles exceeding five-percent cap=((Total number of Tier 1 Vehicles and TLEVs sold in the NTR)—((Total number of Vehicles sold in the NTR) − 0.05))

(ii) Where a manufacturer has elected to use the reporting provision specified in § 86.1710(a)(3)(iii) or § 86.1710(a)(4)(iii), EPA will estimate that manufacturer's number of vehicles sold in the NTR by using the following equation, where the term ''Vehicles'' means light-duty vehicles and light light-duty trucks, but excludes vehicles sold by a manufacturer that has opted out of the National LEV program pursuant to the provisions of § 86.1705, pending final judicial resolution of the opt-out petition:

Estimated number of Vehicles in the NTR=(((sum of Vehicles the manufacturer sold in the NTR for the latest two reported model years) / (sum of Vehicles the manufacturer sold in the 49 states for the same latest two reported model years)) × (number of Vehicles the manufacturer sold in the 49 states as reported for the current model year))

(4)(i) Failure to meet the five-percent cap as specified in this paragraph (b) will be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the individual nonconforming vehicles not covered by the certificate shall be determined as set forth in this paragraph (b)(4).

(ii) For a model year in which the industry-wide five percent cap is exceeded, as specified in paragraph (b)(1) of this section, each manufacturer that sold Tier 1 and TLEV light-duty vehicles and light light-duty trucks in the NTR in excess of five percent of its sales of light-duty vehicles and light light-duty trucks in the NTR is a noncomplying manufacturer.

(iii) A noncomplying manufacturer's share of vehicles exceeding the five percent cap for a given model year shall be determined by the following equation, where the term ''Vehicles'' means light-duty vehicles and light light-duty trucks sold in the NTR, but excludes vehicles sold by a manufacturer that has opted out of the National LEV program pursuant to the

provisions of § 86.1705, pending final judicial resolution of the opt-out petition:

Number of noncomplying manufacturer's Vehicles not covered by a certificate = ((Total number of Vehicles exceeding five-percent cap) × ((number of the noncomplying manufacturer's Tier 1 Vehicles and TLEVs sold in the NTR in excess of five percent of its Vehicle sales in the NTR)/(Sum of the numbers of each noncomplying manufacturer's Tier 1 Vehicles and TLEVs sold in the NTR in excess of five percent of its Vehicle sales in the NTR))).

(iv) EPA will determine the number of vehicles not covered by a certificate based on data reported by manufacturers under § 86.1712(b), § 86.085–37(b) and subsequent model year provisions, and other information provided to EPA by a manufacturer.

(5) EPA will determine which vehicles were not covered by a certificate by designating vehicles in those engine families with the highest certification NMOG emission values first and continuing until a number of vehicles equal to the calculated number of vehicles not covered by a certificate as determined above is reached. If this calculation determines that only a portion of vehicles in an engine family contributes to the debit situation, then EPA will, starting with the last vehicle produced and counting backwards, designate actual vehicles in that engine family as sold without a certificate.

(6) Low volume manufacturers are exempt from the requirements in this paragraph (b) and vehicles produced by low volume manufacturers shall not be included in calculations of industry-wide compliance under the provisions of this paragraph (b).

(7) For the time period that a manufacturer has opted-out under § 86.1705 and the validity of the opt-out is unresolved, that manufacturer is exempt from the requirements in this paragraph (b) and vehicles produced by such manufacturer shall not be included in calculations of industry-wide compliance under the provisions of this paragraph (b), regardless of EPA or a court's determination regarding the validity of the opt-out.

§ 86.1712–97 Maintenance of records; submittal of information.

(a) *Maintenance of records.* (1) The manufacturer producing any light-duty vehicles and/or light light-duty trucks subject to the provisions in this subpart shall establish, maintain, and retain the following information in adequately organized and indexed records for each averaging set of each model year:

(i) Model year;

(ii) Averaging set;

(iii) Fleet average NMOG value achieved; and

(iv) All values used in calculating the fleet average NMOG value achieved.

(2) The manufacturer producing any light-duty vehicles and/or light light-duty trucks subject to the provisions in this subpart shall establish, maintain, and retain the following information in adequately organized and indexed records for each vehicle or truck subject to this subpart:

(i) Model year;

(ii) Averaging set;

(iii) EPA engine family;

(iv) Assembly plant;

(v) Vehicle identification number;

(vi) NMOG standard to which the vehicle or truck is certified; and

(vii) Information on the point of first sale, including the purchaser, city, and state.

(3) The manufacturer shall retain all records required to be maintained under this section for a period of eight years from the due date for the annual report. Records may be retained as hard copy or reduced to microfilm, ADP diskettes, and so forth, depending on the manufacturer's record retention procedure; provided, that in every case all information contained in the hard copy is retained.

(4) Nothing in this section limits the Administrator's discretion to require the manufacturer to retain additional records or submit information not specifically required by this section.

(5) Pursuant to a request made by the Administrator, the manufacturer shall submit to the Administrator the information that the manufacturer is required to retain.

(6) EPA may void *ab initio* a certificate of conformity for a vehicle certified to National LEV certification standards as set forth or otherwise referenced in § 86.1708 or § 86.1709 for which the manufacturer fails to retain the records required in this section or to provide such information to the Administrator upon request.

(b) *Reporting.* (1) Each covered manufacturer shall submit an annual report. Except as provided in paragraph (b)(2) of this section, the annual report shall contain, for each averaging set, the fleet average NMOG value achieved, all values required to calculate the NMOG value, the number of credits generated or debits incurred, and all the values required to calculate the credits or debits. For each region (NTR and 37 States), the annual report shall contain the resulting balance of credits or debits.

(2) When a manufacturer calculates compliance with the fleet average NMOG standards using the provisions in § 86.1710(a)(3)(iii) or § 86.1710(a)(4)(iii), then the annual report shall state that the manufacturer has elected to use such provision and shall contain, for each averaging set, the fleet average NMOG values as specified in § 86.1710(a)(3)(iii) or § 86.1710(a)(4)(iii).

(3) The annual report shall also include documentation on all credit transactions the manufacturer has engaged in since those included in the last report. Information for each transaction shall include:

(i) Name of credit provider;

(ii) Name of credit recipient;

(iii) Date the transfer occurred;

(iv) Quantity of credits transferred;

(v) Model year in which the credits were earned; and

(vi) Region (NTR or 37 States) to which the credits belong.

(4) Unless a manufacturer reports the data required by this section in the annual production report required under § 86.085–37(b) and subsequent model year provisions, a manufacturer shall submit an annual report for each model year after production ends for all affected vehicles and trucks produced by the manufacturer subject to the provisions of this subpart and no later than May 1 of the calendar year following the given model year. Annual reports shall be submitted to: Director, Vehicle Programs and Compliance Division, U.S. Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan, 48105.

(5) Failure by a manufacturer to submit the annual report in the specified time period for all vehicles and trucks subject to the provisions in this section is a violation of section 203(a)(1) of the Clean Air Act for each subject vehicle and truck produced by that manufacturer.

(6) If EPA or the manufacturer determines that a reporting error occurred on an annual report previously submitted to EPA, the manufacturer's credit or debit calculations will be recalculated. EPA may void erroneous credits, unless transferred, and shall adjust erroneous debits. In the case of transferred erroneous credits, EPA shall adjust the manufacturer's credit or debit balance to reflect the sale of such credits and any resulting generation of debits.

(c) *Notice of opportunity for hearing.* Any voiding of the certificate under paragraph (a)(6) of this section will be made only after EPA has offered the manufacturer concerned an opportunity for a hearing conducted in accordance with § 86.614 for light-duty vehicles or

§ 86.1014 for light-duty trucks and, if a manufacturer requests such a hearing, will be made only after an initial decision by the Presiding Officer.

§ 86.1713–97 Light-duty exhaust durability programs.

The provisions of § 86.094–13 and subsequent model year provisions apply to this subpart, except that: Section 86.094–13(f) and subsequent model year provisions does not apply to this subpart.

§ 86.1714–97 Small volume manufacturers certification procedures.

The provisions of § 86.096–14 and subsequent model year provisions apply to this subpart, except that: Section 86.096–14(c)(7)(i)(A) and subsequent model year provisions does not apply to this subpart.

§ 86.1715–97 [Reserved]

§ 86.1716–97 Prohibition of defeat devices.

(a) The provisions of § 86.094–16 and subsequent model year provisions apply to this subpart.

(b) In addition to the provisions of § 86.094–16 and subsequent model year provisions, the following requirements shall apply to this subpart:

(1) For each engine family certified to TLEV, LEV, or ULEV standards, manufacturers shall submit with the certification application, an engineering evaluation demonstrating that a discontinuity in emissions of non-methane organic gases, carbon monoxide, oxides of nitrogen and formaldehyde measured on the Federal Test Procedure (subpart B of this part) does not occur in the temperature range of 20 to 86° F. For diesel vehicles, the engineering evaluation shall also include particulate emissions.

(2) [Reserved]

§ 86.1717–97 Emission control diagnostic system for 1997 and later light-duty vehicles and light-duty trucks.

(a) The provisions of § 86.094–17 and subsequent model year provisions do not apply to this subpart.

(b) The requirements in Chapter 6 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) (these requirements are incorporated by reference; see § 86.1) apply to this subpart.

(c) No vehicle shall be certified under the provisions of this subpart unless such vehicle complies with the requirements of section 202(m)(1), (2), (4), and (5) of the Clean Air Act (42 U.S.C. 7521(m)(1), (2), (4) and (5)).

§ 86.1718–97 through § 86.1720–97 [Reserved]

§ 86.1721–97 Application for certification.

The provisions of § 86.096–21 and subsequent model year provisions apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.096–21(b)(2) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) For TLEVs, LEVs, and ULEVs not certified exclusively on gasoline, projected U.S. sales data and fuel economy data 19 months prior to January 1 of the calendar year with the same numerical designation as the model year for which the vehicles are certified, and projected U.S. sales data for all vehicles, regardless of operating fuel or vehicle emission category, sufficient to enable the Administrator to select a test fleet representative of the vehicles (or engines) for which certification is requested at the time of certification.

(2) [Reserved]

(b) For ZEVs and hybrid electric vehicles, the certification application shall include the following:

(1) Identification and description of the vehicle(s) covered by the application.

(2) Identification of the vehicle weight category to which the vehicle is certifying: LDV, LDT 0–3750 lbs LVW, LDT 3751–5750 lbs LVW (state test weight range), and the curb weight and gross vehicle weight rating of the vehicle.

(3) Identification and description of the propulsion system for the vehicle.

(4) Identification and description of the climate control system used on the vehicle.

(5) Projected number of vehicles sold in the U.S., and projected U.S. sales.

(6) For electric and hybrid electric vehicles, identification of the energy usage in kilowatt-hours per mile from the point when electricity is introduced from the electrical outlet and the operating range in miles of the vehicle when tested in accordance with the All–Electric Range Test provisions in § 86.1770.

(7) If the vehicle is equipped with a fuel fired heater, a description of the control system logic of the fuel fired heater, including an evaluation of the conditions under which the fuel fired heater can be operated and an evaluation of the possible operational modes and conditions under which evaporative emissions can exist. Vehicles which utilize fuel fired heaters which can be operated at ambient temperatures above 40° F or which cannot be demonstrated to have zero evaporative emissions under any and all possible operation modes and conditions shall not be certified as ZEVs.

(8) For ZEVs and HEVs which use fuel fired heaters, the manufacturer shall provide the exhaust emissions value per mile produced by the auxiliary fuel fired heater. This shall be accomplished by determining heater emissions in grams per minute when operating at a maximum heating capacity for a period of 20 minutes, and multiplying that number by 3.6 minutes per mile. At the time of certification, manufacturers shall submit their test plan which describes the procedure used to determine the mass emissions of the fuel fired heater.

