Stallworth at the phone number or e-mail address noted above, preferably at least ten days prior to the meeting, to give EPA as much time as possible to process your request.

Dated: January 20, 2011.

Anthony Maciorowski,

Deputy Director, EPA Science Advisory Board Staff Office.

[FR Doc. 2011–1664 Filed 1–25–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2009–0211; FRL–9258–6]

Partial Grant of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator

AGENCY: Environmental Protection Agency.

ACTION: Notice of Decision Granting a Partial Waiver.

SUMMARY: The Environmental Protection Agency (EPA) is taking additional final action on Growth Energy's application for a waiver submitted under section 211(f)(4) of the Clean Air Act. Today's partial waiver allows fuel and fuel additive manufacturers to introduce into commerce gasoline that contains greater than 10 volume percent ethanol and no more than 15 volume percent ethanol (E15) for use in model year (MY) 2001 through 2006 light-duty motor vehicles (passenger cars, light-duty trucks and medium-duty passenger vehicles), if certain conditions are fulfilled. In October 2010, we granted a partial waiver for E15 for use in MY2007 and newer light-duty motor vehicles subject to the same conditions. Taken together, the two waiver decisions allow the introduction into commerce of E15 for use in MY2001 and newer light-duty motor vehicles if those conditions are met.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2009–0211. All documents and public comments in the docket are listed on the *http://www.regulations.gov* Web site. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the Air and Radiation Docket in the EPA Headquarters Library, EPA West Building, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding holidays. The telephone number for the Reading Room is (202) 566–1744. The Air and Radiation Docket and Information Center's Web site is *http://www.epa.gov/oar/docket.html.* The electronic mail (e-mail) address for the Air and Radiation Docket is: *a-and-r-Docket@epa.gov,* the telephone number is (202) 566–1742 and the fax number is (202) 566–9744.

FOR FURTHER INFORMATION CONTACT: Robert Anderson, Office of Transportation and Air Quality, *Mailcode:* 6405J, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; *telephone number:* (202) 343–9718; *fax number:* (202) 343–2800; *e-mail address: Anderson.Robert@epa.gov.*

SUPPLEMENTAL INFORMATION:

Table of Contents

I. Executive Summary
A. Prior E15 Partial Waiver Decision
B. Waiver Decision for MY2001–2006 Light-Duty Motor Vehicles
C. Conditions on Today's Partial Waiver and Proposed Rule on Misfueling Mitigation
II. Introduction
III. Method of Review
IV. Analysis for MY2001–2006 Light-Duty Motor Vehicles
A. Exhaust Emissions
1. Long-term (Durability) Exhaust Emissions
a. Growth Energy's Submission and Public Comment Summary
b. EPA Analysis and Durability Studies
i. Description of DOE Catalyst Study for MY2001–2006 Motor Vehicles
ii. DOE Catalyst Study Results
2. Immediate Exhaust Emissions
a. Growth Energy's Submission and Public Comment Summary
b. EPA Analysis
B. Evaporative Emissions
1. Immediate Evaporative Emissions
a. Growth Energy's Submission and Public Comment Summary
i. Coordinating Research Council Test Programs—Results
ii. Coordinating Research Council Test Programs—Analysis
2. Long-term (Durability) Evaporative Emissions
C. Materials Compatibility
1. Growth Energy's Submission and Public Comment Summary
2. EPA Analysis and Conclusions
D. Driveability and Operability
1. Growth Energy's Submission and Public Comment Summary
2. EPA Analysis and Conclusions
E. Conclusions
V. Legal Issues Arising In This Partial Waiver Decision
VI. Waiver Conditions
VII. Partial Waiver Decision and Conditions

I. Executive Summary

A. Prior E15 Partial Waiver Decision

In March 2009, Growth Energy and 54 ethanol manufacturers petitioned the Environmental Protection Agency (EPA or Agency) to allow the introduction into commerce of up to 15 volume percent (vol%) ethanol in gasoline. Prior to Growth Energy's petition, ethanol was limited to 10 vol% in motor vehicle gasoline (E10). The petition requested that EPA exercise its authority under section 211(f)(4) of the Clean Air Act (CAA or Act) to waive the prohibition on the introduction of E15 into commerce under section 211(f)(1) of the Act. In April 2009, EPA invited public comment on Growth Energy's waiver request and received about 78,000 comments. On October 13, 2010, EPA took two actions on the waiver request based on the information available at that time ("October Waiver Decision").[1] First, it partially approved Growth Energy's waiver request to allow the introduction of E15 into commerce for use in MY2007 and newer light-duty motor vehicles, subject to several conditions. Second, the Agency denied the waiver request for MY2000 and older light-duty motor vehicles, heavy-duty gasoline engines and vehicles, highway and off-highway motorcycles, and other nonroad engines, vehicles, and equipment. The Agency also deferred making a decision on the waiver request for MY2001–2006 light-duty motor vehicles to await the results of additional testing being conducted by the Department of Energy (DOE).

B. Waiver Decision for MY2001–2006 Light-Duty Motor Vehicles

In today's action, EPA is partially granting Growth Energy's waiver request for MY2001–2006 light-duty motor vehicles based on our analysis of the available information, including DOE and other test data and public comments. This partial grant waives the prohibition on fuel and fuel additive manufacturers and allows the introduction into commerce of gasoline containing greater than 10 vol% ethanol and no more than 15 vol% ethanol for use in MY2001–2006 light-duty motor vehicles, which includes passenger cars, light-duty trucks, and medium-duty passenger vehicles (large sport utility vehicles).[2] It is subject to the same conditions that apply to the partial waiver issued in October for MY2007

[1] *Partial Grant and Partial Denial of CAA Waiver Application Submitted by Growth Energy to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator. See* 75 FR 68094, November 4, 2010.

[2] For purposes of today's decision, "MY2001–2006 light-duty motor vehicles" include MY2001–2006 light-duty vehicles (LDV), light-duty trucks (LDT), and medium-duty passenger vehicles (MDPV), the same types of motor vehicles as in the October Waiver Decision, but for the earlier model years 2001–2006.

and newer light-duty motor vehicles. Today's waiver decision together with the October Waiver Decision means that E15 may be introduced into commerce, subject to those conditions, for use in all MY2001 and newer light-duty motor vehicles.[3]

To receive a waiver under CAA section 211(f)(4), a fuel or fuel additive manufacturer must demonstrate that a new fuel or fuel additive will not cause or contribute to the failure of engines or vehicles to achieve compliance with the emission standards to which they have been certified over their useful life. The information submitted by Growth Energy was not sufficient to support a waiver covering introduction of E15 into commerce for use in MY2001–2006 light-duty motor vehicles. However, key data for responding to the waiver request for MY2001–2006 light-duty motor vehicles was provided by a DOE test program to determine the effect of long-term use of gasoline-ethanol blends, including E15, on the durability of emissions control systems, including catalysts, used in light-duty motor vehicles to control exhaust emissions (DOE Catalyst Study).[4]

In 2008, DOE began testing 19 MY2007 and newer light-duty motor vehicle models, and the resulting test data were an important part of the basis for EPA's October Waiver Decision, which granted a partial waiver for use of E15 in those model year and newer motor vehicles. In 2010, DOE began a second phase of its study with eight motor vehicle models to provide emissions-related data for MY2001–2006 light-duty motor vehicles. Many of the models were selected for their expected sensitivity to the effects of long-term use of higher gasoline-ethanol blends, such as E15, so that any potential emissions problems would be more likely to become apparent. The test fleet also included several high-sales volume vehicle models. As a whole, the test fleet was appropriately composed to provide important information for assessing the potential impact of E15 on emissions of MY2001–2006 light-duty motor vehicles.

In view of the ongoing DOE Catalyst Study, the Agency delayed making a decision on the waiver request for MY2001–2006 light-duty motor vehicles until the test program was completed and the results made available to the public. DOE testing was largely completed in November, and retesting of several models that experienced mechanical problems unrelated to fuel use was completed in December. The test results were made available to the public on a rolling basis, with EPA submitting data to the docket as soon as the data were received and checked for accuracy and completeness with DOE.

As described more fully in Section IV of this notice, EPA is making today's decision based on the results of the DOE Catalyst Study and other relevant test programs, as well as the Agency's engineering assessment that changes in regulatory requirements affecting MY2001–2006 light-duty motor vehicles generally led manufacturers to design and build vehicles able to use E15 without a significant impact on emissions. Consistent with past waiver decisions, the Agency is making its decision based on potential effects of E15 in four areas: (1) Exhaust emissions—immediate[5] and long-term (known as durability); (2) evaporative emissions—immediate and long-term; (3) the impact of materials compatibility on emissions; and (4) the impact of driveability and operability on emissions.

For MY2001–2006 light-duty motor vehicles, EPA concludes that the DOE Catalyst Study, other information and EPA's engineering analysis adequately demonstrate that the impact of E15 on overall exhaust emissions, including both immediate and long-term, will not cause or contribute to violations of the exhaust emissions standards for these motor vehicles. All but one of the vehicles that completed DOE testing met exhaust emission standards on average after the vehicles accumulated significant mileage, and were then tested, on E15. Although one vehicle tested on E15 slightly exceeded one emission standard, the exceedance does not appear related to fuel use since its counterpart tested on E0 (gasoline containing no ethanol) exceeded the same standard. Compliance with emission standards by the E15 test fleet as a whole is particularly compelling given that the vehicles tested were older, high mileage vehicles (reflecting their model year), and much of the testing was conducted at mileages beyond the vehicles' regulatory "full useful life" (FUL) of 100,000–120,000 miles, depending on vehicle type and model year. The test results also show that the vehicles aged and tested on E15 did not have significantly higher emissions than the vehicles aged and tested on E0, and some vehicles' emissions actually decreased on E15. Overall, the test results for MY2001–2006 are similar to the DOE test results for MY2007 and newer light-duty motor vehicles, indicating that the earlier model year vehicles are more like later model year vehicles in their ability to maintain emission control performance when operated on E15. The DOE test results thus strongly confirm EPA's engineering assessment that auto manufacturers responded to regulatory changes applicable to MY2001–2006 with design changes that made light-duty motor vehicles capable of maintaining exhaust emissions performance when operated on mid-level gasoline-ethanol blends, up to and including E15.

With respect to evaporative emissions, EPA concludes that analysis of test data and other available information and the Agency's engineering assessment adequately demonstrate for purposes of CAA section 211(f)(4), with the possible limited exception noted below, that the impact of E15 on overall evaporative emissions, including both immediate and durability-related, will not cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their applicable evaporative emissions standards, so long as the fuel does not exceed a Reid Vapor Pressure (RVP) of 9.0 psi in the summertime volatility control season.[6] Analysis of available information suggests, but does not establish, the possibility that a limited number of vehicle models with emissions already very close to applicable evaporative emission standards might exceed the standards in-use if operated on E15. However, this possibility should be considered in light of information indicating that use of E15 by those vehicles will, overall, be better for the environment with respect to in-use evaporative emissions than would otherwise occur if a waiver were not

[3] It should be noted that a number of additional steps must be completed by various parties before E15 may be distributed and sold. These steps include but are not limited to submission of a complete E15 fuels registration application by the fuel and fuel additive manufacturers who wish to introduce E15 into commerce, and EPA review and approval of the application, under the regulations at 40 CFR Part 79. Various state laws may also affect the distribution and sale of E15.

[4] DOE embarked on the study, in consultation with EPA, auto manufacturers, fuel providers and others, after enactment of the Energy Independence and Security Act of 2007, which significantly expanded the federal Renewable Fuel Standard program by increasing the volume of renewable fuels that must be used in transportation fuel in order to reduce imported petroleum and emissions of greenhouse gases.

[5] In past waiver decisions, we have referred to "immediate" emissions as "instantaneous" emissions. "Immediate" and "instantaneous" are synonymous in this context.

[6] EPA regulates the Reid Vapor Pressure of gasoline sold at retail stations during the summer ozone season (June 1 to September 15) to reduce evaporative emissions from gasoline that contribute to ground-level ozone. Gasoline needs a higher vapor pressure in the wintertime for cold start purposes.

granted. In fact, E15 may result in somewhat lower in-use evaporative emissions compared to fuel currently sold in almost all of the country (E10), as a result of differences in the allowable RVP of the two gasoline-ethanol blends. As such, the possibility of a limited number of evaporative emission exceedances, under these somewhat unique circumstances, does not warrant denial of the request for a waiver with respect to these model year vehicles. Available information on materials compatibility and driveability also supports a partial waiver for MY2001–2006 light-duty motor vehicles. Further information and explanation concerning each of these findings are provided later in this notice.