(9) All information necessary for proper and safe operation of the vehicle, including information on the safe handling of the battery system, emergency procedures to follow in the event of battery leakage or other malfunctions that may affect the safety of the vehicle operator or laboratory personnel, method for determining battery state-of-charge, battery charging capacity and recharging procedures, and any other relevant information as determined by the Administrator.

(c) For all vehicles subject to the provisions of § 86.1717, with its application for certification a description of the malfunction and diagnostic system to be installed on the vehicles. (The vehicles shall not be certified unless the Administrator finds that the malfunction and diagnostic system complies with the requirements of § 86.1717.).

§ 86.1722–97 [Reserved]

§ 86.1723–97 Required data.

The provisions of § 86.096–23 and subsequent model year provisions apply to this subpart, with the following additions to the provisions of § 86.096–23(c)(1) and subsequent model year provisions:

(a) For all TLEVs, LEVs, and ULEVs certifying on a fuel other than conventional gasoline, manufacturers shall multiply the NMOG exhaust certification level for each emission-data vehicle by the appropriate reactivity adjustment factor listed in § 86.1777(d)(2)(i) or established by the Administrator pursuant to Appendix XVII of this part to demonstrate compliance with the applicable NMOG emission standard. For all TLEVs, LEVs, and ULEVs certifying on natural gas, manufacturers shall multiply the NMOG exhaust certification level for each

emission-data vehicle by the appropriate reactivity adjustment factor listed in § 86.1777(d)(2)(i) or established by the Administrator pursuant to Appendix XVII of this part and add that value to the product of the methane exhaust certification level for each emission-data vehicle and the appropriate methane reactivity adjustment factor listed in § 86.1777(d)(2)(ii) or established by the Administrator pursuant to Appendix XVII of this part to demonstrate compliance with the applicable NMOG emission standard. Manufacturers requesting to certify to existing standards utilizing an adjustment factor unique to its vehicle/fuel system must follow the data requirements described in Appendix XVII of this part. A separate formaldehyde exhaust certification level shall also be provided for demonstrating compliance with emission standards for formaldehyde.

(b)(1) The manufacturer shall submit to the Administrator a statement that those vehicles for which certification is requested have driveability and performance characteristics which satisfy that manufacturer's customary driveability and performance requirements for vehicles sold in the United States. This statement shall be based on driveability data and other evidence showing compliance with the manufacturer's performance criteria. This statement shall be supplied with the manufacturer's final application for certification, and with all running changes for which emission testing is required.

(2) If the Administrator has evidence to show that in-use vehicles demonstrate poor performance that could result in wide-spread tampering with the emission control systems, he or she may request all driveability data and other evidence used by the manufacturer to justify the performance statement.

§ 86.1724–97 Test vehicles and engines.

The provisions of § 86.096–24 and subsequent model year provisions apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.096–24(a)(1) and subsequent model year provisions apply to this subpart, with the following addition:

(1) All engines classified in the same engine family shall be certified to identical exhaust emission standards.

(2) [Reserved]

(b) The provisions of § 86.0096–24(b) and subsequent model year provisions apply to this subpart with the following addition:

(1) For TLEVs, LEVs, ULEVs, and ZEVs certifying according to the provisions of this subpart, a manufacturer may substitute emission data vehicles selected by the California Air Resources Board criteria instead of using the criteria specified in § 86.096–24(b)(1) (i), (ii), and (iv) and subsequent model year provisions.

(2) [Reserved]

§ 86.1725–97 Maintenance.

The provisions of § 86.094–25 and subsequent model year provisions apply to this subpart, with the following additions:

(a) Hybrid electric vehicles that use Otto-cycle or diesel engines are subject to the applicable Otto-cycle or diesel engine maintenance requirements of § 86.094–25 (b) through (e) and subsequent model year provisions.

(b) Manufacturers of series hybrid electric vehicles and parallel hybrid electric vehicles shall be required to incorporate into the vehicles a separate odometer or other device subject to the approval of the Administrator that can accurately gauge the mileage accumulation on the engines that are used in these vehicles.

(c)(1) The manufacturer shall equip the vehicle with a maintenance indicator consisting of a light that shall activate automatically by illuminating the first time the minimum performance level is observed for all battery system components. Possible battery system components requiring monitoring are:

(i) Battery water level;

(ii) Temperature control;

(iii) Pressure control;

(iv) Other parameters critical for determining battery condition.

(2) The manufacturer of a hybrid electric vehicle shall equip the vehicle with a useful life indicator for the battery system consisting of a light that shall illuminate the first time the battery system is unable to achieve an all-electric operating range (starting from a full state-of-charge) that is at least 75% of the range determined for the vehicle in the All-Electric Range Test (see § 86.1770) and submitted in the certification application.

(3) Hybrid electric vehicle battery system. Manufacturers shall maintain the battery system according to the requirements in paragraph (c)(1) of this section.

§ 86.1726–97 Mileage and service accumulation; emission measurements.

The provisions of § 86.096–26 and subsequent model year provisions apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.096–26(a)(1) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) Section 86.096–26(a) and subsequent model year provisions applies to light-duty vehicles and light-duty trucks, except ZEVs which shall be exempt from all mileage and service accumulation, durability-data vehicle, and emission-data vehicle testing requirements.

(2) [Reserved]

(b) The provisions of § 86.096–26(a)(2) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) The procedure for mileage accumulation shall be the Durability Driving Schedule as specified in Appendix IV of this part. A modified procedure (Alternative Service Accumulation Durability Program, § 86.094–13(e) and subsequent model year provisions) may also be used if approved in advance by the Administrator. All light-duty vehicles and light-duty trucks shall accumulate mileage at a measured curb weight that is within 100 pounds of the estimated curb weight. If the vehicle weight is within 100 pounds of being included in the next higher inertia weight class as specified in § 86.129, the manufacturer may elect to conduct the respective emission tests at the higher weight. All mileage accumulation of hybrid electric vehicles shall be conducted with the battery pack at the manufacturer's indicated lowest state-of-charge at the beginning of the test cycle. At no time throughout mileage accumulation shall the battery pack be charged using any off-board charging source.

(2) [Reserved]

(c) The provisions of § 86.096–26(a)(3)(i) and (ii) and subsequent model year provisions apply to this subpart, with the following addition:

(1) The Administrator will accept the manufacturer's determination of the mileage at which the engine-system combination is stabilized for emission data testing if (prior to testing) a manufacturer determines that the interval chosen yields emissions performance that is stable and representative of design intent. Sufficient mileage should be accumulated to reduce the possible effects of any emissions variability that is the result of insufficient vehicle operation. Of primary importance in making this determination is the behavior of the catalyst, EGR valve, trap oxidizer or any other part of the ECS which may have non-linear aging characteristics. In the alternative, the manufacturer may elect to accumulate

4,000 mile ± 250 mile on each test vehicle within an engine family without making a determination.

(2) [Reserved]

(d) The provisions of § 86.096–26(a)(4)(i) and (ii) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) For Otto-cycle and diesel vehicles and battery assisted combustion engine vehicles that use Otto-cycle or diesel engines:

(i) Prior to initiation of mileage accumulation in a durability-data vehicle, manufacturers must establish the mileage test interval for durability-data vehicle testing of the engine family. Once testing has begun on a durability-data vehicle, the durability test interval for that family may not be changed. At a minimum, multiple tests must be performed at 5,000 miles, 50,000 miles, and the final mileage point as long as they meet the requirements of Appendix XV of this part. The Administrator will accept durability test interval schedules determined by the manufacturer. The testing must provide a DF confidence level equal to or better than the confidence level using the former fixed mileage test and scheduled maintenance intervals. The procedure for making this determination is specified in Appendix XV of this part. The mileage intervals between test points must be approximately of equal length. The ± 250 mile test point tolerance and the requirement that tests be conducted before and after scheduled maintenance is still mandatory. Emission control systems for Otto-cycle engines that have step function changes designed into the control system must use the 5,000 mile test interval schedule.

(ii) Testing before and after scheduled (or unscheduled) maintenance points must be conducted, and these data are to be included in the deterioration factor calculation. Testing before unscheduled maintenance may be omitted with the prior consent of the Administrator when testing would be dangerous to a vehicle or an operator. The number of tests before and after scheduled maintenance and the mileage intervals between test points should be approximately equal. Durability test interval schedules with multiple testing at test points within 10,000 miles of or at the 50,000 mile and the final mileage test point must be submitted for approval. Multiple testing at maintenance mileage tests points within 10,000 miles of the 50,000 mile and the final mileage test points may be approved if it can be demonstrated by previously generated data that the emission effects of the maintenance are insignificant.

(iii) For engine families that are to be certified to the full useful life emission standards, each exhaust emission durability-data vehicle shall be driven with all emission control systems installed and operating, for the full useful life or such lesser distance as the Administrator may agree to as meeting the objective of this procedure. Durability tests shall be at every 5,000 miles, from 5,000 miles to the full useful life, however, the above procedures may be used to determine alternate test intervals subject to the following:

(A) For engine families that are to be certified to the full useful life emission standards, durability vehicles may accumulate less than the full useful life if the manufacturer submits other data or information sufficient to demonstrate that the vehicle is capable of meeting the applicable emission standards for the full useful life. At a minimum, 75% of the full useful life shall be accumulated.

(B) For the purpose of conducting mileage accumulation on light-duty hybrid electric vehicles, the full useful life of the auxiliary power unit shall be defined as 50,000 miles for a Type A hybrid electric vehicle, 75,000 miles for a Type B hybrid electric vehicle, and 100,000 miles for a Type C hybrid electric vehicle.

(iv) Alternative durability plans may also be used if the manufacturer provides a demonstration that the alternative plan provides equal or greater confidence that the vehicles will comply in-use with the emission standards. All alternative durability plans are subject to approval in advance by the Administrator.

(2) For diesel vehicles equipped with periodically regenerating trap oxidizer systems, at least four regeneration emission tests (see §§ 86.106 through 86.145) shall be made. The pollutant mass emission calculation procedures for vehicles equipped with periodically regenerating trap oxidizer systems are included in Appendix XVI of this part. With the advance approval of the Administrator, the manufacturer may install: A manual override switch capable of preventing (i.e., delaying until the switch is turned off) the start of the regeneration process; and a light which indicates when the system would initiate regeneration if it had no override switch. Upon activation of the override switch the vehicle will be operated on a dynamometer to precondition it for the regeneration emission test in accordance with §§ 86.132 and 86.1772. The Urban Dynamometer Driving Schedule (UDDS) that is in progress at the time when the light comes on shall be completed and the vehicle shall proceed to the prescribed soak period followed by testing. With the advance approval of the Administrator, the manual override switch will be turned off at some predetermined point in the testing sequence, permitting the regeneration process to proceed without further manual interaction. The mileage intervals between test points shall be approximately equal. The first regeneration emission test shall be made at the 5,000 mile point. The regeneration emission tests must provide a deterioration factor confidence level equal to or better than the confidence level achieved by performing regeneration emission tests at the following mileage points: 5,000; 25,000; 50,000; 75,000; and 100,000. The procedure for making this determination is shown in Appendix XV of this part.

(3) For gasoline-, gaseous-, and alcohol-fueled vehicles that are certified by a whole-vehicle durability protocol, the specified evaporative durability test points are at 5,000, 40,000, 75,000, and 100,000 miles. These requirements are also applicable to hybrid electric vehicles. With the exception of flexible-fuel vehicles, a manufacturer may conduct evaporative testing at test points used for exhaust emission durability testing, provided that the same deterioration confidence level for the evaporative emission DF determination is retained (see Appendix XIV of this part).