C. Conditions on Today's Partial Waiver and Proposed Rule on Misfueling Mitigation

Like the waiver for MY2007 and newer light-duty motor vehicles, today's partial waiver is subject to several conditions to ensure fuel quality, limit the fuel's summertime vapor pressure, and mitigate the potential for other vehicles, engines and products to be misfueled with E15. Specifically, EPA is placing two types of conditions on the partial waiver granted today: (1) Those for mitigating the potential for misfueling of E15 in all vehicles, engines and equipment for which E15 is not approved; and (2) those addressing fuel and ethanol quality. All of the conditions are discussed in Section X of the October Waiver Decision (*see* 75 FR 68094, 68148 (November 4, 2010)) and are listed below in Section IV. EPA is applying the same conditions on introduction of E15 into commerce for use in MY2001–2006 light-duty motor vehicles that it applied to use of E15 in MY2007 and newer such vehicles, and for the same reasons, as explained in the October Waiver Decision. To meet the misfueling-related conditions, any fuel or fuel additive manufacturer subject to this waiver must obtain EPA approval of and implement a plan that meets the conditions for ensuring that the fuel or fuel additive is only introduced into commerce for use in MY2001 and newer light-duty motor vehicles, and not for use in other on- and off-road vehicles, engines and equipment for which E15 is not approved. See Section VI below.

To help ensure that E15 is used only in motor vehicles for which it is approved, EPA issued a notice of proposed rulemaking (NPRM) published concurrently with the October Waiver Decision ("Misfueling Mitigation NPRM," 75 FR 68044, November 4, 2010). In that NPRM, EPA proposed safeguards to provide the most practical way to mitigate the potential for misfueling of other vehicles, engines and equipment with E15. The Agency received many comments in response to the NPRM, particularly with regard to the proposed misfueling mitigation measures. EPA is now in the process of considering those comments in developing final mitigation measures so that vehicles, engines and products are appropriately fueled if E15 is introduced into commerce. As noted above, today's waiver decision authorizes, but does not require, E15 to be introduced into commerce (subject to several conditions), and a number of additional steps must be taken before that occurs. In addition, any significant shift in the marketplace from E10 to E15 will take time as producers, distributors and suppliers make the necessary adjustments. EPA is developing a program of misfueling mitigation measures that would work in tandem with the various steps involved in distributing and marketing E15 so that needed safeguards are timely and effective.

EPA expects that the mitigation measures that are adopted would satisfy the misfueling mitigation conditions of the partial waiver decision issued in October and today, and would promote the successful introduction of E15 into commerce. In addition to the misfueling mitigation conditions, E15 and the ethanol used to make E15 must also meet certain fuel and fuel additive quality specifications before it may be introduced into commerce.

II. Introduction

Section II of the October Waiver Decision includes a comprehensive review of the relevant CAA provisions and the amendments made to those provisions by the Energy Independence and Security Act of 2007. It also describes Growth Energy's waiver application and the public review process that EPA conducted as part of its consideration of the application. Today's partial waiver decision fully incorporates by reference Section II of the October Waiver Decision and provides additional information as needed to address the potential use of E15 in MY2001–2006 light-duty motor vehicles.

III. Method of Review

A full explanation of the method of review for waiver requests under CAA section 211(f)(4) is provided in Section III, Method of Review, in the October Waiver Decision. We fully incorporate by reference Section III of the October Waiver Decision into this partial waiver decision. For convenience, a brief description of our method of review is provided here.

Section 211(f)(4) clearly places upon the waiver applicant the burden of establishing that its fuel or fuel additive will not cause or contribute to the failure of vehicles or engines to meet their assigned emission standards over their useful lives. If interpreted literally, however, this burden of proof would be virtually impossible to meet as it requires the proof of a negative proposition: that no vehicle or engine will fail to meet emission standards to which it is subject. Recognizing that Congress contemplated a workable waiver provision, EPA has previously indicated that reliable statistical sampling and fleet testing protocols is one approach that could be used to demonstrate that a fuel or fuel additive under consideration would not cause or contribute to motor vehicles in the applicable national fleet failing to meet their applicable emissions standards.[7]

EPA has also stated that an applicant may make a demonstration based upon a reasonable engineering theory regarding emissions effects and support these judgments with confirmatory testing as an alternative to providing the amount of data necessary to conduct robust statistical analyses.[8] If a reasonable theory exists, based on good engineering judgment, which predicts the emission effects of a fuel or fuel additive, an applicant need only conduct a sufficient amount of testing or provide other data and analysis sufficient to demonstrate the validity of such a theory.[9] In making a waiver determination, EPA reviews all of the material in the public docket.

For EPA to grant a waiver, the available information must be sufficient to answer the essential statutory question of whether the proposed fuel or fuel additive will impact emission controls such that it causes or contributes to vehicles and engines exceeding their emission standards. What specific types of information and analysis may be relevant for assessing a specific fuel or fuel additive depends in part on the physical and chemical characteristics of the proposed fuel or fuel additive and the emission controls it would affect. Applicable methods of review and the type of information sufficient to make the required showing thus vary as necessary and appropriate for addressing the emission control

[7] *See* 43 FR 41425 (September 18, 1978).

[8] *See* 44 FR 12244 (February 23, 1979).

[9] *See* Waiver Decision on Application of E.I. DuPont de Nemours and Company (DuPont), 46 FR 6124 (February 28, 1983).

issues that a proposed fuel or fuel additive raises. As discussed below, the grant of a partial waiver in this case is based on a combination of engineering assessment, test data, and other information, which together provide a reliable factual and technical basis for making the judgment required under section 211(f)(4). This approach is consistent with the discretion provided under the statute and EPA's recognition in prior waiver decisions that more than one approach can be used to make the determination required under the statute, including combinations of test data and engineering assessment.

As noted previously, the emissions impact analysis for a waiver request must address the following four major areas [10]: (1) Exhaust emissions, immediate and long-term; (2) evaporative emissions, immediate and long-term; (3) materials compatibility; and (4) driveability and operability. EPA evaluates the emissions impacts in these four categories individually and collectively in making its waiver determination.

Exhaust and evaporative emissions data are analyzed according to the effects that a fuel or fuel additive is predicted to have on emissions over time. A fuel might have only an immediate effect on emissions (*i.e.,* the emission effects of the fuel or fuel additive are immediate and remain constant throughout the life of the vehicle or engine when operating on the waiver fuel). A fuel might instead or in addition affect the operation of the engine or related emission control hardware in a physical manner (*e.g.,* operating temperatures, component interaction, chemical changes, increased permeation, or materials degradation) that might lead to emissions deterioration over time. Depending on the type of effect a fuel may have, different types of testing or other information may be appropriate to evaluate the effect on emissions.

Materials compatibility issues can lead to substantial exhaust and evaporative emissions increases. In most cases, materials compatibility issues show up in emissions testing; however, there may be impacts that do not show up due to the way the testing is performed or because the tests simply do not capture the effect.

A change in the driveability of a motor vehicle that results in significant deviation from normal operation (*i.e.,* stalling, hesitation, *etc.*) could result in increased emissions. These increases may not be demonstrated in the test cycles used for certifying vehicles as complying with emission standards, but they are present during in-use operation. For example, a motor vehicle stall and subsequent restart can result in a significant emissions increase. Further, concerns exist that vehicles might be tampered with in an attempt to correct the driveability issue and emissions might increase as a result.

IV. Analysis for MY2001–2006 Light-Duty Motor Vehicles

As described in detail below, DOE and other test data together with other available information and EPA's engineering analysis support granting a partial waiver for use of E15 in MY2001–2006 light-duty motor vehicles. As with EPA's waiver decision for MY2007 and newer light-duty motor vehicles, the DOE Catalyst Program provided critically important test data for assessing the ability of MY2001–2006 light-duty motor vehicles to meet applicable exhaust emission standards if operated on E15. DOE's test fleet was carefully assembled to be broadly representative of the national fleet for those model years and to discern any emission problems that might arise from use of E15. Results from DOE's testing strongly support a determination that E15 will not cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their applicable exhaust emission standards. Analysis of other test data, including EPA compliance information, combined with EPA's engineering assessment shows that MY2001–2006 light-duty motor vehicles should generally be able to meet evaporative emission standards when operated on E15 so long as the fuel does not exceed a RVP of 9.0 psi in the summertime volatility control season. In fact, such vehicles should have somewhat lower evaporative emissions when operated on 9.0 psi E15 than when operated on currently available in-use fuel. Although our analysis suggests the possibility that a relatively small number of vehicles already emitting at close to applicable evaporative emission standards may exceed those standards on E15, that possibility does not warrant denial of the waiver, particularly in light of the evaporative emission benefits that 9.0 psi E15 is expected to achieve in comparison to commercially available in-use fuel.[11]

In the October Waiver Decision, EPA discussed at length Growth Energy's request and the information provided by Growth Energy in its waiver application and by the public in comments on the request. As the Agency noted, the information provided for light-duty motor vehicles was generally not specific to model years. EPA described and addressed that information in discussing its decisions for MY2007 and newer light-duty motor vehicles and MY2000 and older light-duty motor vehicles. Rather than repeat the full discussion in the October Waiver Decision, we incorporate it by reference here and expand on it below as needed to address MY2001–2006 light-duty motor vehicles.

At the outset of our analysis for MY2001–2006 light-duty motor vehicles, it is useful to note that our analysis for these model years is somewhat different from that used for MY2007 and newer light-duty motor vehicles. DOE's Catalyst Study tested a large number of MY2007 and newer light-duty motor vehicles representing a cross section of the fleet. The size of the MY2007 and newer motor vehicle test fleet allowed a statistical analysis of the potential impact of a fuel or fuel additive on exhaust emissions. DOE's data and EPA's analysis of that data provided much of the basis for EPA's determination that E15 will not cause or contribute to MY2007 and newer light-duty motor vehicles failing to meet applicable emission standards. The data and analysis also confirmed EPA's engineering assessment that regulatory changes applicable to those model years likely resulted in manufacturers making design changes that allowed the vehicles to continue to comply with exhaust emission standards when operated on E15. For the other factors relevant to waiver determinations (e.g., evaporative emissions, materials compatibility), EPA employed engineering judgment based on and/or confirmed by available information, including data from DOE and other test programs.

For MY2001–2006 light-duty motor vehicles, DOE tested fewer vehicle models but selected models for their expected sensitivity to ethanol blends

[10] *See* 44 FR 12244 (February 23, 1979).

[11] As explained later in this notice, EPA has traditionally interpreted and applied CAA section 211(f)(4) to authorize a waiver for fuels or fuel additives that statistical analysis shows will not result in a significant increase in violations of the vehicle emissions standards. Even if EPA were to adopt a more stringent test for waiver decisions, it would not apply such a test in these circumstances, where the actual environmental impact of the fuel is neutral or positive. In the unique circumstances here, the potential emissions violation should not be considered significant, given their actual impact on in-use emissions is neutral or even positive. Also, since the EPA regulations for determining auto manufacturers' compliance with emission standards specify use of E0 fuel during compliance testing, manufacturers' compliance status will not be adversely affected by any emission failures that might occur in-use as the result of any immediate emissions impacts of E15.

and to achieve broad representation of the national vehicle fleet for these model years. As a result, while DOE's test fleet does not include enough vehicles to allow the same statistical analysis conducted for MY2007 and newer light-duty motor vehicles, it is composed in a way that provides data that is very informative about the expected effects of E15 on the in-use fleet, and confirms the engineering assessment that regulatory requirements applicable to MY2001–2006 light-duty motor vehicles resulted in emission control improvements sufficient to maintain compliance with applicable exhaust standards if these vehicles are operated on E15. For MY2001–2006 light-duty motor vehicles, EPA is thus utilizing a broad range of evidence relevant to making waiver decisions under CAA section 211(f)(4) and considering the DOE Catalyst Study in combination with other available test data and information and EPA's engineering assessment in determining whether a waiver for these model years is appropriate.

In evaluating Growth Energy's waiver request with respect to MY2001–2006 light-duty motor vehicles, EPA considered the potential impact of E15 on the four relevant emission–related categories listed previously. The technical issue is whether these motor vehicles would still meet the applicable emission standards over their fuel useful life if they operated in-use on E15 and emissions testing was performed using E15 as the fuel.[12]

In considering the potential impact of E15 on the four factors, we focused on MY2001–2006 light-duty motor vehicles subject to pre-Tier 2 emission standards (*i.e.,* the standards in effect before Tier 2 standards applied to all light-duty motor vehicles). As described in the October Waiver Decision, Tier 2 standards began phasing in with MY2004 and, according to EPA certification information, were fully phased in by MY2007 for passenger cars and several categories of light-duty trucks. EPA expected, and DOE testing confirmed, that Tier 2 standards and related compliance requirements prompted manufacturers to make changes to vehicles that helped maintain emission control under real-world conditions, including fueling with E10. The applicability of Tier 2 standards was thus found to be an important basis for partially granting the waiver request for MY2007 and newer model light-duty motor vehicles.

Since Tier 2 standards began to phase in with MY2004, many MY2004–2006 light-duty motor vehicles are subject to Tier 2 standards. Indeed, as illustrated by Figure IV.A–1, more than 60% of MY2005, and more than 80% of MY2006, light-duty motor vehicles are certified as complying with Tier 2 standards. EPA's reasons for partially granting the waiver with respect to MY2007 and newer light-duty motor vehicles also apply to MY2004–2006 Tier 2 vehicles. However, in its October Decision, EPA did not grant the partial waiver with respect to MY2004–2006 Tier 2 vehicles because the Agency expected most vehicle owners for those model years would not know what emission standards their vehicles are supposed to meet, and that information is not easily discerned from the vehicle itself. EPA thus decided to use a model year cut-off for delineating which model years were covered by the partial waiver. For purposes of today's decision, though, it is important to note that MY2004–06 vehicles certified to Tier 2 standards should be able to use E15 without adverse impacts on their emissions for the reasons given in the October Waiver Decision. The analysis in today's decision focuses on light-duty motor vehicles that are not certified to Tier 2 standards.

A. Exhaust Emissions

As described below, a number of regulatory actions took place by 2000 that placed emphasis on real-world testing of motor vehicles, which in turn led to changes in design of exhaust emission control systems. Those actions, together with actual compliance information, provide a strong basis for an engineering assessment that manufacturers improved exhaust emission controls for MY2001–2006 light-duty motor vehicles in ways similar in nature to Tier 2 motor vehicles and are likely sufficient to allow such vehicles to use E15 and still meet exhaust emission standards. DOE's testing of pre-Tier 2 vehicle models (including several expected to be sensitive to ethanol's impact on emissions control) strongly confirms that assessment and demonstrates that MY2001–2006 light-duty motor vehicles can operate on E15 without significant impact on exhaust emission control and that E15 is not expected to cause or contribute to failures to meet applicable exhaust emissions standards.

1. Long-term (Durability) Exhaust Emissions

The October Waiver Decision describes at length various changes in regulatory requirements since the 1970s that over time have required auto manufacturers to design and build increasingly cleaner vehicles that can maintain their emission control performance over the vehicles' FUL under real-world conditions. For today's decision, we focus on those changes that were applicable by or affected MY2001, since those changes are relevant to any engineering assessment of whether MY2001–2006 light-duty motor vehicles that are not Tier 2 vehicles would operate on E15 without significant loss of emission control.

a. Growth Energy's Submission and Public Comment Summary

As mentioned above, Growth Energy's submission and the information supplied by commenters regarding long-term exhaust emission impacts of E15 were generally not specific to the model year of motor vehicles. For a detailed discussion of Growth Energy's submission and summary of public comments with respect to the impact of long-term use of E15 on exhaust emissions, refer to section IV.A.1 for MY2007 and newer light-duty motor vehicles and IV.C.3.b.i for MY2000 and older light-duty motor vehicles of the October Waiver Decision.

b. EPA Analysis and Durability Studies

By MY2001, the federal National Low Emission Vehicle (NLEV) program for reducing exhaust emissions was fully phased in for all cars and light-duty trucks (LDT) up to 6000 lb. gross vehicle weight (GVW) (LDT 1s and 2s) (63 FR 926, January 7, 1998).[13] This program essentially adopted the existing California LEV standards (which began phasing in for California with MY1994) as a national vehicle program. NLEV motor vehicles were required to meet more stringent emission standards for emissions of all criteria pollutants,[14] which in turn required substantial

[12] Compliance with vehicle and engine standards is determined for certification and in-use (*i.e.,* recall) purposes using federal test procedures which include a specified test fuel that is E0. The purpose of the waiver process under CAA section 211(f)(4) is to determine whether a vehicle operated on the fuel or fuel additive for which a waiver is requested (here E15) would meet applicable emission standards after operating in-use and then testing using that fuel. In that way, section 211(f)(4) helps protect the emission control effectiveness of vehicles operated under real-world conditions, which ultimately determines the amount of emission reductions achieved.

[13] The program was fully phased in by MY1999 in the Northeast Trading Region (the region comprised of the states that meet the conditions specified under 40 CFR 86.1705(d)) within the NLEV program. The states that opted in include Connecticut, Delaware, the District of Columbia, Maryland, New Hampshire, New Jersey, Pennsylvania, Rhode Island and Virginia.

[14] Criteria pollutants are those pollutants, including precursors, for which EPA has set National Ambient Air Quality Standards under CAA section 109.

changes to emission control hardware and strategies compared with motor vehicles certified to the previous Tier 1 standards.

Light-duty trucks from 6001–8500 lb. GVW (*e.g.,* large pickup trucks and vans, known as LDT 3s and 4s) were not subject to NLEV standards, and instead transitioned directly from Tier 1 to Tier 2 standards. Many of the improvements made for smaller light-duty motor vehicles (*i.e.,* catalyst designs and washcoat formulation) may have been applied to these motor vehicles. These motor vehicles also emit at levels substantially below their applicable federal standard because, as discussed later in this section, many were also certified to a more stringent California emission standard. This "compliance margin," which is the difference between a vehicle's certified emission level and the applicable standard, suggests these heavier light-duty trucks benefited from at least some of the advances in exhaust emission controls developed for lighter trucks, and, in any event, can continue to comply with standards even if operated on E15, as discussed below.

Issuance in 2000 of more stringent Tier 2 standards (65 FR 6698, February 10, 2000) also affected manufacturers' planning. To comply with those standards, including compliance over vehicles' FUL,[15] manufacturers were required to focus on ensuring the durability of the exhaust and evaporative emission controls of their vehicles under real-world conditions. Although Tier 2 standards only began to phase in with MY2004, manufacturers were allowed to earn credit towards compliance with those standards in earlier model years. As a result, they had a strong incentive to develop and apply emission control hardware and strategies resembling future Tier 2 designs to earlier model year light-duty motor vehicles.

Overall, the transition from Tier 1 to NLEV and then to Tier 2 exhaust standards called for design changes that all moved in the same direction of increased control of exhaust emissions, through increasingly sophisticated emissions control systems aimed at reducing the level of emissions created by the combustion of the fuel in the engine combined with increased control of these emissions by the catalyst system. This increasing sophistication was based on better air fuel ratio control, and increased efficiency, durability and faster light-off of the catalyst. While Tier 2 standards called for the most sophisticated engine and catalyst system designs, the NLEV standards prompted major redesign efforts by manufacturers that were later expanded and advanced even further to meet, and earn credits towards compliance with, Tier 2 standards. From an engineering perspective, the emissions control systems of pre-Tier 2, NLEV vehicles are significantly more robust than those used in MY2000 and older vehicles and more like those of Tier 2 vehicles in terms of the degree of sophistication of engine controls and catalyst technology.

Review of the emission control and related changes made by manufacturers for MY2001–2006 confirms that the LEV and NLEV programs involved use of more sophisticated technologies and strategies. From its decades-long role in certifying and overseeing in-use compliance of light-duty motor vehicles, EPA is aware that manufacturers made a number of improvements to reduce emissions at cold start, provide better fuel control, and make their emission control systems more durable. These improvements included independent catalysts per bank on V-engines, higher cell density catalyst substrates with thinner cell walls for lower thermal inertia/faster light-off, stereo oxygen sensors on V-engines, and improved catalyst washcoats with improved light-off and better resistance to thermal deterioration.[16] In addition, manufacturers improved oxygen sensor designs for better durability and improved oxygen sensor heater control strategies to reduce the likelihood of cracking due to thermal shock. These technologies were developed even further for Tier 2 vehicles.

The phase-in of these various exhaust emission control programs for MY2001–2006 light-duty motor vehicles is shown in Figure IV.A–1. As the figure illustrates, the percentage of Tier 2 vehicles significantly increased between MY2004 and MY2006 such that the large majority of the MY2005 and MY2006 light-duty motor vehicle fleet met the more stringent standards applicable to MY2007 and newer motor vehicles.

[15] FUL is 100,000 miles for NLEV passenger cars and light-duty truck category 1; 120,000 miles for NLEV light-duty truck category 2; and 120,000 miles for Tier 1 light-duty truck categories 3 and 4. Light-duty trucks up to 6000 lbs. GVW are composed of light-duty truck categories 1 and 2 where category 1 has a loaded vehicle weight equal to 3,750 lbs. and category 2 has a loaded vehicle weight greater than 3,750 lbs. Light-duty trucks of 6001–8500 lbs. GVW are composed of light-duty truck categories 3 and 4 where category 3 has an adjusted loaded vehicle weight less than or equal to 5,750 lbs and category 4 has an adjusted loaded vehicle weight greater than 5,750 lbs.

[16] Close-coupled faster light-off catalysts, faster light-off oxygen sensors, and more sophisticated cold start strategies enable faster transition from open loop to closed loop operation for reduced cold start emissions.

[17] Interim Non-Tier 2 refers to MY2004 or newer vehicles not certified to Tier 2 FTP exhaust emission standards during the Tier 2 phase in period. Interim Non-Tier 2 emission standards included all of the Tier 2 emission standard bins in addition to bins unique to the Interim Non-Tier 2 program. The Interim Non-Tier 2 fleet average NO_X standard was 0.30 g/mi compared to the Tier 2 fleet average NO_X standard of 0.07 g/mile. The Interim Non-Tier 2 standards were more stringent than both the NLEV and Tier 1 standards.

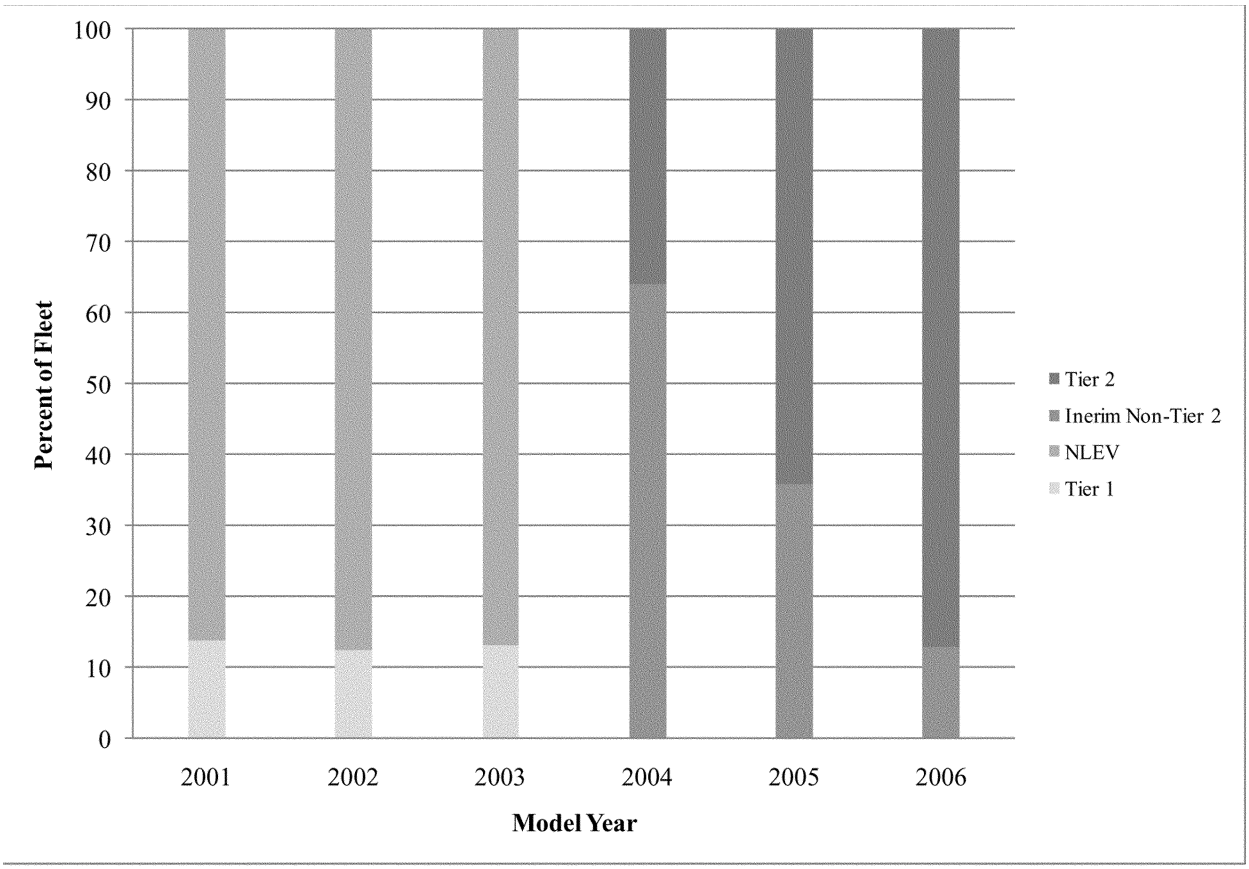

Figure IV.A-1—Fleet Tailpipe Emission Standards for MY2001-2006 Light-duty Motor Vehicles[17]

Another important regulatory change for improving the exhaust emissions control durability of MY2001–2006 light-duty motor vehicles was the Compliance Assurance Program ("CAP2000"), which took effect by MY2000 for light-duty motor vehicles. CAP2000 placed more emphasis on in-use performance of vehicle emission controls, including the potential impacts of operation on different available in-use fuels. In particular, the In-use Verification Program (IUVP) introduced under CAP2000 requires manufacturers to perform exhaust and evaporative emissions tests on customer vehicles in the in-use fleet to confirm the durability projections that manufacturers make at certification. These tests must be performed at low and high mileage intervals and include at least one vehicle per test group [18] at 75% of FUL. This emphasis on real-world vehicle testing to ensure durable emission controls prompted manufacturers to consider different commercially available fuels (including ethanol blends up to E10) when developing and testing their emissions systems for MY2000 and later.