(4) For flexible-fuel vehicles certifying to TLEV, LEV, or ULEV standards, the test schedule shall include exhaust emission tests at 5,000 miles, 10,000 miles, and every 10,000 miles thereafter to the final mileage point using M85 or E85 and certification gasoline. For all flexible-fuel vehicles, if evaporative emission testing is conducted, exhaust and evaporative emission tests shall also be conducted using M35 or E10, or another approved fuel, at the mileage points where M85 or E85 testing is conducted. The results of these exhaust and evaporative emission tests will be used by the Administrator to evaluate the vehicle's emission control deterioration with various fuels (M85, M35, and unleaded gasoline; See fuel specifications in § 86.1771). Only the M85 or E85 and certification gasoline exhaust emission results and the M35 or E10 evaporative emission results will be used to determine applicable exhaust and evaporative emission deterioration factors, respectively, as required in § 86.1728 (Compliance with Emission Standards).

(e) The provisions of § 86.096–26(a)(5)(i) and subsequent model year

provisions apply to this subpart, with the following addition:

(1) In addition, the emission tests performed on emission-data vehicles and durability-data vehicles shall be non-regeneration emission tests for diesel light-duty vehicles and light-duty trucks equipped with periodically regenerating trap oxidizer systems. For any of these vehicles equipped with continually regenerating trap oxidizer systems, manufacturers may use the provisions applicable to periodically regenerating trap oxidizer systems as an option. If such an option is elected, all references in these procedures to vehicles equipped with periodically regenerating trap oxidizer systems shall be applicable to the vehicles equipped with continually regenerating trap oxidizer systems.

(2) [Reserved]

(f) The provisions of § 86.096–26(a)(8) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) Once a manufacturer submits the information required in § 86.096–26(a)(7) and subsequent model year provisions for a durability-data vehicle, the manufacturer shall continue to run the vehicle to 50,000 miles if the family is certified to 50,000 mile emission standards or to the full useful life if it is certified to emission standards beyond 50,000 miles (or to a lesser distance that the Administrator may have previously agreed to), and the data from the vehicle will be used in the calculations under § 86.094–28 and subsequent model year provisions. Discontinuation of a durability-data vehicle shall be allowed only with the consent of the Administrator.

(2) [Reserved]

(g) The provisions of § 86.096–26(b) and subsequent model year provisions do not apply to this subpart.

(h)(1) The exhaust emissions shall be measured from all exhaust emission data vehicles tested in accordance with the federal Highway Fuel Economy Test (HWFET; 40 CFR part 600, subpart B). The oxides of nitrogen emissions measured during such tests shall be multiplied by the oxides of nitrogen deterioration factor computed in accordance with § 86.094–28 and subsequent model year provisions, and then rounded and compared with the applicable emission standard in §§ 86.1708 and 86.1709. All data obtained pursuant to this paragraph (h)(1) shall be reported in accordance with procedures applicable to other exhaust emissions data required pursuant to these procedures. Hybrid electric vehicles shall be tested with the battery state-of-charge set such that one of the following two conditions is satisfied:

(i) The state-of-charge is at the lowest level allowed by the control unit of the auxiliary power unit; or

(ii) The state-of-charge is set such that auxiliary power unit operation will be at its maximum level at the beginning and throughout the emission test.

(2) In the event that one or more of the manufacturer's emission data vehicles fail the applicable HWFET standard in §§ 86.1708 and 86.1709, the manufacturer may submit to the Administrator engineering data or other evidence showing that the system is capable of complying with the standard. If the Administrator finds, on the basis of an engineering evaluation, that the system can comply with the HWFET standard, he or she may accept the information supplied by the manufacturer in lieu of vehicle test data.

§ 86.1727–97 [Reserved]

§ 86.1728–97 Compliance with emission standards.

The provisions of § 86.094–28 and subsequent model year provisions apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.094–28(a)(1) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) The provisions of § 86.094–28(a) and subsequent model year provisions apply to light-duty vehicles and light light-duty trucks, except ZEVs.

(2) [Reserved]

(b) The provisions of § 86.094–28(a)(4)(i) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) Separate emission deterioration factors shall be determined from the exhaust emission results of the durability-data vehicle(s) for each engine-system combination. A separate factor shall be established for exhaust HC (non-alcohol vehicles, non-TLEVs, non-LEVs, and non-ULEVs), exhaust OMHCE or OMNMHCE (alcohol vehicles that are not TLEVs, LEVs, or ULEVs), exhaust NMOG (all TLEVs, LEVs, ULEVs), exhaust formaldehyde (alcohol vehicles, TLEVs, LEVs, ULEVs), exhaust CO, exhaust NO_X, and exhaust particulate (diesel vehicles only) for each engine-system combination. A separate evaporative emission deterioration factor shall be determined for each evaporative emission family-evaporative emission control system combination from the testing conducted by the manufacturer (gasoline- and alcohol-fueled vehicles only). Separate emission correction factors (diesel light-duty vehicles and light-duty trucks equipped with periodically regenerating trap oxidizer systems only) shall be determined from the exhaust emission results of the durability-data vehicle(s) for each engine-system combination. A separate factor shall be established for exhaust HC (non-alcohol vehicles, non-TLEVs, non-LEVs, and non-ULEVs), exhaust OMHCE or OMNMHCE (alcohol vehicles that are not TLEVs, LEVs, or ULEVs), exhaust NMOG (TLEVs, LEVs, ULEVs), exhaust CO, exhaust NO_X, and exhaust particulate for each engine-system combination.

(2) [Reserved]

(c) The provisions of § 86.094–28(a)(4)(i)(A)(*4*) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) The manufacturer must use the outlier identification procedure set forth in Appendix VIII of this part to test for irregular data from a durability-data set. If any data point is identified as a statistical outlier, the Administrator shall determine, on the basis of an engineering analysis of the causes of the outlier submitted by the manufacturer, whether the outlier is to be rejected. The outlier shall be rejected only if the Administrator determines that the outlier does not reflect representative characteristics of the emission control system, *i.e.*, the outlier is a result of an emission control system anomaly, test procedure error, or an extraordinary circumstance not expected to recur. Only the identified outlier shall be eliminated; other data at that test point (i.e., data for other pollutants) shall not be eliminated unless the Administrator determines, based on the engineering analysis, that they also do not reflect representative characteristics of the emission control system. Where the manufacturer chooses to apply both the outlier procedure and averaging to the same data set, the outlier procedure shall be completed prior to applying the averaging procedure. All durability test data, including any outliers and the manufacturer's engineering analysis, shall be submitted with the final application.

(2) [Reserved]

(d) The provisions of § 86.094–28(a)(4)(i)(B) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) All applicable exhaust emission results shall be plotted as a function of the mileage on the system, rounded to the nearest mile, and the best fit straight

lines, fitted by the method of least squares, shall be drawn through all these data points. The emission data will be acceptable for use in the calculation of the deterioration factor only if the interpolated 4,000-mile, 50,000-mile, and full useful life points on this line are within the applicable emission standards in §§ 86.1708 and 86.1709. For hybrid electric vehicles, the emission data will be acceptable for use in the calculation of the deterioration factor only if the engine mileage points corresponding to the interpolated 4,000 mile, 50,000 mile, and full useful life points of the vehicle on this line are within the applicable emission standards in §§ 86.1708 and 86.1709. The engine mileage points shall be determined based on the test schedule submitted to the Administrator as required in § 86.096–26. As an exception, the Administrator will review the data on a case-by-case basis and may approve its use in those instances where the best fit straight line crosses an applicable standard but no data point exceeds the standard or when the best fit straight line crosses the applicable standard at the 4,000-mile point but the 5,000-mile actual test point and the 50,000 mile and full useful life interpolated points are both below the standards. A multiplicative exhaust emission deterioration factor shall be calculated for each engine system combination as follows:

(i) For engine families certified to 50,000 mile emissions standards:

Factor=Exhaust emissions interpolated to 50,000 miles divided by exhaust emissions interpolated to 4,000 miles.

(ii) For engine families certified to full useful life emissions standards beyond 50,000 miles:

Factor = Exhaust emissions interpolated to the full useful life divided by exhaust emissions interpolated to 4,000 miles.

(2) [Reserved]

(e) The following requirements shall be in addition to the provisions of § 86.094–28(a)(4) and subsequent model year provisions:

(1)(i) The regeneration exhaust emission data (diesel light-duty vehicles and light-duty trucks equipped with periodically regenerating trap oxidizer systems only) from the tests required under § 86.096–26(a)(4) and subsequent model year provisions shall be used to determine the regeneration exhaust emissions interpolated to the 50,000-mile point. The regeneration exhaust emission results shall be plotted as a function of the mileage on the system, rounded to the nearest mile, and the best fit straight lines, fitted by the method of least squares, shall be drawn through all these data points. The interpolated 50,000-mile point of this line shall be used to calculate the multiplicative exhaust emission correction factor for each engine-system combination as follows:

$$\text{Factor} = 1 + \frac{R-1}{4505} n$$

where:

R = the ratio of the regeneration exhaust emissions interpolated to 50,000 miles to the non-regeneration exhaust emissions interpolated to 50,000 miles.

n = the number of complete regenerations which occur during the durability test.

(ii) The interpolated values determined in paragraph (e)(1)(i) of this section shall be carried out to a minimum of four places to the right of the decimal point before dividing one by the other to determine the correction factor. The results shall be rounded to three places to the right of the decimal point in accordance with the Rounding-Off Method specified in ASTM E 29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1). For applicability to gaseous emission standards under the 100,000 mile option, R will be determined based upon projected 100,000 mile emissions.

(2) [Reserved]

(f) The provisions of § 86.094–28(a)(4)(ii)(A) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) The official exhaust emission test results for each emission-data vehicle at the 4,000 mile test point shall be multiplied by the appropriate deterioration factor, and correction factor (diesel light-duty vehicles and light-duty trucks equipped with periodically regenerating trap oxidizer systems only): Provided: that if a deterioration factor as computed in § 86.094–28(a)(4)(i)(B) and subsequent model year provisions or a correction factor as computed in paragraph (e) of this section is less than one, that deterioration factor or correction factor shall be one for the purposes of this paragraph (f).

(2) [Reserved]

(g) The provisions of § 86.094–28(a)(4)(iii) and subsequent model year provisions do not apply to this subpart. The following shall instead apply to this subpart:

(1) The emissions to compare with the standard (or the family particulate emission limit, as appropriate) shall be the adjusted emissions of § 86.094–28(a)(4)(ii)(A) and (B) and subsequent model year provisions for each emission-data vehicle. Before any emission value is compared with the standard (or the family particulate limit, as appropriate), it shall be rounded to one significant figure beyond the number of significant figures contained in the standard (or the family particulate emission limit, as appropriate) in accordance with the Rounding-Off Method specified in ASTM E 29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1). The rounded emission values may not exceed the standard (or the family particulate emission limit, as appropriate). Fleet average NMOG value calculations shall be rounded to four significant figures in accordance with the Rounding-Off Method specified in ASTM E 29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1) before comparing with fleet average NMOG requirements.

(2) [Reserved]

(h) The provisions of § 86.094–28(b) and subsequent model year provisions do not apply to this subpart.

§ 86.1729–97 through § 86.1733–97 [Reserved]

§ 86.1734–97 Alternative procedure for notification of additions and changes.

The provisions of § 86.082–34 and subsequent model year provisions apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.082–34(a) and subsequent model year provisions apply to this subpart, with the following addition:

(1) A manufacturer must notify the Administrator within 10 working days of making an addition of a vehicle to a certified engine family or a change in a vehicle previously covered by certification. The manufacturer shall also submit, upon request of the Administrator, the following items:

(i) service bulletin;

(ii) driveability statement;

(iii) test log;

(iv) maintenance log.

(2) All running changes and field fixes that do not adversely affect the system durability are deemed approved unless disapproved by the Administrator within 30 days of the receipt of the running change or field fix request. A change not specifically identified in the manufacturer's application must also be reported to the Administrator if the

change may adversely affect engine or emission control system durability. Examples of such changes include any change that could affect durability, thermal characteristics, deposit formation, or exhaust product composition, i.e., combustion chamber design, cylinder head material, camshaft profile, computer modifications, turbocharger, intercooler wastegate characteristics, and transmission or torque converter specifications. The manufacturer is required to update and submit to the Administrator the ''supplemental data sheet'' for all running changes and field fixes implemented with the change notification. The manufacturer shall submit, on a monthly basis, by engine family, a list of running changes/field fixes giving the document number date submitted and a brief description of the change.

(b) [Reserved]

§ 86.1735–97 Labeling.

The following requirements shall apply to TLEVs, LEVs, ULEVs, and ZEVs certified under the provisions of this subpart:

(a) The requirements in § 86.096–35 and subsequent model year provisions do not apply to this section.

(b) The requirements in Chapter 7 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) shall apply. These requirements are incorporated by reference (see § 86.1).

§ 86.1736–97 through § 86.1769–97 [Reserved]

§ 86.1770–97 All-Electric Range Test requirements.

(a) ZEVs and Type A and Type B hybrid electric vehicles shall be subject to the All-Electric Range Test specified below for the purpose of determining the energy efficiency and operating range of a ZEV or of a hybrid electric vehicle operating without the use of its auxiliary power unit. For hybrid electric vehicles, the manufacturer may elect to conduct the All-Electric Range Test prior to vehicle preconditioning in the exhaust and evaporative emission test sequence specified in subpart B of this part.

(1) Cold soak. The vehicle shall be stored at an ambient temperature not less than 68° F (20° C) and not more than 86° F (30° C) for 12 to 36 hours. During this time, the vehicle's battery shall be charged to a full state-of-charge.

(2) Driving schedule. At the end of the cold soak period, the vehicle shall be placed, either driven or pushed, onto a dynamometer and operated through a Highway Fuel Economy Driving Schedule, found in 40 CFR part 600, Appendix I, followed immediately by an Urban Dynamometer Driving Schedule, found in Appendix I of this part 86, followed by another Highway Fuel Economy Driving Schedule and an Urban Dynamometer Driving Schedule. This sequence of driving schedules shall be repeated until the vehicle is no longer able to maintain within 5 miles per hour of the speed requirements or within 2 seconds of the time requirements of the driving schedules in the case of a ZEV, or unable to maintain within 5 miles per hour of the speed requirements or within 2 seconds of the time requirement of the driving schedules without the use of the auxiliary power unit in the case of a hybrid electric vehicle.

(3) Recording requirements. Once the vehicle is no longer able to maintain the speed and time requirements specified in paragraph (a)(2) of this section, or once the auxiliary power unit turns on, in the case of a hybrid electric vehicle, the accumulated mileage and energy usage of the vehicle from the point where electricity is introduced from the electrical outlet shall be recorded, and the vehicle shall be brought to an immediate stop, thereby concluding the All-Electric Range Test.

(4) Regenerative braking. Regenerative braking systems may be utilized during the range test. The braking level, if adjustable, shall be set according to the manufacturer's specifications prior to the commencement of the test. The driving schedule speed and time tolerances specified in paragraph (a)(2) of this section shall not be exceeded due to the operation of the regenerative braking system.

(b) [Reserved]

§ 86.1771–97 Fuel specifications.

(a) The provisions of § 86.113 apply to this subpart, with the following exceptions and additions.

(1) For light-duty vehicles and light light-duty trucks, gasoline having the specifications listed below may be used in exhaust emission testing as an option to the specifications in § 86.113(a)(1). If a manufacturer elects to utilize this option, exhaust emission testing shall be conducted by the manufacturer with gasoline having the specifications listed in the table in this paragraph (a)(1), and the Administrator shall conduct exhaust emission testing with gasoline having the specifications listed in the table in this paragraph (a)(1). Specifications for non-gasoline fuels and all fuel property test methods are contained in Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1). The table follows:

Fuel property	Limit
Octane, (R+M)/2 (min).	91.
Sensitivity (min)	7.5.
Lead, g/gal (max) (No lead added).	0–0.01
Distillation Range, °F	
10 pct. point,	130–150.
50 pct. point,	200–210.
90 pct. point,	290–300.
EP, maximum	390.
Residue, vol % (max)	2.0.
Sulfur, ppm by wt.	30–40.
Phosphorous, g/gal (max).	0.005.
RVP, psi	6.7–7.0.
Olefins, vol %	4.0–6.0.
Total Aromatic Hydrocarbons (vol %).	22–25.
Benzene, vol %	0.8–1.0.
Multi-Substituted Alkyl Aromatic Hydrocarbons, vol %.	12–14.
MTBE, vol %	10.8–11.2.
Additives	See Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These procedures are incorporated by reference (see § 86.1).
Copper Corrosion	No. 1.
Gum, Washed, mg/100 ml (max).	3.0.
Oxidation Stability, minutes (min).	1,000.
Specific Gravity	No limit; report to purchaser required.
Heat of Combustion	No limit; report to purchaser required.
Carbon, wt %	No limit; report to purchaser required.
Hydrogen, wt %	No limit; report to purchaser required.

(2) [Reserved]

(b) [Reserved]

§ 86.1772–97 Road load power test weight and inertia weight class determination.

(a) The provisions of § 86.129 apply to this subpart.

(b) The following requirements shall also apply to this subpart:

(1) For electric and hybrid electric vehicle lines where it is expected that more than 33 percent of a vehicle line will be equipped with air conditioning, per § 86.096–24(g)(2), that derives power from the battery pack, the road load shall be increased by the incremental horsepower required to operate the air conditioning unit. The

incremental increase shall be determined by recording the difference in energy required for a hybrid electric vehicle under all-electric power to complete the running loss test fuel tank temperature profile test sequence without air conditioning and the same vehicle tested over the running loss test fuel tank temperature profile test sequence with the air conditioning set to the ''NORMAL'' air conditioning mode and adjusted to the minimum discharge air temperature and high fan speed over the time period needed to perform the test sequence, and converting this value into units of horsepower. Vehicles equipped with automatic temperature controlled air conditioning systems shall be operated in ''AUTOMATIC'' temperature and fan modes with the system set at 72° F. The running loss test fuel tank temperature profile test sequence is found in § 86.129(d).

(2) [Reserved]

§ 86.1773–97 Test sequence; general requirements.

(a) The provisions of § 86.130 apply to this subpart.

(b) The following additional requirements shall also apply to this subpart:

(1) For purposes of determining conformity with 50° F test requirements, the procedures set forth in paragraph (c) of this section shall apply. For all hybrid electric vehicles and all 1995 and subsequent model-year vehicles certifying to running loss and useful life evaporative emission standards, the test sequence specified in subpart B of this part shall apply.

(2) [Reserved]

(c)(1) Following a 12 to 36 hour cold soak at a nominal temperature of 50° F, emissions of CO and NO_X measured on the Federal Test Procedure (subpart B of this part), conducted at a nominal test temperature of 50° F, shall not exceed the standards for vehicles of the same emission category and vehicle type subject to a cold soak and emission test at 68 to 86° F. For all TLEVs, emissions of NMOG and formaldehyde at 50° F shall not exceed the 50,000 mile certification standard multiplied by a factor of 2.0. For all LEVs, emissions of NMOG and formaldehyde at 50° F shall not exceed the 50,000 mile certification standard multiplied by a factor of 2.0. For all ULEVs, emissions of NMOG and formaldehyde at 50° F shall not exceed the 50,000 mile certification standard multiplied by a factor of 2.0. Emissions of NMOG shall be multiplied by a reactivity adjustment factor, if any, prior to comparing with the 50,000 certification standard multiplied by the specified factor. The test vehicles shall not be subject to a diurnal heat build prior to the cold start exhaust test or evaporative emission testing.

(i) For the 50° F emission test, the nominal preconditioning, soak, and test temperatures shall be maintained within 3° F of the nominal temperature on an average basis and within 5° F of the nominal temperature on a continuous basis. The temperature shall be sampled at least once every 15 seconds during the preconditioning and test periods and at least once each 5 minutes during the soak period. A continuous strip chart recording of the temperature with these minimum time resolutions is an acceptable alternative to employing a data acquisition system.

(ii) The test site temperature shall be measured at the inlet of the vehicle cooling fan used for testing.

(iii) The test vehicle may be fueled before the preconditioning procedure in a fueling area maintained within a temperature range of 68 to 86° F. The preconditioning shall be conducted at a nominal temperature of 50° F. The requirement to saturate the evaporative control canister(s) shall not apply.

(iv) If a soak area remote from the test site is used, the vehicle may pass through an area maintained within a temperature range of 68 to 86° F during a time interval not to exceed 10 minutes. In such cases, the vehicle shall be restabilized to 50° F by soaking the vehicle in the nominal 50° F test area for six times as long as the exposure time to the higher temperature area, prior to starting the emission test.

(v) The vehicle shall be approximately level during all phases of the test sequence to prevent abnormal fuel distribution.

(2) Manufacturers shall demonstrate compliance with this requirement each year by testing at least three LDV or LDT emission data and/or engineering development vehicles (with at least 4000 miles) which are representative of the array of technologies available in that model year. Only TLEVs, LEVs, and ULEVs are to be considered for testing at 50 °F. It is not necessary to apply deterioration factors (DFs) to the 50 °F test results to comply with this requirement. Testing at 50 °F shall not be required for fuel-flexible and dual-fuel vehicles when operating on gasoline. Natural gas, hybrid electric and diesel-fueled vehicles shall also be exempt from 50 °F testing.

(3) The following schedule outlines the parameters to be considered for vehicle selection:

(i) Fuel control system (e.g., multiport fuel injection, throttle body electronic fuel injection, sequential multiport electronic fuel injection, etc.);

(ii) Catalyst system (e.g., electrically heated catalyst, close-coupled catalyst, underfloor catalyst, etc.);

(iii) Control system type (e.g., mass-air flow, speed density, etc.);

(iv) Vehicle category (e.g., TLEV, LEV, ULEV);

(v) Fuel type (e.g., gasoline, methanol, etc.).

(4) The same engine family shall not be selected in the succeeding two years unless the manufacturer produces fewer than three engine families. If the manufacturer produces more than three TLEV, LEV, or ULEV engine families per model year, the Administrator may request 50 °F testing of specific engine families. If the manufacturer provides a list of the TLEV, LEV, and ULEV engine families that it will certify for a model year and provides a description of the technologies used on each engine family (including the vehicle selection parameters information in paragraphs (c)(3) (i) through (v) of this section), the Administrator shall select the engine families subject to 50 °F testing within a 30 day period after receiving such a list and description. The Administrator may revise the engine families selected after the 30 day period if the information provided by the manufacturer does not accurately reflect the engine families actually certified by the manufacturer.

(5) For the purposes of this section, the Administrator will accept vehicles selected and tested in accordance with the 50 °F testing procedures specified by the California Air Resources Board.

§ 86.1774–97 Vehicle preconditioning.

The provisions of § 86.132 apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.132 (a) through (e) apply to this subpart, with the following additional requirements:

(1) The UDDS performed prior to a non-regeneration emission test shall not contain a regeneration (diesel light-duty vehicles and light-duty trucks equipped with periodically regenerating trap oxidizer systems only). A gasoline fueled test vehicle may not be used to set dynamometer horsepower.

(2) [Reserved]

(b) [Reserved]

§ 86.1775–97 Exhaust sample analysis.