Section VI.A of the Misfueling Mitigation NPRM describes the growing market penetration of E10 over time. In the late 1990s, when manufacturers were planning for MY2001, national availability of E10 was increasing, and E10 was already the predominant form of gasoline sold in several major metropolitan areas. For example, by 2000, E10 comprised nearly 15% of the U.S. gasoline market, and for certain major metropolitan areas such as Chicago and Milwaukee, the gasoline market entirely shifted to E10 by around 1996. With the advent of CAP2000 and with E10 pervasive in several major markets, manufacturers had a strong incentive to plan for ethanol exposure in designing for durable emissions performance.

Finally, the Supplemental Federal Test Procedure (SFTP) compliance requirements began to phase in with MY2001 and were fully phased in with MY2004. These standards further increased manufacturers' incentives to design emissions controls that would be durable in use and with exposure to available gasoline-ethanol blends. The SFTP compliance requirements expanded motor vehicle emission testing to better represent actual consumer driving habits and conditions by including the US06 test (a high speed and high acceleration cycle) and the SCO3 test (an air conditioning test cycle run in a environmental test chamber at 95 °F). In response to these requirements, manufacturers developed increasingly robust emissions control systems capable of withstanding the higher engine and catalyst temperatures experienced during these more severe cycles without simply relying on enrichment of the air-to-fuel ratio (which causes increased emissions) for temperature control. This improved ability to handle higher temperatures would also help emission control

[18] EPA certifies light-duty motor vehicles on a test group basis. A test group is a group of vehicles having similar design and emission characteristics.

systems withstand enleanment [19] from ethanol use.

Another consideration in our engineering analysis is the extent to which MY2001–2006 light-duty motor vehicles, when tested on E0 (as required for determining auto manufacturers' compliance with emission standards), emit at levels below the applicable standards and therefore have a compliance margin. Compliance margins are generally designed into motor vehicles by manufacturers to account for possible variations in production vehicles and changes to vehicle emissions control systems from actual field usage, such as the type of driving employed and the type of fuel used. The larger the compliance margin, the more likely it is that vehicles would accommodate any emissions increases from fueling with E15 and continue to meet emission standards in-use. As discussed in more detail later in this decision, a survey of certification data [20] shows that the average FUL compliance margin (which accounts for in-use deterioration) projected at the time of certification for the entire MY2001–2006 light-duty motor vehicle fleet was approximately 66%. In-use data from the IUVP program indicates that motor vehicles actually achieved a similar compliance margin when operated in real-world conditions. The size of the compliance margins for MY2001–2006 light-duty motor vehicles suggests manufacturers were in fact designing and building motor vehicles that were significantly cleaner than required as part of a planned migration to technologies capable of meeting the tighter Tier 2 standards.

Based on our engineering analysis of the expected impact of relevant regulatory changes and certification and IUVP data, we believe that the regulatory changes affecting MY2001–2006 light-duty motor vehicles prompted manufacturers to design those MY2001–2006 vehicles using technology similar to the technology used for Tier 2 motor vehicles. As with Tier 2 motor vehicles, these technology changes would be expected to maintain the durability of the performance of emission control systems when motor vehicles are operated on E10 and also allow the motor vehicles to operate over time on E15 without significant changes in exhaust emissions. The designs of the emission control systems of MY2001–2006 light-duty motor vehicles also included a large compliance margin to address, among other things, variations in in-use driving patterns and fuels, and this large compliance margin would be expected to offset exhaust emissions increases that might be associated with the long-term use of E15. The combination of these factors leads to the engineering conclusion that the long-term use of E15 by MY2001–2006 light-duty motor vehicles is not expected to lead to significant emission increases and to cause or contribute to failures to meet applicable exhaust emissions standards.

i. Description of DOE Catalyst Study for MY2001–2006 Motor Vehicles

The results of DOE's Catalyst Study for MY2001–2006 light-duty motor vehicles provide strong confirmation that those vehicles should be able to operate on E15 and continue to comply with applicable exhaust emission standards. As described in detail below, DOE selected vehicle models so that the test fleet would broadly represent the national MY2001–2006 light-duty motor vehicle fleet and be likely to reveal any adverse emissions impacts from long-term operation on E15. DOE also followed all other aspects of the test protocol it used for MY2007 and newer motor vehicle testing to assure appropriate and consistent rigor in testing of MY2001–2006 motor vehicles. DOE test results indicate that the changes manufacturers made to MY2001–2006 light-duty motor vehicle emission controls, calibration, hardware, etc., in response to regulatory changes in fact resulted in vehicle exhaust emissions control systems, including the catalyst, that are capable of withstanding the additional enleanment caused by E15 and maintaining exhaust emission performance on E15 over the FUL of the motor vehicles.

To evaluate the actual impacts of E15 on MY2001–2006 light-duty motor vehicles, DOE tested eight MY2000–2003 motor vehicle models,[21] including high sales volume models produced by several light-duty motor vehicle manufacturers. The specific purpose of the program was to evaluate the long-term effects of E0, E10, E15, and E20 on catalyst durability of MY2001–2006 light-duty motor vehicles that were subject to pre-Tier 2 standards (*i.e.,* NLEV or Tier 1). A number of criteria were used to select motor vehicle models for the program. In particular, vehicle selection was based on high sales volume models so that the test fleet would be broadly representative of the in-use fleet. Since the number of models tested for MY2001–2006 was not as large as the number tested for newer model years, models were also selected for expected emissions related sensitivity (particularly in terms of their ability to apply learned fuel trim from closed loop to open loop operation [22]) so that the test fleet would be more likely to include vehicles that would reveal any adverse impacts of E15. In addition, one-half of the motor vehicle models were selected for their likely sensitivity to ethanol-gasoline blends as indicated by the results the Coordinating Research Council (CRC) Mid-level Ethanol Blends Catalyst Durability Study Screening (E–87–1). CRC is a research organization comprised of auto manufacturers and oil companies.

Testing of all vehicles followed the same protocol as that used for MY2007 and newer light-duty motor vehicles, although the NLEV or Tier 1 vehicles were all used vehicles with relatively high mileage due to their age. *See* Table IV.A–1—Vehicle Attribute Summary for the list of specific models.

[19] Enleanment refers to increasing the amount of oxygen in the mixture of air and fuel that enters the engine for combustion. Enrichment refers to increasing the amount of fuel in that mixture. At any one air to fuel ratio, adding ethanol to the fuel adds additional oxygen to the mixture of air and fuel, tending to enlean the mixture.

[20] These data are submitted by manufacturers to EPA's Certification and Fuel Economy Information System to demonstrate compliance with the applicable emission standards and are part of the application process to receive a certificate of conformity. The CAA requires that all motor vehicles be covered by a certificate of conformity before they may enter into commerce.

[21] The MY2000 vehicle models selected were representative of all MY2001 and later pre-Tier 2 vehicles since they were certified as meeting Tier 1 or NLEV standards.

[22] *See* October Waiver Decision Section IV.A for a full discussion of the relevance of learned fuel trim to waiver determinations for gasoline-ethanol blends.

TABLE IV.A–1—VEHICLE ATTRIBUTE SUMMARY

Project Vehicle Summary		Engine		Engine Family	Emissions standard				Starting odometer (×1000 miles)	
Year	Vehicle	Disp	Config			NMOG	CO	NO_X	E0	E15
Southwest Research Institute										
2000	Chevrolet Silverado	5.3	V8	YGMXT05.3181	Tier 1/LDT 3	0.460	6.4	0.98	111	112
2002	Nissan Frontier	2.4	I4	2NSXT02.4C4B	NLEV (LEV)	0.130	5.5	0.5	95	91
2002	Dodge Durango	4.7	V8	2CRXT04.75B0	Tier 1/LDT 3	0.460	6.4	0.98	71	60
Transportation Research Center										
2003	Toyota Camry	2.4	I4	3TYXV02.4HHA	ULEV	0.055	4.2	0.3	77	77
2003	Ford Taurus	3	V6	3FMXV03.0VF3	NLEV (LEV)	0.090	4.2	0.3	93	88
2003	Chevrolet Cavalier	2.2	I4	3GMXV02.2025	NLEV (LEV)	0.090	4.2	0.3	78	81
Environmental Testing Corp										
2000	Honda Accord	2.3	I4	YHNXV02.3PF3	NLEV (LEV)	0.090	4.2	0.3	106	95
2000	Ford Focus	2	I4	YFMXV02.0VF3	NLEV (LEV)	0.090	4.2	0.3	103	85

For testing purposes, at least two vehicles of the same model were matched to prevent confounding of the data by differences in vehicle attributes. Specifically, the test group, engine displacement, evaporative emissions control family, model year, powertrain control unit calibration, axle ratios, wheel size, and tire size were constrained to be identical within a vehicle set. Physical inspections of the vehicles were conducted to eliminate obviously problematic vehicles (such as those with gross fluid leaks, obvious and excessive body damage, etc.). Odometer reading was also used to identify candidate vehicles with the goal of restricting the difference in odometer readings within a vehicle set to a maximum of 10,000 miles in order to facilitate data comparisons between the vehicles. One vehicle from each set was aged on E0, one was aged on E15, and each vehicle was tested on both E0 and E15. Additional vehicles were aged on E20 or E10.[23]

The assignment of a particular vehicle to a particular fuel was random and was accomplished prior to conducting any emissions tests on the vehicles. Obtaining suitable matched sets of vehicles was challenging for several of the older model year vehicles for the simple reason that these were older vehicles with various driving histories. As a result, there were a few instances where it was necessary to test vehicles with mileages that were not within the 10,000 mile odometer range target for matched vehicles in order to obtain a suitably-matched set of vehicles.

ii. DOE Catalyst Study Results

As noted above, the results from the DOE Catalyst Study for MY2001–2006 light-duty motor vehicles confirm the engineering analysis that long-term use of E15 is not expected to lead to significant emissions increases or contribute to those vehicles exceeding their exhaust emission standards over their FUL. Emission test results and the applicable emission standards[24] for the vehicles aged on E0 ("E0 vehicles") and the vehicles aged on E15 ("E15 vehicles") at the start, middle, and end of the test program are shown in Tables IV.A–2 and 3. There were no trends or patterns that appeared fuel related. No significant increases in long-term exhaust emissions were observed with the E15 vehicles. Furthermore, the test results show that the vehicles aged and tested on E15 did not have significantly higher emissions than the vehicles aged and tested on E0, and some vehicles' emissions actually decreased on E15. Overall, the exhaust emission test results across test vehicles were generally similar with regard to deterioration and failure rates to the test results observed for the Tier 2 vehicle test fleet (which included some MY2005 and 2006 motor vehicles) and discussed in the October Waiver Decision.

All E15 vehicles except one were below their emissions limits at the end of the test. One E15 vehicle exceeded its non-methane organic gas (NMOG) emissions limits at the end of the test program. The vehicle, a 2000 Honda Accord, was just above its FUL NMOG standard after 50,000 miles of aging.[25] The exceedance of the NMOG standard did not appear to be related to E15 since the NMOG emissions of the E0 counterpart motor vehicle also exceeded the standard after only 25,000 miles of aging. Two other E0 motor vehicles (2003 Chevy Cavalier and 2003 Toyota Camry) also failed the NMOG standard but their E15 counterpart did not.

All motor vehicles except for the E0 Accord were below their carbon monoxide (CO) emissions limits at the end of the test. One end-of-test program data point for the E15 Frontier was over the standard but the test point average was well below the standard. All motor vehicles were below their oxides of nitrogen (NO_X) emissions limits at the end of the test program.

Testing of older motor vehicles did pose challenges since they had relatively high mileages and their maintenance and driving histories were not well known. As a result, test results for these motor vehicles showed greater variability than the results for the newer motor vehicles of the Tier 2 test fleet. There were also mechanical issues to address during mileage accumulation. Considering the higher variability expected in this situation, there were generally small changes in emissions (both increases and decreases) with mileage accumulation for most of the motor vehicles (with the exception of the Honda Accord samples) with no indication of significant deterioration of the exhaust emission control system, including the catalyst, due to E15.[26] The

[23] As discussed previously, EPA relied on the vehicles using E15 and E0 for aging and test results, as that allows the emissions impact of the candidate fuel to be compared to the emissions impact of the fuel used for testing for compliance with the certification standards.

[24] Total hydrocarbons (THC), non-methane hydrocarbons (NMHC), non-methane organic gases (NMOG), nitrogen oxides (NOx), and carbon monoxide (CO).

[25] In general, EPA may take action to compel a manufacturer to recall and remedy a problem after determining that a substantial number of properly maintained and operated vehicles fail to conform to EPA standards in actual use. EPA will use the information from the DOE test program to help it identify future vehicle test classes as part of its overall vehicle compliance program.

[26] The exhaust emissions of some vehicles actually decreased over the course of the testing program. There are a few possible reasons for this result. For example, "TOP TIER Detergent Gasoline" was used during the aging cycles. With unknown

relative durability of exhaust emissions control performance is particularly notable given the high mileage of the test vehicles at the end of testing. The results from the DOE test program thus provide compelling support for the conclusion that the long-term use of E15 will not cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their exhaust emission standards over their FUL.

TABLE IV.A–2—E15 EMISSION TEST RESULTS COMPARED TO THE RESPECTIVE CERTIFICATION STANDARDS AT START, MIDDLE, AND END OF TEST

Year	Make	Model	Cert Standard	THC	NMHC	NMOG	CO	NO_X
E15 Start of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
E15 Middle Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Pass*	Pass	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
E15 End of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass*	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Fail	Pass	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.

* Indicates that average of composites met standards, but one test result exceeded standard.

TABLE IV.A–3—E0 EMISSION TEST RESULTS COMPARED TO THE RESPECTIVE CERTIFICATION STANDARDS AT START, MIDDLE, AND END OF TEST

Year	Make	Model	Cert Standard	THC	NMHC	NMOG	CO	NO_X
E0 Start of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Pass*	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
E0 Middle Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Pass*	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Fail	Fail	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.

aging conditions and fuel quality prior to the testing and mileage accumulation, some vehicles may have become cleaner between the start of the test and the midpoint of the test due to the detergent additives in the aging fuel. In addition, the standard Road Cycle used for the mileage accumulation may have helped restore catalyst activity in some vehicles if they were never driven hard enough (high speed and/or high load) during previous aging.

TABLE IV.A–3—E0 EMISSION TEST RESULTS COMPARED TO THE RESPECTIVE CERTIFICATION STANDARDS AT START, MIDDLE, AND END OF TEST—Continued

Year	Make	Model	Cert Standard	THC	NMHC	NMOG	CO	NO_X
E0 End of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.
2003	Chevy	Cavalier	NLEV(LEV)	N/A	N/A	Fail	Pass	Pass.
2003	Ford	Taurus	NLEV(LEV)	N/A	N/A	Pass	Pass	Pass.
2003	Toyota	Camry	ULEV	N/A	N/A	Fail	Pass	Pass.
2000	Ford	Focus	NLEV(LEV)	N/A	N/A	Pass*	Pass	Pass.
2000	Honda	Accord	NLEV(LEV)	N/A	N/A	Fail	Fail	Pass.
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass.

* Indicates that average of composites met standards, but one test result exceeded standard.

2. Immediate Exhaust Emissions

Instantaneous or immediate impacts of a fuel or fuel additive are those that are experienced essentially immediately upon switching from the original fuel. The immediate exhaust emission impacts of interest are any that are caused by E15 in comparison to the test fuel on which motor vehicles are tested for compliance with the applicable standards (E0). Immediate exhaust emission impacts must be taken into consideration along with the long-term or durability emission impacts discussed in the previous section in assessing the waiver.

a. Growth Energy's Submission and Public Comment Summary

As mentioned above, Growth Energy's submission and the information supplied by commenters regarding immediate exhaust emission impacts of E15 on light-duty motor vehicles were not specific to the model year of the motor vehicles. For more information, including a detailed discussion of Growth Energy's submission and summary of public comments on immediate exhaust emission impacts, refer to section IV.A.2 for MY2007 and newer light-duty motor vehicles and IV.C.3.b.ii for MY2000 and older light-duty motor vehicles of the October Waiver Decision.

b. EPA Analysis

Since the earliest days of gasoline-ethanol blends, many test programs have been carried out on light-duty motor vehicles and trucks to quantify the immediate emissions impacts of blending ethanol into gasoline. The common theme across these various test programs is that, consistent with combustion theory, the enleanment of the air-to-fuel (A/F) ratio caused by the oxygen in ethanol leads to an immediate reduction in HC and CO emissions and a corresponding increase in NO_X emissions. While other factors influence this, such as the combustion characteristics of the ethanol itself, other changes that occur in the gasoline when ethanol is added, and the test conditions under which the emissions are measured which can cause some variations in study results, the bottom line is that the immediate emissions changes from increased levels of ethanol are fairly well known.

More recent data and information [27] show that (1) newer motor vehicles exhibit similar immediate emission impact trends as the data and modeling show for older motor vehicles, and (2) the immediate emission impacts of E15 continue to show the same trends as E10 with the effects being slightly larger for E15 due to its higher ethanol content and therefore the increased enleanment due to its higher oxygen content. Thus, MY2001–2006 light-duty motor vehicles are expected to have immediate emissions impacts similar to MY2007 and newer, and MY2000 and older, light-duty motor vehicles, and the magnitude of the E15 impact is expected to be relatively small. As the analysis in the October Waiver Decision for Tier 2 vehicles shows, non-methane hydrocarbon (NMHC) and CO emissions are expected to decrease for MY2001–2006 light-duty motor vehicles while NO_X emissions are expected to increase between 5 and 10% (depending on how other fuel properties change). This estimated impact is based on extrapolation from E10 modeling using the Agency's Predictive Models.[28]

Although the overall weight of the available data shows that E15 will cause a small immediate increase in NO_X emissions, the issue is whether such increases, by themselves or in combination with long-term durability effects, would cause or contribute to MY2001–2006 light-duty motor vehicles to exceed their emissions standards. Given the relatively small magnitude of the immediate NO_X emissions increase in relation to the large compliance margins that motor vehicle manufacturers have traditionally built in to the products they certify, and the lack of any significant increase in NO_X emissions deterioration with E15 in comparison to E0, it is reasonable to expect that E15 will not cause or contribute to compliant MY2001–2006 light-duty motor vehicles exceeding their emissions standards.

Available information on the compliance margins of MY2001–2006 light-duty motor vehicles indicates that these vehicles have compliance margins even larger than the average compliance margin manufacturers typically provide. Average compliance margins projected during certification for MY2001–2006 light-duty motor vehicles are shown in Table IV.A–4.[29]

[27] CRC E74b, DOE Pilot Study, DOE Catalyst Study, and the RIT Study, all of which are discussed at length in the October Waiver Decision.

[28] A detailed description of the development of the EPA Predictive Models is available in a Technical Support Document: "Analysis of California's Request for Waiver of the Reformulated Gasoline Oxygen Content Requirement for California Covered Areas," EPA420–R–01–016, June 2001.

[29] Based on data submitted to EPA's Certification and Fuel Economy Information System and available on the EPA Web site at *http://www.epa.gov/otaq/crttst.htm.*

TABLE IV.A–4—AVERAGE CERTIFICATION COMPLIANCE MARGIN (PERCENT BY POLLUTANT) FOR MY2001–2006 LIGHT-DUTY MOTOR VEHICLES

	Percent Compliance Margin by Pollutant					
	NMOG	NMHC	Total HC	NO_X	CO	Overall
MY2001–2006 Tier 2 & NLEV	51%	N/A	N/A	65%	75%	63%
MY2001–2003 NLEV	49%	N/A	N/A	71	78	66
MY2001–2003 Tier 1 LDT 3 & 4	N/A	74%	80%	73	71	74

Data collected from EPA's IUVP also show large compliance margins for light-duty motor vehicles operating in real-world conditions. Based on data from IUVP testing of MY2001–2006 light-duty motor vehicles as of August 2010, the average compliance margin was 56%, 69%, and 76% for hydrocarbons (NMOG, NMHC, and Total HC), NO_X, and CO, respectively. These large certification program and in-use testing compliance margins indicate that MY2001–2006 light-duty motor vehicles on average would absorb the immediate emissions impact of E15 on NO_X emissions without exceeding the applicable emission standards.

In addition, the results of the recently completed DOE Catalyst Study provide direct evidence that MY2001–2006 light-duty motor vehicles would accommodate the immediate impact of E15 on NO_X emissions and still comply with applicable standards. While the Catalyst Study was carried out to assess long-term (durability) exhaust emissions impacts, the immediate emission impacts of ethanol are also captured in the testing. All of the motor vehicles tested for the MY2001–2006 program continued to comply with their NOx emission standards at FUL despite both the immediate and durability impacts of E15 on emissions. The results from the DOE test program thus support the conclusion that the immediate emissions impact of E15 will not cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their exhaust emission standards over their FUL.

B. Evaporative Emissions

Assessment of the impact of E15 on evaporative emissions compliance requires consideration of the applicable evaporative emissions standards to which the particular motor vehicles were certified. There are now five main components of motor vehicle evaporative emissions that are addressed by standards: (1) Diurnal (evaporative emissions that come off the fuel system as a motor vehicle heats up during the course of the day); (2) hot soak (evaporative emissions that come off a hot motor vehicle as it cools down after the engine is shut off); (3) running loss (evaporative emissions that come off the fuel system during motor vehicle operation); (4) permeation (evaporative emissions that come through the walls of elastomers in the fuel system and are measured as part of the diurnal test); and (5) unintended leaks due to deterioration/damage that is now largely monitored through onboard diagnostic standards.

As with exhaust emissions, emission control improvements adopted in response to applicable regulatory requirements are important to the consideration of the potential impact of a fuel or fuel additive on evaporative emissions, both immediate and long-term. EPA has set evaporative emission standards for motor vehicles since 1971. During the ensuing years, evaporative standards have continued to evolve, resulting in technology and designs that achieve additional evaporative emissions reductions. A number of regulatory actions occurred by MY2001 that placed an emphasis on the control of evaporative emissions and on real-world testing of motor vehicles, which in turn led to changes in evaporative emission control systems. These regulatory changes together with test data and information and analysis concerning compliance margins support the conclusion that MY2001–2006 light-duty motor vehicles operated on E15 would generally continue to comply with evaporative emission standards and likely achieve actual evaporative emission levels somewhat lower than what they currently experience when operated on in-use fuel.

1. Immediate Evaporative Emissions

a. Growth Energy's Submission and Public Comment Summary

Growth Energy's submission and the information supplied by commenters regarding immediate evaporative emission impacts of E15 were not specific to the model year of the motor vehicles. For more information, including a detailed discussion of Growth Energy's submission and summary of public comments regarding immediate evaporative emissions, refer to section IV.A.3 for MY2007 and newer light-duty motor vehicles and IV.C.3.c for MY2000 and older light-duty motor vehicles of the October Waiver Decision.

b. EPA Analysis and Test Programs

As discussed in the October Waiver Decision, prior to MY1999, evaporative emissions standards addressed diurnal and hot soak emissions, but the test procedures for determining compliance did not require control of running loss and permeation emissions. These latter emissions became subject to control with the enhanced evaporative emissions requirements and were fully phased in for light-duty motor vehicles and light-duty trucks by MY1999. These requirements included both new emission standards and new test procedures: The two-day and three-day diurnal tests with new canister loading procedures, and a running loss test. Prior to the enhanced evaporative requirements, the diurnal evaporative emissions test was only 1 hour and there was no running loss measurement. The longer diurnal measurement and the addition of the running loss test made the control of emissions from both permeation and running losses more critical. In addition to the new procedures, the regulatory useful life of covered vehicles was extended from 5 years/50,000 miles to 10 years/100,000 miles for light-duty motor vehicles.

Along with the enhanced evaporative emissions requirements, EPA introduced the On Board Diagnostic (OBD) requirements for evaporative leak detection monitors; those requirements were fully phased in with MY1999. OBD required motor vehicles to detect a leak equivalent to 0.040 inch in the fuel or evaporative emissions system. Beginning in MY2001, EPA allowed manufacturers to comply with California OBD regulations, which required motor vehicles to detect a leak equivalent to a 0.020 inch. While not required federally, according to EPA certification data for MY2001–2006, many manufacturers developed one leak detection system that complied with the more stringent California requirement for use in vehicles for sale in all 50 states.