The following requirements shall apply to TLEVs, LEVs, ULEVs, and ZEVs certified under the provisions of this subpart:

(a) The requirements in § 86.140;

(b) The requirements in Chapter 5 of the California Regulatory Requirements

Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1).

§ 86.1776–97 Records required.

(a) The provisions of § 86.142 apply to this subpart.

(b) In addition to the provisions of § 86.142, the following provisions apply to this subpart:

(1) The manufacturer shall record in the durability-data vehicle logbook, the number of regenerations that occur during the 50,000 mile durability test of each diesel light-duty vehicle and light-duty truck equipped with a periodically regenerating trap oxidizer system. The manufacturer shall include, for each regeneration: the date and time of the start of regeneration, the duration of the regeneration, and the accumulated mileage at the start and the end of regeneration. The number of regenerations will be used in the calculation of the correction factor in § 86.096–28 and subsequent model year provisions.

(2) The requirements in Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1).

(3) For additional record requirements see §§ 86.1770, 86.1771, 86.1772, 86.1773, 86.1774, and 86.1777.

§ 86.1777–97 Calculations; exhaust emissions.

The provisions of § 86.144 apply to this subpart, with the following exceptions and additions:

(a) The provisions of § 86.144(b) apply to this subpart, with the following additional requirement:

(1) Organic material non-methane hydrocarbon equivalent mass for ethanol vehicles:

$$OMNMHCE_{mass}=NMHC_{mass}+(13.8756/32.042)\times(CH_3OH)_{mass}+(13.8756/46.064)\times(CH_3CH_2OH)_{mass}+(13.8756/30.0262)\times(HCHO)_{mass}+(13.8756/44.048)\times(CH_3CHO)_{mass}$$

(2) [Reserved]

(b) The requirements in Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) apply to this subpart. These requirements are incorporated by reference (see § 86.1).

(c) The provisions in Appendix XV of this part and Appendix XVI of this part apply to this subpart.

(d) Reactivity adjustment factors. (1) For the purpose of complying with the NMOG exhaust emission standards in §§ 86.1708 and 86.1709, the mass of NMOG emissions from a vehicle certified to operate on a fuel other than conventional gasoline, including fuel-flexible and dual-fuel vehicles when operated on a fuel other than conventional gasoline, shall be multiplied by the reactivity adjustment factor applicable to the vehicle emission control technology category and fuel. The product of the NMOG mass emission value and the reactivity adjustment factor shall be compared to the NMOG exhaust emission standards to determine compliance with the standards. In addition to the above requirements, vehicles operating on natural gas shall add to the product of the NMOG mass emission value and the reactivity adjustment factor, the product of the methane mass emission value and the methane reactivity adjustment factor. This result shall be compared to the NMOG exhaust emission standards to determine compliance with the standards for natural gas-fueled vehicles.

(2) The following reactivity adjustment factors have been established pursuant to the criteria in Appendix XVII of this part:

(i) Light-duty vehicles and light-duty trucks:

Vehicle emission control technology category	Fuel	Reactivity adjustment factor
TLEVs	85% methanol, 15% gasoline blends	0.41
LEVs and ULEVs through model year 2000	85% methanol, 15% gasoline blends	0.41
TLEVs through model year 2000	Gasoline meeting the specifications of § 86.1771(a)(1)	0.98
LEVs and ULEVs through model year 2000	Gasoline meeting the specifications of § 86.1771(a)(1)	0.94
TLEVs through model year 2000	Fuel meeting the specifications for liquefied petroleum gas specified in Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996).	1.00
LEVs and ULEVs through model year 2000	Fuel meeting the specifications for liquefied petroleum gas specified in Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996).	0.50
TLEVs through model year 2000	Fuel meeting the specifications for natural gas specified in Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996).	1.00
LEVs and ULEVs through model year 2000	Fuel meeting the specifications for natural gas specified in Chapter 4 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996).	0.43

(ii) Natural gas light-duty vehicles and light-duty trucks:

Vehicle emission control technology category	Methane reactivity adjustment factor
TLEVs	0.0043
LEVs and ULEVs	0.0047

(3) The Administrator may establish new reactivity adjustment factors pursuant to Appendix XVII of this part in addition to those listed in paragraph (d)(2) of this section. The Administrator shall notify manufacturers in writing of the new reactivity adjustment factors within 30 days of their establishment.

(4) The Administrator may revise any reactivity adjustment factor listed in paragraph (d)(2) of this section or established by the Administrator pursuant to Appendix XVII of this part if he or she determines that the revised reactivity adjustment factor is more representative of the ozone-forming potential of vehicle NMOG emissions based on the best available scientific knowledge and sound engineering judgment. The Administrator shall notify manufacturers in writing of any such reactivity adjustment factor at least 3 years prior to January 1 of the calendar year which has the same numerical designation as the model year for which the revised reactivity adjustment factor first becomes effective. However, manufacturers may use the revised reactivity adjustment factor in certifying

any new engine family whose certification application is submitted following such notification, if they so choose. Manufacturers may also continue to use the original reactivity adjustment factor for any existing engine family previously certified with that reactivity adjustment factor until a new durability-data vehicle is tested for that engine family.

(5) Manufacturers may request the use of a unique reactivity adjustment factor for a specific vehicle emission control technology category and fuel. The Administrator shall approve such requests in accordance with the conditions and procedures of Appendix XVII of this part. For the purpose of calculating the reactivity adjustment factor as specified in Appendix XVII of this part, the ''g ozone potential per g NMOG'' value for the vehicle emission control technology category and fuel system for which the manufacturer is requesting the use of a unique reactivity adjustment factor shall be divided by the ''g ozone potential per g NMOG'' value for a conventional gasoline-fueled vehicle established for the vehicle emission control technology category. The following ''g ozone potential per g NMOG'' values for conventional gasoline-fueled vehicle emission control technology categories have been established:

(i) Light-duty vehicles and light-duty trucks:

Vehicle emission control technology category	''g ozone potential per g NMOG'' for conventional gasoline
All TLEVs	3.42
All 1993 and subsequent model-year LEVs and ULEVs	3.13

(ii) [Reserved]

§ 86.1778–97 Calculations; particulate emissions.

The provisions of § 86.145 and Appendix XVI of this part apply to this subpart.

§ 86.1779–97 General enforcement provisions.

(a) The provisions of sections 203–208 of the Clean Air Act, as amended, (42 U.S.C. 7522–7525, 7541–7542) apply to all motor vehicles manufactured by a covered manufacturer under this program, and to all covered manufacturers and all persons with respect to such vehicles.

(b) Violation of the requirements of this subpart shall subject a person to the jurisdiction and penalty provisions of sections 204–205 of the Clean Air Act (42 U.S.C. 7522–7523).

(c) EPA may not issue a certificate of conformity to a covered manufacturer, as defined in § 86.1702, except based on compliance with the standards and requirements in this part 86 and 40 CFR part 85.

§ 86.1780–97 Prohibited acts.

(a) The following acts and the causing thereof are prohibited:

(1) In the case of a covered manufacturer, as defined by § 86.1702, of new motor vehicles or new motor vehicle engines for distribution in commerce, the sale, or the offering for sale, or the introduction, or delivery for introduction, into commerce, or (in the case of any person, except as provided by regulation of the Administrator), the importation into the United States of any new motor vehicle or new motor vehicle engine subject to this subpart, unless such vehicle or engine is covered by a certificate of conformity issued (and in effect) under regulations found in this subpart (except as provided in sec. 203(b) of the Clean Air Act (42 U.S.C. 7522(b)) or regulations promulgated thereunder).

(2)(i) For any person to fail or refuse to permit access to or copying of records or to fail to make reports or provide information required under sec. 208 of the Clean Air Act (42 U.S.C. 7542) with regard to covered vehicles.

(ii) For a person to fail or refuse to permit entry, testing, or inspection authorized under sec. 206(c) (42 U.S.C. 7525(c)) or sec. 208 of the Clean Air Act (42 U.S.C. 7542) with regard to covered vehicles.

(iii) For a person to fail or refuse to perform tests, or to have tests performed as required under sec. 208 of the Clean Air Act (42 U.S.C. 7542) with regard to covered vehicles.

(iv) For a person to fail to establish or maintain records as required under §§ 86.1723 and 86.1776 with regard to covered vehicles.

(v) For any manufacturer to fail to make information available as provided by regulation under sec. 202(m)(5) of the Clean Air Act (42 U.S.C. 7521(m)(5)) with regard to covered vehicles.

(3)(i) For any person to remove or render inoperative any device or element of design installed on or in a covered vehicle or engine in compliance with regulations under this subpart prior to its sale and delivery to the ultimate purchaser, or for any person knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser.

(ii) For any person to manufacture, sell or offer to sell, or install, any part or component intended for use with, or as part of, any covered vehicle or engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a covered vehicle or engine in compliance with regulations issued under this subpart, and where the person knows or should know that the part or component is being offered for sale or installed for this use or put to such use.

(4) For any manufacturer of a covered vehicle or engine subject to standards prescribed under this subpart:

(i) To sell, offer for sale, introduce or deliver into commerce, or lease any such vehicle or engine unless the manufacturer has complied with the requirements of sec. 207 (a) and (b) of the Clean Air Act (42 U.S.C. 7541 (a), (b)) with respect to such vehicle or engine, and unless a label or tag is affixed to such vehicle or engine in accordance with sec. 207(c)(3) of the Clean Air Act (42 U.S.C. 7541(c)(3)).

(ii) To fail or refuse to comply with the requirements of sec. 207 (c) or (e) of the Clean Air Act (42 U.S.C. 7541 (c) or (e)).

(iii) Except as provided in sec. 207(c)(3) of the Clean Air Act (42 U.S.C. 7541(c)(3)), to provide directly or indirectly in any communication to the ultimate purchaser or any subsequent purchaser that the coverage of a warranty under the Clean Air Act is conditioned upon use of any part, component, or system manufactured by the manufacturer or a person acting for the manufacturer or under its control, or conditioned upon service performed by such persons.

(iv) To fail or refuse to comply with the terms and conditions of the warranty under sec. 207 (a) or (b) of the Clean Air Act (42 U.S.C. 7541 (a) or (b)).

(b) For the purposes of enforcement of this subpart, the following apply:

(1) No action with respect to any element of design referred to in paragraph (a)(3) of this section (including any adjustment or alteration of such element) shall be treated as a prohibited act under paragraph (a)(3) of this section if such action is in accordance with sec. 215 of the Clean Air Act (42 U.S.C. 7549);

(2) Nothing in paragraph (a)(3) of this section is to be construed to require the use of manufacturer parts in maintaining or repairing a covered vehicle or engine. For the purposes of the preceding sentence, the term ''manufacturer parts'' means, with respect to a motor vehicle engine, parts produced or sold by the manufacturer of

the motor vehicle or motor vehicle engine;

(3) Actions for the purpose of repair or replacement of a device or element of design or any other item are not considered prohibited acts under paragraph (a)(3) of this section if the action is a necessary and temporary procedure, the device or element is replaced upon completion of the procedure, and the action results in the proper functioning of the device or element of design;

(4) Actions for the purpose of a conversion of a motor vehicle or motor vehicle engine for use of a clean alternative fuel (as defined in title II of the Clean Air Act) are not considered prohibited acts under paragraph (a) of this section if:

(i) The vehicle complies with the applicable standard when operating on the alternative fuel; and

(ii) In the case of engines converted to dual fuel or flexible use, the device or element is replaced upon completion of the conversion procedure, and the action results in proper functioning of the device or element when the motor vehicle operates on conventional fuel.

33. Appendix XIII is added to part 86 to read as follows:

Appendix XIII to Part 86—State Requirements Incorporated by Reference in Part 86 of the Code of Federal Regulations

The following is an informational list of the California regulatory requirements applicable to the National Low Emission Vehicle program (October, 1996) incorporated by reference in part 86 of the Code of Federal Regulations (see § 86.1).