As described in the exhaust emissions section above, CAP2000 took effect beginning with MY2000 and was designed to place more emphasis on in-use performance of vehicle emission controls, including the fact that vehicles operate nationwide on different available fuels. In particular, CAP2000 introduced the IUVP program, which requires manufacturers to perform exhaust and evaporative emissions tests on customer in-use vehicles. These tests must be performed at low and high mileage intervals. This emphasis on real-world vehicle testing prompted manufacturers to consider different commercially available fuels (including E10) when developing and testing their emissions systems. Also under CAP2000, manufacturers are required to focus on using an effective durability process for predicting in-use deterioration as part of the process of certifying vehicles as complying with applicable evaporative emission standards. For this process, manufacturers are required to use fuel representative of commercial gasoline that will generally be available at retail outlets for the mileage accumulation on their durability demonstration vehicles.

Based on the enhanced evaporative emission standards and test procedures, the CAP2000 requirements, and the OBD leak detection requirement, our engineering assessment is that regulatory changes prompted manufacturers to make the evaporative emission systems of MY2001–2006 light-duty motor vehicles, in comparison to prior model year vehicles, more compatible from an emissions perspective with fuels that would be encountered in the marketplace, including ethanol blends. As such, MY2001–2006 light-duty motor vehicles generally would be expected to include design elements that would better control evaporative emissions than prior model year vehicles when fueled on ethanol blends, moving in the direction of the design elements implemented for Tier 2.

It should also be noted that for MY2004–2006 Tier 2 vehicles, manufacturers were required to use E10 for the full mileage accumulation period used in the certification durability demonstration process to demonstrate evaporative emissions durability. In addition, Tier 2 evaporative emissions standards were significantly lower (over a 50% reduction). These Tier 2 requirements prompted manufacturers to further change materials to those with improved permeation barriers with ethanol. For purposes of the evaporative emissions discussion below, it is important to note that a large percentage of MY2004–2006 motor vehicles certified to Tier 2 evaporative emission standards should be able to use E15 without adverse impacts on their evaporative emissions for the reasons given in the October Waiver Decision. The analysis in today's decision of the potential E15 impact on evaporative emissions focuses on light-duty motor vehicles that are certified to enhanced evaporative emission standards (pre-Tier 2 standards). Figure IV.B–1 shows the fleet percentage by evaporative emissions standard level for MY2001–2006 light-duty motor vehicles.

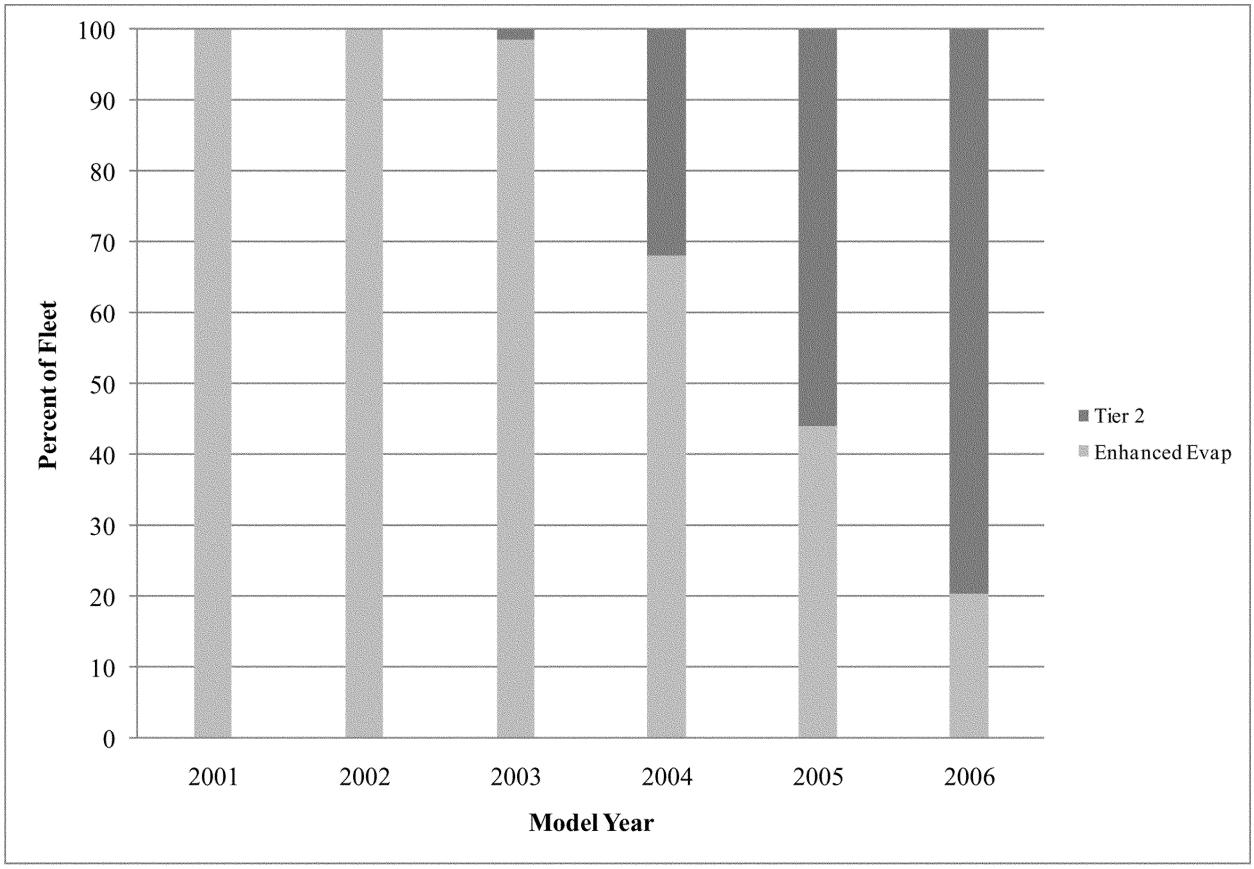

Figure IV.B-1—Fleet Evaporative Emissions Standards for MY2001-2006 Light-duty Motor Vehicles

i. Coordinating Research Council Test Programs—Results

EPA examined available test data and other information to evaluate whether expected enhancement to evaporative emissions control systems were in fact sufficient to permit MY2001–2006 light-duty motor vehicles to operate on E15 without significant adverse impact on immediate evaporative emissions.

In section IV.A.3 of the October Waiver Decision, EPA discussed the impact of ethanol on diurnal emissions as a result of ethanol's effect on fuel volatility absent countervailing changes to fuel or emission controls. EPA reviewed the CRC E–77 test programs [30] and found they support the conclusion that evaporative emissions (excluding permeation) measured on the diurnal test with E10 and E20 are likely to be comparable to those with E0, at the same RVP. This conclusion also applies to E15 by interpolation. Testing performed on E0, E10, and E20 shows that diurnal emissions, with the exception of permeation, are a function of the volatility of the fuel, not the ethanol content. As a result, EPA concluded that for Tier 2 vehicles E15, with adequate control of volatility, would not adversely affect vehicles' diurnal evaporative emissions with the possible exception of permeation emissions. This conclusion is applicable to MY2001–2006 light-duty motor vehicles as well as to MY2007 and newer light-duty motor vehicles.

The impact of gasoline volatility on diurnal evaporative emissions led EPA to condition the introduction of E15 into commerce for MY2007 and newer light-duty motor vehicles on E15 having no more than 9.0 RVP during the summertime period when RVP is controlled. For the same evaporative emission control reasons, EPA is applying the same RVP limit condition to today's waiver for use of E15 in MY2001–2006 light-duty motor vehicles. As EPA explained in the October Waiver Decision, the CRC E–77 test program indicated that as the volatility of the fuel increased, the number of motor vehicles which experienced canister emissions breakthrough also increased, with three of five enhanced evaporative vehicles experiencing canister breakthrough at 10.0 psi RVP. These elevated diurnal emissions with increased volatility are expected, since the increased volatility of 10.0 psi versus 9.0 psi fuel results in roughly a 25% increase in evaporative vapor generation that must be captured by the canister, beyond the amount of vapor generation that must be captured during evaporative emission testing using E0 fuel. The canister breakthrough measured in the CRC E–77 program was enough to cause these enhanced evaporative vehicles to exceed their evaporative emissions standard on E10 fuel. It should be noted, however, that the CRC diurnal tests were done on a more severe temperature cycle of 65 °F—105 °F (California cycle), as opposed to the federal requirement of 72 °F—96 °F. These test results nonetheless confirm the expectation that ethanol blends with volatility higher than 9.0 psi RVP during the summer will lead to motor vehicles exceeding their evaporative emissions standard in-use.

At the same time, the Agency is not aware of any data showing that motor vehicles would continue to meet their evaporative emissions standards when tested using E15 with an RVP greater than 9.0 psi. Given the significant potential for increased evaporative emissions at higher gasoline volatility levels and the lack of any data to indicate this would not cause a problem with compliance with the standard, the E15 waiver can only be considered in the context of E15 that maintains the same volatility as required of the E0 test fuel. As long as the volatility of the fuel does not exceed 9.0 psi during the summer, diurnal emissions from E15 are not anticipated to cause the motor vehicles to exceed their evaporative emissions standards in-use.

As a related but separate matter, as discussed in section IX of the October Waiver Decision, EPA interprets CAA section 211(h)(4) as limiting the 1.0 psi waiver to gasoline-ethanol blends that contain 10 vol% ethanol, including limiting the provision concerning "deemed to be in full compliance" to the same 10 vol% blends. This interpretation is consistent with how EPA has historically implemented CAA section 211(h)(4) through 40 CFR 80.27(d), which provides that gasoline-ethanol blends that contain at least 9 vol% ethanol and not more than 10 vol% ethanol qualify for the 1.0 psi waiver of the applicable RVP standard. EPA has invited comment on this issue in the Misfueling Mitigation NPRM (75 FR 68044, 68061 (November 4, 2010)).

E15 does not appear to raise any issues with respect to hot soak and running loss emissions from MY2001–2006 light-duty motor vehicles, for the same reasons applicable to MY2007 and newer motor vehicles. Data from the CRC E–77 test programs suggest that there may be some correlation between hot soak and running loss [31] emissions and ethanol content, but the impact is small, of questionable statistical significance, and may be related to permeation that occurs during the testing (Figures IV.B–2 and 3). While there was an increase in the measured hot soak and running loss emissions with the E10 fuel compared to the E0 fuel, the emissions from the E20 fuel were comparable to the emissions from the E0 fuel, and lower than the emissions from the E10 fuel. We expect by interpolation that emissions from E15 would be between the emissions from E10 and E20 and that any emissions increase would be too small to result in evaporative emission standard exceedances.

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[30] Enhanced Evaporative Emission Vehicles (CRC Report: E–77–2), March 2010, and Evaporative Emissions from In-Use Vehicles: Test Fleet Expansion (CRC Report: E–77–2b), June 2010.

[31] Running loss emissions measured in the CRC E–77 programs did not use the certification cycle. The study was focused on the worst case for permeation emissions and therefore used back-to-back LA92 cycles to increase the tank temperature with more aggressive driving. The certification cycle, which uses the Urban Dynamometer Driving Schedule, followed by a two-minute idle, two New York City Cycles followed by a two-minute idle, and another Urban Dynamometer Driving Schedule followed by a two-minute idle, has many stops and starts, making it more difficult to purge the canister. There was no canister breakthrough measured during running loss tests in the study.