California State Regulations

(a) State of California; Air Resources Board: California Assembly-Line Test Procedures for 1983 Through 1997 Model-Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles, adopted November 24, 1981, amended June 24, 1996.

(b) State of California; Air Resources Board: California Assembly-Line Test Procedures for 1998 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles, adopted June 24, 1996.

(c) California Code of Regulations, Title 13, Division 3, Sections 2108, 2109, 2110.

(d) State of California; Air Resources Board: California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, adopted May 20, 1987, amended June 24, 1996, Section 9.a.

(e) State of California; Air Resources Board: California Non-Methane Organic Gas Test Procedures, adopted July 12, 1991, amended June 24, 1996.

(f) State of California; Air Resources Board: Regulations Regarding Malfunction and Diagnostic System Requirements—1994 and Later Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (OBD II), California Mail Out #95–34, September 26, 1995, excluding paragraphs (d), (m)(4), and (m)(5).

(g) State of California; Air Resources Board: California Motor Vehicle Emission Control Label Specifications, adopted March 1, 1978, amended June 24, 1996, excluding paragraphs 2(b), 3.5, and 10.

34. Appendix XIV is added to part 86 to read as follows:

Appendix XIV to Part 86—Determination of Acceptable Durability Test Schedule for Light-Duty Vehicles and Light Light-Duty Trucks Certifying to the Provisions of Part 86, Subpart R

A manufacturer may determine mileage test intervals for durability-data vehicles subject to the conditions specified in § 86.1726. The following procedure shall be used to determine if the schedule is acceptable to the Administrator:

1. Select exhaust system mileage test points and maintenance mileage test points for proposed (prop) schedule.

2. Calculate the sums of the squares corrected to the mean of the system mileages at the proposed test points:

$$A_{prop} = [\sum(X_p)^2 - ((\sum X_p)^2 / N_p))_{prop}$$

Where:

X_p = Individual mileages at which the vehicle will be tested.

N_p = Total number of tests (including before and after maintenance tests).

(Subscript ''p'' refers to proposed test schedule).

3. Determine exhaust system mileage test points and maintenance mileage test points based on testing at five thousand mile intervals from 5,000 miles through the final testing point and maintenance mileage test points selected for the proposed schedule in step 1 of this appendix. This schedule will be designated as the standard (std) test schedule.

4. Calculate the sums of squares corrected to the mean of the standard schedule:

$$B_{std} = [\sum(X_s)^2 - ((\sum X_s)^2 / N_s))_{std}$$

Where:

X_s = Individual mileages at which the vehicle will be tested.

N_s = Total number of tests (including before and after maintenance).

(Subscript ''s'' refers to standard test schedule).

5. Refer to Table I and determine t_p at $(N_p - 2)_{prop}$ degrees of freedom and t_s at $(N_s - 2)_{std}$.

6. If $(A_{prop})^{1/2} \geq t_p / t_s \times (B_{std})^{1/2}$ the proposed plan is acceptable.

TABLE I TO APPENDIX XIV

Degrees of freedom (N–2)	t
1	6.314
2	2.920
3	2.353
4	2.132
5	2.015
16	1.943
7	1.895
8	1.860

TABLE I TO APPENDIX XIV—Continued

Degrees of freedom (N–2)	t
9	1.833
10	1.812
11	1.796
12	1.782
13	1.771
14	1.761
15	1.753
6	1.746
17	1.740
18	1.734
19	1.729
20	1.725
21	1.721
22	1.717
23	1.714
24	1.711
25	1.708

35. Appendix XV is added to part 86 to read as follows:

Appendix XV to Part 86—Procedure for Determining an Acceptable Exhaust Regeneration Durability-Data Test Schedule for Diesel Cycle Vehicles Equipped With Periodically Regenerating Trap Oxidizer Systems Certifying to the Provisions of Part 86, Subpart R

1. Select exhaust system mileage test points for proposed (prop) schedule.

2. Calculate the sums of the squares corrected to the mean of the system mileages at the proposed test points:

$$A_{prop} = [\sum(X_p)^2 - ((\sum X_p)^2 / N_p))_{prop}$$

Where:

X_p = Individual mileages at which the vehicle will be tested.

N_p = Total number of tests (including before and after maintenance tests).

(Subscript ''p'' refers to proposed test schedule).

3. The exhaust system mileage tests points at 5,000, 25,000, 50,000, 75,000, and 100,000 miles will be designated as the standard (std) test schedule.

4. Calculate the sums of square corrected to the mean of the standard tests schedule:

$$B_{std} = [\sum(X_s)^2 - ((\sum X_s)^2 / N_s))_{std}$$

Where:

X_s = Individual mileages at which the vehicle will be tested.

N_s = Total number of regeneration emission tests.

(Subscript ''s'' refers to standard test schedule)

5. Refer to Table I and determine t_p at $(N_p - 2)_{prop}$ degrees of freedom and t_s at $(N_s - 2)_{std}$ degrees of freedom.

6. If $(A_{prop})^{1/2} \geq t_p / t_s \times (B_{std})^{1/2}$ the proposed plan is acceptable.

TABLE I TO APPENDIX XV

Degrees of freedom (N–2)	t
1	6.314
2	2.920
3	2.353
4	2.132

TABLE I TO APPENDIX XV—Continued

Degrees of freedom (N–2)	t
5	2.015
6	1.943
7	1.895
8	1.860
9	1.833
10	1.812
11	1.796
12	1.782
13	1.771
14	1.761
15	1.753

36. Appendix XVI is added to part 86 to read as follows:

Appendix XVI to PART 86—Pollutant Mass Emissions Calculation Procedure for Gaseous-Fueled Vehicles and for Vehicles Equipped With Periodically Regenerating Trap Oxidizer Systems Certifying to the Provisions of Part 86, Subpart R

(a) Gaseous-Fueled Vehicle Pollutant Mass Emission Calculation Procedure.

(1) For all TLEVs, LEVs, and ULEVs, the calculation procedures specified in Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) shall apply. These procedures are incorporated by reference (see § 86.1).

(b) Pollutant Mass Emissions Calculation Procedure for Vehicles Equipped with Periodically Regenerating Trap Oxidizer Systems.

(1) Exhaust Emissions. (i) The provisions of § 86.1777 apply to vehicles equipped with periodically regenerating trap oxidizer systems, except that the following shall apply instead of the requirements in § 86.144–94(a):

(ii) The final reported test results shall be computed by the use of the following formula:

(iii) For light-duty vehicles and light-duty trucks:

$$Y_{wm} = 0.43\ ((Yct+Ys)/(Dct + Ds))+0.57\ ((Yht+Ys)/(Dht+Ds)).$$

(iv) For purposes of adjusting emissions for regeneration:

$$Re = ((Yr1—Yct)+(Yr2—Ys)+(Yr3—Yht))/(Dct+Ds+Dht).$$

$$Yr = Ywm+Re.$$

Where:

Ywm = Weighted mass emissions of each pollutant, i.e., HC, CO, NO_X or CO , in grams per vehicle mile.

Yct = Mass emissions as calculated from the ''transient'' phase of the cold start test, in grams per test phase.

Yht = Mass emissions as calculated from the ''transient'' phase of the hot start test in grams per test phase.

Ys = Mass emissions as calculated from the ''stabilized'' phase of the cold start test, in grams per test phase.

Dct = The measured driving distance from the ''transient'' phase of the cold start test, in miles.

Dht = The measured distance from the ''transient'' phase of the hot start test, in miles.

Ds = The measured driving distance from the ''stabilized'' phase of the cold start test, in miles.

Yr = Regeneration emission test.

Re = Mass emissions of each pollutant attributable to regeneration in grams per mile.

Yr1 = Mass emissions, during a regeneration emission test, as calculated from the ''transient'' phase of the cold start test, in grams per test phase.

Yr2 = Mass emissions, during a regeneration emission test, as calculated from the ''stabilized'' phase of the cold start test, in grams per test phase.

Yr3 = Mass emissions, during a regeneration emission test, as calculated from the ''transient'' phase of the hot start test in grams per test phase.

(2) Particulate Emissions. (i) The provisions of § 86.1778 apply to vehicles equipped with periodically regenerating trap oxidizer systems, except that the following shall apply instead of the requirements § 86.145–82(a):

(ii) The final reported test results for the mass particulate (Mp) in grams/mile shall be computed as follows.

(iii) For purposes of adjusting emissions for regeneration:

$$Mp = 0.43(Mp1+Mp2)/(Dct+Ds)+0.57\ (Mp3+Mp2/(Dht+Ds)$$

$$Re = ((Mpr1 - Mp1)+(Mpr2—Mp2)+(Mpr3—Mp3)/(Dct+Ds+Dht)$$

$$Mpr = Mp+Re$$

Where:

(1) Mp1 = Mass of particulate determined from the ''transient'' phase of the cold start test, in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(2) Mp2 = Mass of particulate determined from the ''stabilized'' phase of the cold start test, in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(3) Mp3=Mass of particulate determined from the ''transient'' phase of the hot start test, in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(4) Dct=The measured driving distance from the ''transient'' phase of the cold start test, in miles.

(5) Ds=The measured driving distance from the ''stabilized'' phase of the cold start test, in miles.

(6) Dht=The measured driving distance from the ''transient'' phase of the hot start test, in miles.

(7) Mpr=Regeneration emission test

(8) Re=Mass of particulate attributable to regeneration in grams/mile.

(9) Mpr1=Mass of particulate determined, during a regeneration emission test, from the ''transient'' phase of the cold start test in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(10) Mpr2=Mass of particulate determined, during a regeneration emission test, from ''stabilized'' phase of the cold start test, in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(11) Mpr3=Mass of particulate determined, during a regeneration emission test, from the ''transient'' phase of the hot start test, in grams per test phase. (See § 86.110–94(d)(1) for determination.)

(c) Fuel Economy Calculations for Gaseous Fuels Based on the Cold Start CVS–1975 Federal Test Procedure.

(1) Assume the fuel meets HD–5 specifications (95% C_3H_8, 5% nC_4H_{10}, by volume).

(i) Physical constants of Propane and Normal Butane:

Component	Mol. Wt.	Sp. Gr.	Liquid density (lb/gal @ 60° F)				Liquid density of Hd–5 (lb/gal at 60° F)
C_3H_8	44.094	0.508	4.235	×	0.95	=	4.0233
nC_4H_{10}	58.12	0.584	4.868	×	0.05	=	0.2434
							4.2667

(ii) Density of the HD–5 fuel:

$$(0.95\times4.235)+(0.05\times4.868)=4.267\ \text{lb/gal @ 60° F}$$

(iii) Molecular Weights:

(A)

Species	Mol. Wt.
C	12.01115
H	1.00797
0	15.9994
CO	28.01055
CO_2	44.00995
$CH_{2.658}$*	14.6903

*Average ratio of Hydrogen to carbon atoms in HD–5 fuel.