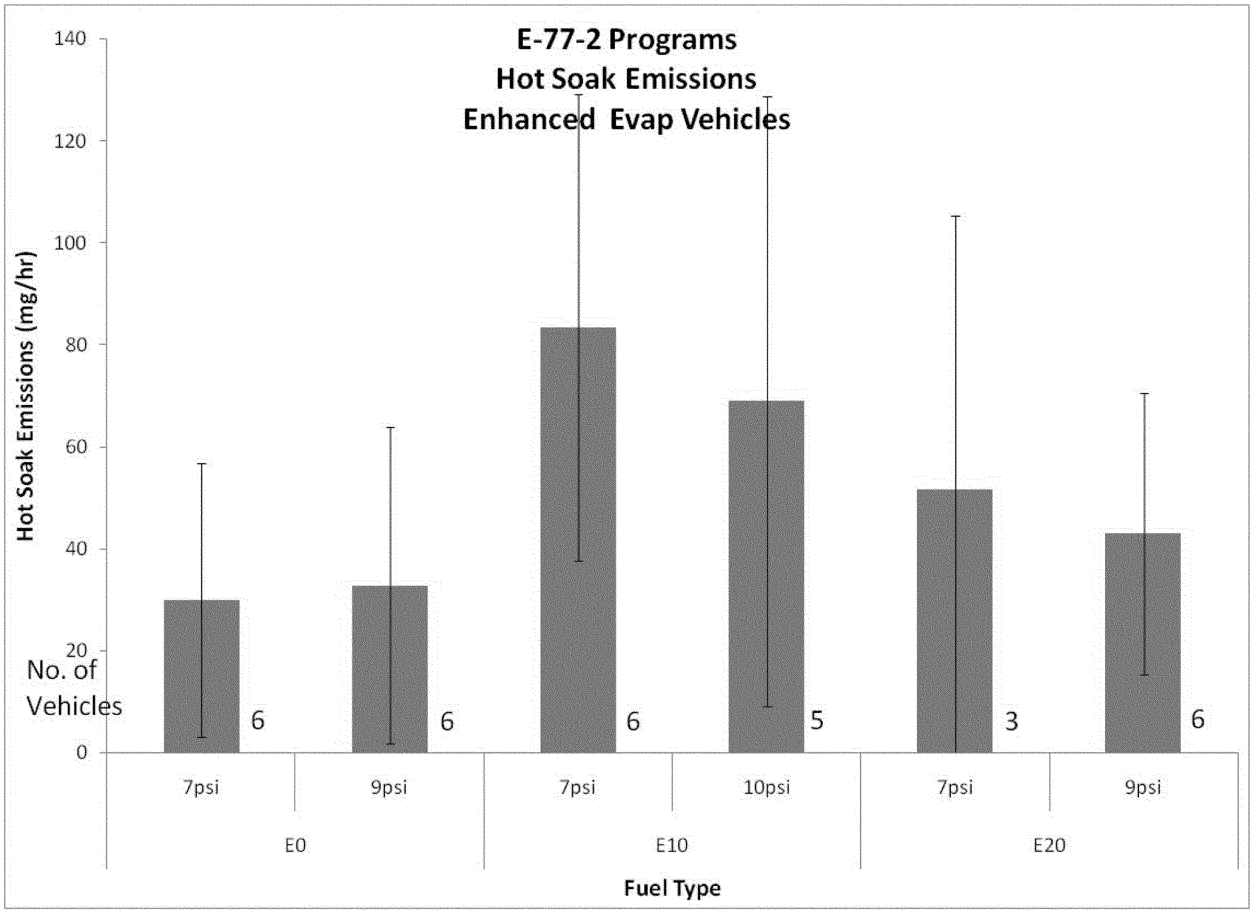

Figure IV.B-2—Hot Soak Emissions of Enhanced Evaporative Vehicles (with error bars representing 95% confidence intervals)

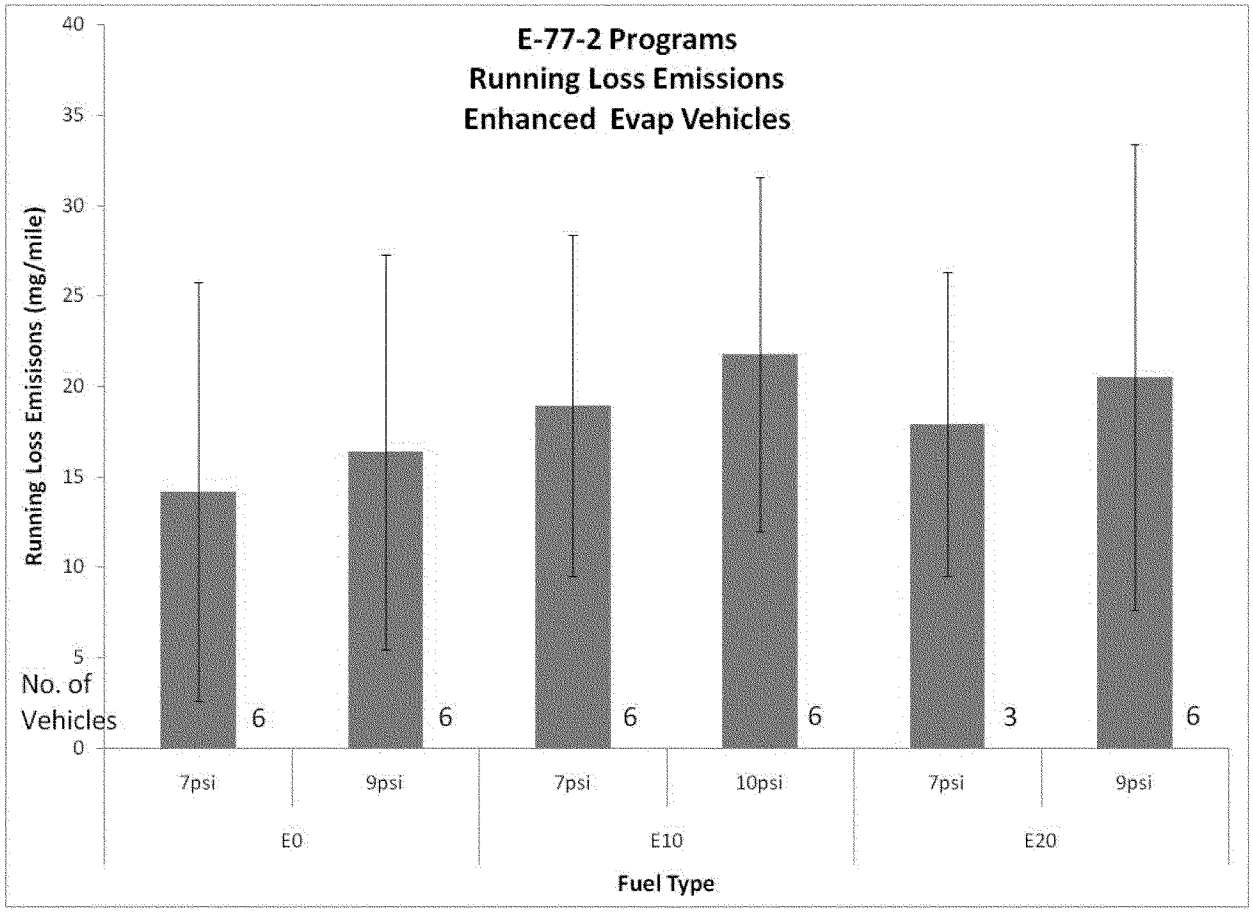

Figure IV.B-3—Running Loss Emissions of Enhanced Evaporative Vehicles

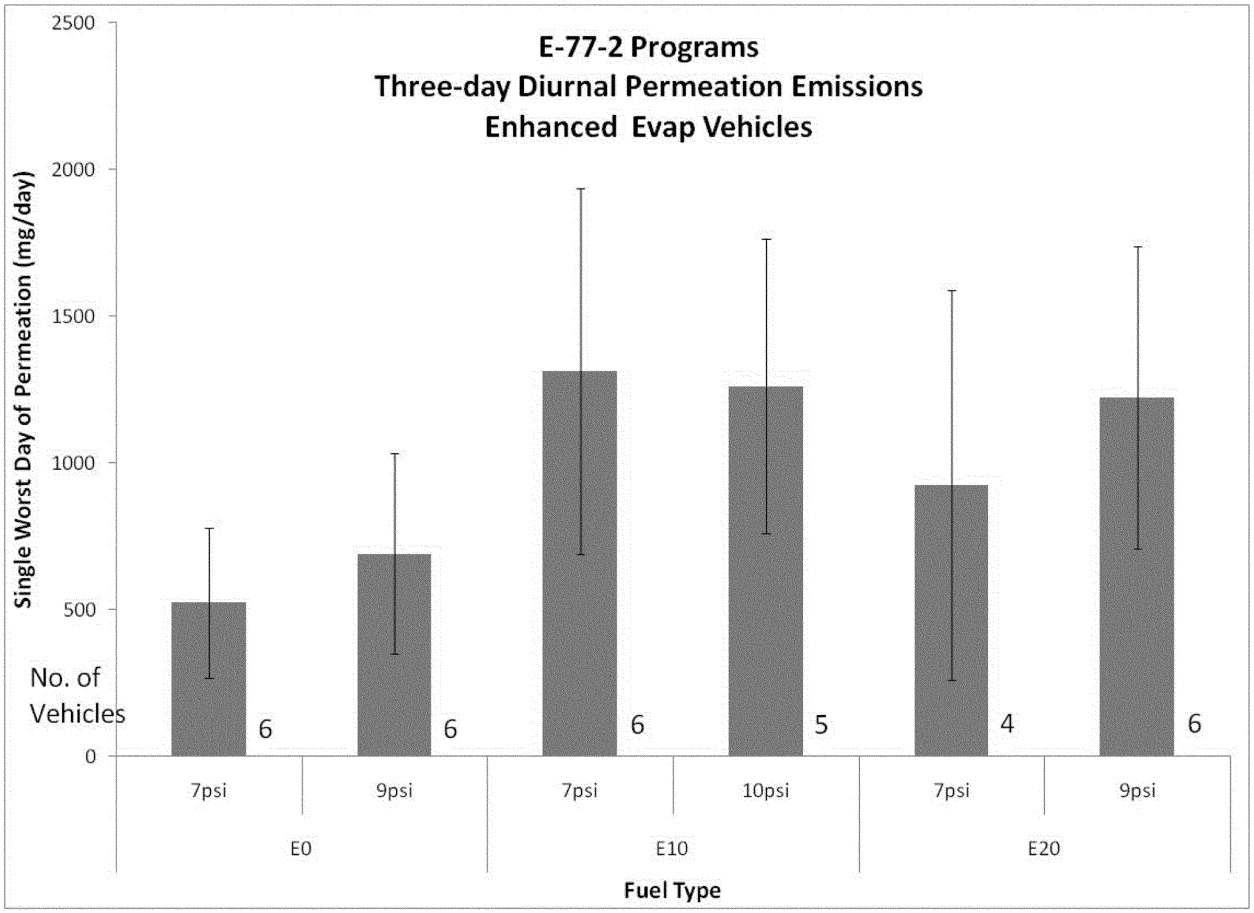

Figure IV.B-4—Single Worst Day of Three-day Diurnal Permeation Emissions of Enhanced Evaporative Vehicles

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As described in the October Waiver Decision, while the CRC E–77 test programs were valuable in assessing diurnal emissions, their primary purpose was to allow the quantification and modeling of evaporative emissions from permeation separate and apart from the other evaporative emissions for E0, E10, and E20. Some key findings of the test programs were that (1) gasoline-ethanol blends can significantly increase permeation emissions compared to pure gasoline; and (2) permeation emissions are a function of the presence of ethanol in the gasoline irrespective of concentration (especially in the E6 to E20 range). Consequently, results for E15 would be anticipated to be comparable to those for E10 and E20 having the same RVP.

ii. Coordinating Research Council Test Programs—Analysis

We believe CRC E–65 and E–77 test results are useful for indicating the potential magnitude of permeation emission increases for the vehicles in the test programs as well as for the MY2001–2006 motor vehicle fleet. The CRC E–65 and E–77 test programs covered a large segment of the MY2001–2006 light-duty motor vehicle fleet (high sales volume models). While the test programs used unique test procedures designed to isolate the effects of ethanol on permeation,[32] we have no reason to believe that the test procedures are more or less stringent than the federal test procedures in measuring permeation, since permeation is affected much more by the ethanol content of the fuel than by changes in temperature and fuel volatility. Therefore, while the overall results of the CRC E–65 and E–77 test programs cannot be directly compared to federal emission standards, the observed impacts on permeation are appropriate to use for generally assessing potential evaporative emission increases from E15.

For pre-Tier 2 MY2001–2006 light-duty motor vehicles, the results of the CRC test programs indicate that the permeation emissions of these vehicles are likely to increase with use of ethanol-gasoline blends to a greater extent than is expected for MY2007 and newer motor vehicles.[33] The issue thus becomes whether the increase will cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their evaporative emission standards. We used the results of the CRC test programs to estimate the increase in evaporative emissions from the permeation effect of an E10–20 fuel (and therefore E15 by interpolation) for vehicles in the programs, since they represent a large segment of the national fleet. We began by averaging the results of the CRC E–65 and E–77 programs together for each of the models tested

[32] For example, the California diurnal temperature profile of 65 to 105 °F and fuel with an RVP of 9 psi were used.