(B)

C_3H_8

8/3=2.666×0.95 (% propane)= 2.533

nC_4H_{10}

10/4=2.5×0.05 (% Butane) =0.125

2.568

(iv) Weight of Carbon in:

CO=wt. of CO×(12.01115/28.01055)=wt CO×(0.429)

CO_2=wt. of CO_2×(12.01115/44.00995) wt CO_2×(0.273)

$CH_{2.658}$=wt. of $CH_{2.658}$×(12.01115/14.6903)=wt $CH_{2.658}$×(0.818)

(v) Wt. of Carbon per gallon of LPG:

wt. of carbon=4.2667 lbs/gal×453.59 gms/lb×0.818=1583 grams C/gal HD–5

(vi) Fuel economy:

$$\frac{\text{grams C/gal}}{\text{grams C in exhaust/mi}} = \text{miles/gal}$$

$$\text{LPG} = \frac{1583 \text{ gms C/gal}}{(0.818)(\text{HC}) + (0.429)(\text{CO}) + (0.273)(\text{CO}_2)}$$

Where:

HC=CVS HC in grams/mile

CO=CVS CO in grams/mile

CO_2=CVS CO_2 in grams/mile

For gasoline:

=2421 / ((0.866)(HC)+(0.429)(CO)+(0.273)(CO_2))

For Natural Gas:

=1535 / ((0.759)(HC)+(0.429)(CO)+(0.273)(CO_2))

37. Appendix XVII is added to part 86 to read as follows:

Appendix XVII to Part 86—Procedure for Determining Vehicle Emission Control Technology Category/Fuel Reactivity Adjustment Factors for Light-Duty Vehicles and Light Light-Duty Trucks Certifying to the Provisions of Part 86, Subpart R

The following procedure shall be used by the Administrator to establish the reactivity adjustment factor for exhaust emissions of non-methane organic gases (NMOG) and establish the ''methane reactivity adjustment factor'' for exhaust methane emissions from natural gas vehicles, for the purpose of certifying a vehicle of specific emission control technology category and fuel for the National LEV program provisions of subpart R of this part.

(a) The Administrator shall determine representative speciated NMOG exhaust emission profiles for light-duty conventional gasoline-fueled TLEVs, LEVs, and ULEVs according to the following conditions:

(1) All testing will be conducted using a specified gasoline blend representative of commercial gasoline and having the specifications listed in § 86.1771.

(2) Speciated NMOG profiles shall be obtained from a statistically valid number of TLEVs, LEVs, and ULEVs.

(3) The speciated NMOG profiles shall identify and quantify, in units of g/mile or mg/mile, as many constituents as possible in accordance with the procedures specified in Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These procedures are incorporated by reference (see § 86.1).

(b) The ''g ozone potential per mile'' of each NMOG identified in the speciated profile shall be determined by multiplying the ''g/mile NMOG'' emission value of the constituent NMOG by its maximum incremental reactivity in paragraph (j) of this appendix.

(c) The ''total g ozone potential per mile'' of NMOG exhaust emissions from the vehicle/fuel system shall be the sum of all the constituent NMOG ''g ozone potential per mile'' values calculated in paragraph (b) of this appendix.

(d) The ''g ozone potential per g NMOG'' for the vehicle/fuel system shall be determined by dividing the ''total g ozone potential per mile'' value calculated in paragraph (c) of this appendix by the ''total g/mile of NMOG emissions''.

(e) For light-duty candidate vehicle/fuel systems not powered by conventional gasoline, the Administrator shall establish ''reactivity adjustment factors'' calculated from exhaust emission profiles derived according to the same conditions specified in paragraphs (a)(1) and (a)(2) of this appendix.

(f) The ''g ozone potential per g NMOG'' for candidate vehicle/fuel systems not powered by conventional gasoline shall be determined according to paragraphs (b), (c), and (d) of this appendix.

(g)(1) The candidate vehicle/fuel ''reactivity adjustment factor'' shall be determined by dividing the ''g ozone potential per g NMOG'' calculated in paragraph (f) of this appendix by the ''g ozone potential per g NMOG'' value for the vehicle in the same emission control technology category operated on conventional gasoline. The ''g ozone potential per g NMOG'' values for conventional gasoline vehicles are listed in § 86.1777(b)(5) or shall be established by the Administrator pursuant to this appendix. For candidate vehicle/fuel systems powered by methanol or liquefied petroleum gas, the quotient calculated above shall be multiplied by 1.1. The resulting value shall constitute the ''reactivity adjustment factor'' for the methanol or liquefied petroleum gas-powered vehicle/fuel system.

(2) For candidate vehicle/fuel systems operating on natural gas, a ''methane reactivity adjustment factor'' shall be calculated by dividing the maximum incremental reactivity value for methane given in paragraph (j) of this appendix by the ''g ozone potential per g NMOG'' value for the vehicle in the same emission control technology category operated on conventional gasoline as listed in § 86.1777(b)(5) or established by the Administrator pursuant to this appendix.

(h) The Administrator shall assign a reactivity adjustment factor unique to a specific engine family at the request of a vehicle manufacturer provided that each of the following occurs:

(1)(i) The manufacturer submits speciated NMOG exhaust emission profiles to the Administrator obtained from emission testing a minimum of four different vehicles representative of vehicles that will be certified in the engine family. The test vehicles shall include the official emission-data vehicle(s) for the engine family, and the mileage accumulation of each vehicle shall be at or greater than 4000 miles. One speciated profile shall be submitted for each test vehicle. Emission levels of each constituent NMOG shall be measured according to Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These procedures are incorporated by reference (see § 86.1). For the emission-data vehicle(s), the speciated profile(s) shall be obtained from the same test used to obtain the official exhaust emission test results for the emission-data vehicle at the 4,000 mile test point. The manufacturer shall calculate ''g ozone potential per g NMOG'' values for each speciated NMOG exhaust emission profile in accordance with the procedures specified in paragraphs (b), (c), and (d) of this appendix. By using these ''g ozone potential per g NMOG'' values, the manufacturer shall calculate a ''reactivity adjustment factor'' for each test vehicle in accordance with the procedure specified in paragraph (g) of this appendix. A ''reactivity adjustment factor'' for the engine family shall be calculated by taking the arithmetic mean of the ''reactivity adjustment factor'' obtained for each test vehicle. The 95 percent upper confidence bound (95% UCB) shall be calculated according to the equation:

$$95\%\ \text{UCB} = \text{RAF}_m + 1.96 \times \left[\frac{\sum_{i=1}^{n} \left(\text{RAF}_i - \text{RAF}_m\right)^2}{(n-1)} \right]^{1/2}$$

where:

RAF_m = mean ''reactivity adjustment factor'' calculated for the engine family.

RAF_i = ''reactivity adjustment factor'' calculated for the i'th test vehicle.

n = number of test vehicles.

(ii) The 95 percent upper confidence bound of the ''reactivity adjustment factor'' for the engine family shall be less than or equal to 115 percent of the engine family ''reactivity adjustment factor.''

(2) The manufacturer submits an ''ozone deterioration factor'' for the engine family. To determine the ''ozone deterioration factor,'' the manufacturer shall perform two tests at each mileage interval for one or more durability vehicle(s) tested in accordance with the procedures and conditions specified in subpart R of this part for calculating mass deterioration factors. The Administrator shall approve the use of other mileage intervals and procedures if the manufacturer can demonstrate that equivalently representative ''ozone deterioration factors'' are obtained. One speciated profile shall be submitted for each test. Emission levels of each constituent NMOG shall be measured according to Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These procedures are incorporated by reference (see § 86.1). A mean g/mi NMOG mass value and a mean ''g ozone per g NMOG'' value shall be calculated by taking the arithmetic mean of each measurement from the speciated profiles. These results shall be multiplied together to obtain a mean ''total g ozone potential per mile'' value at each mileage interval. A mean ''ozone deterioration factor'' shall be calculated in accordance with the procedures in § 86.1777

and this appendix except that the mean total ''g ozone potential per mile'' value determined at each mileage interval shall be used in place of measured mass emissions. If the ''ozone deterioration factor'' is determined to be less than 1.00, the ''ozone deterioration factor'' shall be assigned a value of 1.00. The ''ozone deterioration factor'' shall be multiplied by the product of the official exhaust NMOG mass emission results at the 4000 mile test point and the mean ''reactivity adjustment factor'' for the engine family to obtain the NMOG certification levels used to determine compliance with the NMOG emission standards.

(3) The speciated profiles, mean ''reactivity adjustment factor'' for the engine family, and ''ozone deterioration factor'' are provided to the Administrator with the certification application for the engine family.

(i) Gasoline meeting the specifications listed in the following tables shall be used to determine the ''g ozone potential per g NMOG'' of conventional gasoline (the test methods used for each fuel property shall be the same as the test method for the identical fuel property listed in § 86.1771):

Fuel property	Limit
Sulfur, ppm by weight	300 ± 50
Benzene, volume percent	1.6 ± 0.3
Reid vapor pressure, psi	8.7 ± 0.3

Distillation, D–86 degrees F	
10%	115–135
50%, maximum	240
90%	323–333
EP, maximum	420

Hydrocarbon Type, volume percent	
Total Aromatics	32 ± 3.0

Hydrocarbon Type, volume percent	
Multi-substituted alkyl aromatics	21 ± 3.0
Olefins	12 ± 3.0
Saturates	remainder

(j) The maximum incremental reactivities to be used in paragraph (b) of this appendix are provided in the table in this paragraph (j). Any manufacturer which intends to use the table shall submit to the Administrator a list which provides the specific organic gases measured by the manufacturer and the maximum incremental reactivity value assigned to each organic gas prior to or with the submittal of a request for the use of a reactivity adjustment factor unique to a specific engine family. The Administrator may deny such requests if he or she determines that the maximum incremental reactivity value assignments are made incorrectly. The table follows:

MAXIMUM INCREMENTAL REACTIVITY (MIR) VALUES

[Units: grams ozone/gram organic gas]

CAS#	Compound	MIR
	Alcohols	
00067–56–1	methanol	0.56
00064–17–5	ethanol	1.34
	Light End and Mid-Range Hydrocarbons (Listed in approximate elution order)	
	methane	0.0148
00074–85–1	ethene	7.29
00074–86–2	ethyne	0.50
00074–84–0	ethane	0.25
00115–07–1	propene	9.40
00074–98–6	propane	0.48
00463–49–0	1,2-propadiene	10.89
00074–99–7	1-propyne	4.10
00075–28–5	methylpropane	1.21
00115–11–7	2-methylpropene	5.31
00106–98–9	1-butene	8.91
00106–99–0	1,3-butadiene	10.89
00106–97–8	n-butane	1.02
00624–64–6	trans-2-butene	9.94
00463–82–1	2,2-dimethylpropane	0.37
00107–00–6	1-butyne	9.24
00590–18–1	cis-2-butene	9.94
00563–45–1	3-methyl-1-butene	6.22
00078–78–4	2-methylbutane	1.38
00503–17–3	2-butyne	9.24
00109–67–1	1-pentene	6.22
00563–46–2	2-methyl-1-butene	4.90
00109–66–0	n-pentane	1.04
00078–79–5	2-methyl-1,3-butadiene	9.08
00646–04–8	trans-2-pentene	8.80
00558–37–2	3,3-dimethyl-1-butene	4.42
00627–20–3	cis-2-pentene	8.80
00689–97–4	1-buten-3-yne	9.24
00513–35–9	2-methyl-2-butene	6.41
00542–92–7	1,3-cyclopentadiene	7.66
00075–83–2	2,2-dimethylbutane	0.82
00142–29–0	cyclopentene	7.66
00691–37–2	4-methyl-1-pentene	4.42
00760–20–3	3-methyl-1-pentene	4.42
00287–92–3	cyclopentane	2.38
00079–29–8	2,3-dimethylbutane	1.07
01634–04–4	1-methyl-tert-butyl-ether	0.62
00691–38–3	4-methyl-cis-2-pentene	6.69
00107–83–5	2-methylpentane	1.53
00674–76–0	4-methyl-trans-2-pentene	6.69

MAXIMUM INCREMENTAL REACTIVITY (MIR) VALUES—Continued

[Units: grams ozone/gram organic gas]

CAS#	Compound	MIR
00096–14–0	3-methylpentane	1.52
00763–29–1	2-methyl-1-pentene	4.42
00592–41–6	1-hexene	4.42
00110–54–3	n-hexane	0.98
13269–52–8	trans-3-hexene	6.69
07642–09–3	cis-3-hexene	6.69
04050–45–7	trans-2-hexene	6.69
00616–12–6	3-methyl-trans-2-pentene	6.69
00625–27–4	2-methyl-2-pentene	6.69
01120–62–3	3-methylcyclopentene	5.65
07688–21–3	cis-2-hexene	6.69
00637–92–3	1-ethyl-tert-butyl-ether	1.98
00922–62–3	3-methyl-cis-2-pentene	6.69
00590–35–2	2,2-dimethylpentane	1.40
00096–37–7	methylcyclopentane	2.82
00108–08–7	2,4-dimethylpentane	1.78
00464–06–2	2,2,3-trimethylbutane	1.32
07385–78–6	3,4-dimethyl-1-pentene	3.48
00693–89–0	1-methylcyclopentene	7.66
00071–43–2	benzene	0.42
03404–61–3	3-methyl-1-hexene	3.48
00562–49–2	3,3-dimethylpentane	0.71
00110–82–7	cyclohexane	1.28
00591–76–4	2-methylhexane	1.08
00565–59–3	2,3-dimethylpentane	1.51
00110–83–8	cyclohexene	5.67
00589–34–4	3-methylhexane	1.40
02532–58–3	cis-1,3-dimethylcyclopentane	2.55
00617–78–7	3-ethylpentane	1.40
00822–50–4	trans-1,2-dimethylcyclopentane	1.85
00592–76–7	1-heptene	3.48
00540–84–1	2,2,4-trimethylpentane	0.93
14686–14–7	trans-3-heptene	5.53
00142–82–5	n-heptane	0.81
02738–19–4	2-methyl-2-hexene	5.53
03899–36–3	3-methyl-trans-3-hexene	5.53
14686–13–6	trans-2-heptene	5.53
00816–79–5	3-ethyl-2-pentene	5.53
00107–39–1	2,4,4-trimethyl-1-pentene	2.69
10574–37–5	2,3-dimethyl-2-pentene	5.53
06443–92–1	cis-2-heptene	5.53
00108–87–2	methylcyclohexane	1.85
00590–73–8	2,2-dimethylhexane	1.20
00107–40–4	2,4,4-trimethyl-2-pentene	5.29
01640–89–7	ethylcyclopentane	2.31
00592–13–2	2,5-dimethylhexane	1.63
00589–43–5	2,4-dimethylhexane	1.50
00563–16–6	3,3-dimethylhexane	1.20
00565–75–3	2,3,4-trimethylpentane	1.60
00560–21–4	2,3,3-trimethylpentane	1.20
00108–88–3	toluene	2.73
00584–94–1	2,3-dimethylhexane	1.32
00592–27–8	2-methylheptane	0.96
00589–53–7	4-methylheptane	1.20
00589–81–1	3-methylheptane	0.99
15890–40–1	(1a,2a,3b) -1,2,3-trimethylcyclopentane	1.94
00638–04–0	cis-1,3-dimethylcyclohexane	1.94
02207–04–7	trans-1,4-dimethylcyclohexane	1.94
03522–94–9	2,2,5-trimethylhexane	0.97
00111–66–0	1-octene	2.69
14850–23–8	trans-4-octene	5.29
00111–65–9	n-octane	0.61
13389–42–9	trans-2-octene	5.29
02207–03–6	trans-1,3-dimethylcyclohexane	1.94
07642–04–8	cis-2-octene	5.29
01069–53–0	2,3,5-trimethylhexane	1.14
02213–23–2	2,4-dimethylheptane	1.34
02207–01–4	cis-1,2-dimethylcyclohexane	1.94
01678–91–7	ethylcyclohexane	1.94
00926–82–9	3,5-dimethylheptane	1.14
00100–41–4	ethylbenzene	2.70

MAXIMUM INCREMENTAL REACTIVITY (MIR) VALUES—Continued

[Units: grams ozone/gram organic gas]

CAS#	Compound	MIR
03074–71–3	2,3-dimethylheptane	1.14
00108–38–3	m-&p-xylene	7.64
02216–34–4	4-methyloctane	1.14
03221–61–2	2-methyloctane	1.14
02216–33–3	3-methyloctane	1.14
00100–42–5	styrene(ethenylbenzene)	2.22
00095–47–6	o-xylene	6.46
00124–11–8	1-nonene	2.23
00111–84–2	n-nonane	0.54
00098–82–8	(1-methylethyl)benzene	2.24
15869–87–1	2,2-dimethyloctane	1.01
04032–94–4	2,4-dimethyloctane	1.01
00103–65–1	n-propylbenzene	2.12
00620–14–4	1-methyl-3-ethylbenzene	7.20
00622–96–8	1-methyl-4-ethylbenzene	7.20
00108–67–8	1,3,5-trimethylbenzene	10.12
00611–14–3	1-methyl-2-ethylbenzene	7.20
00095–63–6	1,2,4-trimethylbenzene	8.83
00124–18–5	n-decane	0.47
00538–93–2	(2-methylpropyl)benzene	1.87
00135–98–8	(1-methylpropyl)benzene	1.89
00535–77–3	1-methyl-3-(1-methylethyl)benzene	6.45
00526–73–8	1,2,3-trimethylbenzene	8.85
00099–87–6	1-methyl-4-(1-methylethyl)benzene	6.45
00496–11–7	2,3-dihydroindene(indan)	1.06
00527–84–4	1-methyl-2-(1-methylethyl)benzene	6.45
00141–93–5	1,3-diethylbenzene	6.45
00105–05–5	1,4-diethylbenzene	6.45
01074–43–7	1-methyl-3-n-propylbenzene	6.45
01074–55–1	1-methyl-4-n-propylbenzene	6.45
00135–01–3	1,2-diethylbenzene	6.45
01074–17–5	1-methyl-2-n-propylbenzene	6.45
01758–88–9	1,4-dimethyl-2-ethylbenzene	9.07
00874–41–9	1,3-dimethyl-4-ethylbenzene	9.07
00934–80–5	1,2-dimethyl-4-ethylbenzene	9.07
02870–04–4	1,3-dimethyl-2-ethylbenzene	9.07
01120–21–4	n-undecane(hendecane)	0.42
00933–98–2	1,2-dimethyl-3-ethylbenzene	9.07
00095–93–2	1,2,4,5-tetramethylbenzene	9.07
03968–85–2	(2-methylbutyl)benzene	1.07
00527–53–7	1,2,3,5-tetramethylbenzene	9.07
01074–92–6	1-(1,1-dimethylethyl)-2-methylbenzene	5.84
00488–23–3	1,2,3,4-tetramethylbenzene	9.07
00538–68–1	n-pentylbenzene	1.70
00098–19–1	1-(1,1-dimethylethyl)-3,5-DMbenzene	7.50
00091–20–3	naphthalene	1.18
00112–40–3	n-dodecane	0.38
	Carbonyl Compounds	
00050–00–0	formaldehyde	7.15
00075–07–0	acetaldehyde	5.52
00107–02–8	acrolein	6.77
00067–64–1	acetone	0.56
00123–33–6	propionaldehyde	6.53
00123–72–8	butyraldehyde	5.26
00066–25–1	hexanaldehyde	3.79
00100–52–7	benzaldehyde	-0.55
00078–93–3	methyl ethyl ketone (2-butanone)	1.18
00078–85–3	methacrolein	6.77
04170–30–3	crotonaldehyde	5.42
00110–62–3	valeraldehyde	4.41
00620–23–5	m-tolualdehyde	-0.55

38. Appendix XVIII is added to part 86 to read as follows:

Appendix XVIII to Part 86—Statistical Outlier Identification Procedure for Light-Duty Vehicles and Light Light-Duty Trucks Certifying to the Provisions of Part 86, Subpart R

Residual normal deviates to indicate outliers are used routinely and usefully in analyzing regression data, but suffer theoretical deficiencies if statistical significance tests are required. Consequently, the procedure for testing for outliers outlined by Snedecor and Cochran, 6th ed., *Statistical Methods,* PP. 157–158, will be used. The method will be described generally, then by appropriate formulae, and finally a numerical example will be given.

(a) Linearity is assumed (as in the rest of the deterioration factor calculation procedure), and each contaminant is treated separately. The procedure is as follows:

(1) Calculate the deterioration factor regression as usual, and determine the largest residual in absolute value. Then recalculate the regression with the suspected outlier omitted. From the new regression line calculate the residual at the deleted point, denoted as $(y_i - y_i')$. Obtain a statistic by dividing $(y_i - y_i')$ by the square root of the estimated variance of $(y_i - y_i')$. Find the tailed probability, p, from the t-distribution corresponding to the quotient (double-tailed), with n-3 degrees of freedom, with n the original sample size.

(2) This probability, p, assumes the suspected outlier is randomly selected, which is not true. Therefore, the outlier will be rejected only if $1-(1-p)^n < 0.05$.

(3) The procedure will be repeated for each contaminant individually until the above procedure indicates no outliers are present.

(4) When an outlier is found, the vehicle test-log will be examined. If an unusual vehicle malfunction is indicated, data for all contaminants at that test-point will be rejected; otherwise, only the identified outlier will be omitted in calculating the deterioration factor.

(b) Procedure for the calculation of the t-Statistic for Deterioration Data Outlier Test.

(1) Given a set of n points, $(x_1, y_1), (x_2, y_2) * * * (x_n, y_n)$.

Where:

x_i is the mileage of the ith data point.

y_i is the emission of the ith data point.

Assume model:

$$y = a+\beta(x-\bar{x})+\in$$

(2)(i) Calculate the regression line.

$$\hat{y} = a+b(x-\bar{x})$$

(ii) Suppose the absolute value of the ith residual

$(y_i - \hat{Y}_i)$ is the largest.

(3)(i) Calculate the regression line with the ith point deleted.

$$\hat{y} = a^1+b^1(x-\bar{x})$$

$$\text{Let } t = \frac{\left((y_i - \hat{y}_i')\right)}{\sqrt{\hat{var}\left(y_i - \hat{y}_i'\right)}}$$

Where:

y^1 is the observed suspected outlier.

$\hat{y}_i$ is the predicted value with the suspected outlier deleted.

$$\hat{var}\left(y_i - \hat{y}_i'\right) = S_2\left(1+\frac{1}{n-1}+\frac{(x_i - x)^2}{\sum_{j=1}^{n}(x-\bar{x})^2}\right), j \neq i$$

(x is calculated without the suspected outlier)

$$S_2 = \frac{\sum_{j=1}^{n}\left(y_j - \bar{y}_j'\right)^2}{n-3}, j \neq i$$

(iii) Find p from the t-statistic table

Where:

$p = \text{prob}\,(|t(n-3)| \geq t)$

$t(n-3)$ is a t-distributed variable with n–3 degrees of freedom.

(iv) y_i is an outlier if $1-(1-p)^n < .05$

x	y	$\hat{y}$	$y-\hat{y}$
8	59	56.14	2.86
6	58	58.17	−0.17
11	56	53.10	2.90
22 [1]	53	41.96	11.04
14	50	50.06	−0.06
17	45	47.03	−2.03
18	43	46.01	−3.01
24	42	39.94	2.06
19	39	45.00	−6.00
23	38	40.95	−2.95
26	30	37.91	−7.91
40	27	23.73	3.27

[1] Suspected outlier.

(3)(i) Assume model:

$$y = a+\beta(x-\bar{x})+\in$$
$$y = 45-1.013(x-\bar{x})$$

(ii) Suspected point out of regression:

$$y = 44.273-1.053(x-\bar{x})$$
$$y = 44.273-1.053(22-18.727) = 40.827$$
$$y_i - y_{\hat{i}} = 12.173$$

$$\hat{var}\left(y_i - \hat{y}_i'\right) = S^2\left(1+\frac{1}{11}+\frac{10.711}{914.182}\right)$$

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