[33] Compare Figure IV.B–4 in today's notice with Figure IV.A–3 in the October Waiver Decision.

given the limited sample size of each program and the fact that ethanol content alone, versus RVP or the specific ethanol volume percentage of the fuel, has the greatest effect on permeation. Then, we calculated the permeation change (E0 to E10–20) for each vehicle model.[34] Next, we added that vehicle model's permeation increase to the vehicle model's projected evaporative emission level (as determined for certifying compliance with emission standards) to estimate what the vehicle model's projected evaporative emissions would be if operated on E15. The results of this analysis show that all of the vehicle models tested in the CRC programs would meet their evaporative emissions standard even with the calculated permeation increase (Figure IV.B–1). Hence, while the permeation impact of E10 and E20, and therefore E15 by interpolation, on these vehicle models is projected to be larger than for E0, the vehicle models also have very large compliance margins that would allow them to still meet their evaporative emission standards on E15.

TABLE IV.B–1—ENHANCED EVAPORATIVE VEHICLES PERMEATION MEASURED IN CRC E65 AND E–77(B)

MY	Make & model	E0 7 psi (mg)	E0 9 psi (mg)	E10 7 psi (mg)	E10 10 psi (mg)	E20 9 psi (mg)	Avg. E0 (mg)	Avg. E10 and E20 (mg)	Delta E0 to E10–20 (mg)	Cert Level (g)	Projected Emissions (g)
1999	Honda Accord	367	628	1260	1548	1103	498	1304	806	1.0	1.8
2001	Toyota Corolla	383	500	1783	1794	1775	441	1784	1343	0.4	1.7
2001	Dodge Caravan	398	406	1087	1406	1548	402	1347	945	1.0	1.9
2004	Ford Escape	494	1102	524	492	752	798	589	−209	0.9	0.7
2000	Mitsubishi Galant	603	706	895	828	751	655	824	170	0.6	0.8
2001	Toyota Tacoma	91	.....	.....	.....	508	91	508	418	0.4	0.8
2000	Honda Odyssey	458	.....	.....	.....	1765	458	1765	1308	0.7	2.0
2002	Nissan Altima	1172	1500	2583	2777	1959	1336	2439	1103	0.8	1.9
2004	Toyota Highlander*	294	202	.....	.....	451	249	157	.....	0.3	0.4

*Tier 2 vehicle

As noted above, the vehicles tested in the CRC programs represent a broad cross-section of the national light-duty motor vehicle fleet, so our analysis indicates that most MY2001–2006 light-duty motor vehicles would still meet applicable evaporative emission standards if operated on E15. However, the test programs were not fully representative as they included no General Motors models or larger light-duty trucks. Thus, there may be some vehicles in the fleet with smaller compliance margins such that the impact of permeation could increase their total evaporative emissions beyond the standard to which they were certified.

Even if a small number of vehicle models might exceed evaporative emission standards in-use when operated on E15, we believe that a waiver is appropriate for two reasons. One, any increase in evaporative emission standard exceedances is expected to be limited since all the CRC motor vehicles tested continued to meet their evaporative emission standards and those motor vehicles represent a large segment of the national fleet. In past waiver decisions, EPA has applied statistical tests that are failed if the fuel or fuel additive being considered would increase the number of motor vehicles exceeding their emissions standard by a significant amount. For example, see the discussion of the Petrocoal Waiver in *MVMA* v. *EPA,* 768 F.2d 385, 399 (DC Cir. 1985) ("Petrocoal Waiver, 46 FR at 48,978. The Deteriorated Emissions Test is designed to provide a 90 percent probability of failure of the test if 25 percent or more of the vehicle fleet tested would fail to meet emission standards using the waiver fuel or fuel additive."). This was based on EPA's longstanding interpretation that the criteria in CAA section 211(f)(4) could be met where a fuel or fuel additive would not cause or contribute to a "significant" number of motor vehicles in the national fleet failing their emission standards. *See MVMA,* 768 F.2d at 391 ("This burden, which Congress has imposed on the applicant, if interpreted literally, is virtually impossible to meet as it requires proof of a negative proposition, *i.e.,* that no vehicle will fail to meet emission standards with respect to which it has been certified. Taken literally, it would require the testing of every vehicle. Recognizing that Congress contemplated a workable waiver provision, mitigation of this stringent burden was deemed necessary. For purposes of the waiver provision, EPA has previously indicated that reliable statistical sampling and fleet testing protocols may be used to demonstrate that a fuel under consideration would not cause or contribute to a significant failure of emission standards by vehicles in the national fleet.") The statistical tests used by EPA were intended to identify failures of a statistically significant number of motor vehicles resulting from the fuel or fuel additive itself as opposed to other non-fuel related causes. Consequently, the statistical tests do not bar a waiver for a fuel or fuel additive that would increase the number of motor vehicles exceeding their applicable emission standards by an amount smaller than the statistical tests were designed to confidently discern. While EPA is not applying those statistical tests in this case, they represent the Agency's past judgment that a possible increase in a limited number of motor vehicles exceeding their applicable emission standards is not necessarily a basis for denying a waiver request.

In this case, the CRC test data indicate that the large majority of MY2001–2006 vehicle models have compliance margins adequate to meet their evaporative emissions standard when operated on E15. EPA's engineering assessment is that the degree of control of permeation emissions from E15 exhibited in the CRC test programs (although less than the degree of control exhibited by Tier 2 vehicles) and the size of compliance margins likely result in large part from the response to EPA's regulatory changes discussed above.

[34] We also averaged the ethanol blends together to compare to E0. As noted above, the effect of ethanol blends on permeation emissions is essentially constant across E6, E10 and E20, so it is appropriate to average the emissions increases resulting from the different blends to obtain a more robust result.

Manufacturers were improving their evaporative emissions systems so they would be more effective at controlling evaporative emissions from in-use fuels, including fuels containing ethanol. The regulatory changes also generally applied to the kinds of vehicles not included in the CRC test program, so similar levels of permeation emission control and compliance margins could also be expected in those vehicles. There is thus the possibility of, at most, limited emission standard exceedances in the MY2001–2006 light-duty motor vehicle fleet with the use of E15, considering the results of the CRC test programs, EPA's analysis using the compliance margins of those vehicles, and the expectation of similar emissions levels and compliance margins for other MY2001–2006 vehicles. This judgment is based on all of the information before the Agency, including the engineering assessment discussed above.

A second reason that a waiver is appropriate in this case is that the environment would likely benefit from, and in any event would not be harmed by, the impact of E15 use on evaporative emissions of MY2001–2006 light-duty motor vehicles. As explained in the Misfueling Mitigation NPRM, E10 is now the pervasive fuel in the national motor vehicle fuel market. The use of E10 already results in some permeation increases, resulting from its ethanol content, and E15 would cause no greater permeation emissions than E10. As a result, permeation emissions from the use of E15 should not lead to any actual increase in exceedances of the evaporative emissions standards in the in-use fleet of MY2001–2006 light-duty motor vehicles compared to no use of E15. In addition, as a result of the CAA's 1 psi waiver for E10, the use of E10 results in significant additional evaporative emissions from canister breakthrough, resulting from the fuel's higher volatility at 10.0 psi RVP. Since a waiver for E15 would not allow RVP greater than 9.0 psi, the lower volatility of E15 would lead to significantly lower evaporative emissions than would otherwise result from canister breakthrough with E10. To the extent it is used in the marketplace, E15 would likely replace the use of E10.[35] Therefore, its use would likely benefit, and would not harm, the environment by reducing in-use vehicle evaporative emissions.[36] In these somewhat unique circumstances, EPA believes that any limited number of motor vehicles exceeding their evaporative emission standards when using E15 should not be considered significant for purposes of determining whether to grant a waiver under section 211(f)(4).[37]

This interpretation and approach is also appropriate as it furthers the goals of Congress in the recent amendments to the Renewable Fuel Standard (RFS) program under section 211(o). Congress' purpose in enacting the EISA amendments to section 211(o) was to increase the volume of renewable fuel, including gasoline-ethanol blends, to improve the nation's energy and economic security. Granting a waiver for E15 is consistent with and advances these goals. This provides further support for EPA's decision that it is appropriate to grant a partial waiver for E15 where it would not cause or contribute to a significant number of motor vehicles exceeding their evaporative emission standards, especially given the fact that E15 use would not increase, but would likely reduce, actual in-use evaporative emissions when compared to E10 use.

2. Long-term (Durability) Evaporative Emissions

Considering regulatory changes applicable to MY2001–2006 light-duty motor vehicles, the Agency believes that manufacturers generally designed their enhanced evaporative emission control systems for long-term exposure to E10 and that the systems should be compatible and durable with E15 use over the FUL of the motor vehicle.

As mentioned previously, CAP 2000 requires MY2001–2006 motor vehicle evaporative emission systems to be tested on in-use vehicles exposed to market fuel, including fuels containing ethanol. Further, in MY1999, along with enhanced evaporative emissions requirements, OBD leak detection requirements were introduced with the more stringent California requirement adopted optionally by manufacturers in 2001 to enable the sale of vehicles in all 50 states with one leak detection system. To avoid excessive warranty costs and potential recalls, manufacturers needed to ensure the evaporative emissions control and fuel systems would be compatible with and durable to market fuel, including fuels containing ethanol.[38] As a result of these requirements, manufacturers had a strong incentive to develop evaporative emission systems that are robust to market fuels, including fuels containing ethanol. Manufacturers also design to account for production variability in materials and tolerances. Robustness in the design of these components provides a safety margin that, according to the compliance margin data discussed above, results in vehicles actually emitting at levels well below required levels. There is thus an engineering basis for expecting robustness in design to allow MY2001–2006 motor vehicle evaporative emission systems to maintain durable emissions control with long-term use of E15.

Available data from IUVP, EPA's in-use surveillance program, and manufacturer emission defect information reports support that these vehicles can maintain evaporative emission control with long-term E15 use. The data are robust given the nature of these programs. IUVP, as previously described, requires manufacturers to perform exhaust and evaporative emissions tests on in-use vehicles, including at high mileage, and submit the data to EPA. EPA itself conducts an ongoing surveillance program at its Ann Arbor laboratory to assess vehicle emissions a few years after vehicles enter customer service. EPA typically recruits two- or three-year-old vehicles from vehicle owners for this program. These vehicles are chosen for a variety of reasons, ranging from issues of past emissions performance to gaining a better understanding of how new technologies are working. As for defects, manufacturers are required to report

[35] E10 is already the predominant gasoline fuel in most of the country and it is reasonable to assume that, if and when E15 is introduced into the marketplace, it would be in a market where fuel ethanol is already available and sold as E10.

[36] E15 use would also not affect vehicle manufacturers' compliance status since in-use testing for recall and other regulatory purposes is conducted on E0 fuel, and any effect of E15 on immediate evaporative emissions is transient and would not affect results of compliance testing on E0 fuel.

[37] It is important to note that the relevant comparison for evaluating whether a fuel or fuel additive will have an impact on failures of emission standards is a comparison between the proposed fuel or additive (here E15) and the fuel on which vehicles are tested for purposes of determining auto manufacturers' compliance with emission standards (E0). While E15 may result in limited additional exceedances of evaporative emission standards in comparison to E0, it will reduce actual in-use evaporative emissions compared to E10, the fuel it is expected to replace. We believe it is appropriate to consider both E15's limited potential for increasing exceedances of standards when compared to E0 fuel, and this real-world evaporative emissions benefit of E15 in considering the significance of any such exceedances, in deciding whether to grant a waiver for E15 use in MY2001–2006 light-duty motor vehicles.

[38] Manufacturers are required by the CAA to warrant that their vehicles are free from defects in materials and workmanship which would cause such vehicle to fail to conform to applicable regulations for the two year/24,000 mile warranty period. These vehicles are also subject to the recall provisions of Section 207 of the CAA which requires a manufacture to remedy non-conformities if the Administrator has determined that a substantial number of any class or category of vehicles do not conform to the regulations when in actual use throughout their useful life.

emission-related defects to EPA. An emission-related defect is a defect in design, materials, or workmanship in a device, system, or assembly, as described in the approved application for certification.

Review of the data from these programs indicates there have been no detected defects (*e.g.,* leaks from material softening, swelling, or cracking) or evaporative test failures attributable to ethanol exposure over time for MY2001–2006 light-duty motor vehicles, notwithstanding the long-term and expanding use of E10 across the country. As previously mentioned, E10 has been exclusively utilized as gasoline fuel in major U.S. cities since as early as 1996. By 2006, many, if not most, U.S. major metropolitan areas (for example, those cities utilizing reformulated gasoline) were using E10 and close to half of the U.S. gasoline market was comprised of E10. Now over 80 percent of the U.S. market is E10. For these periods, EPA is unaware of any significant problems associated with the use of the fuel in MY2001–2006 (or newer) light-duty motor vehicles. The lack of any reported problems with use of E10, coupled with the large compliance margins of most MY2001–2006 light-duty motor vehicles, indicates that MY2001–2006 light-duty motor vehicles generally should be able to accommodate E15 without exceeding evaporative emission standards. Even if a small subset of the MY2001–2006 fleet experienced some decrease in evaporative emissions control durability on E15, it is unlikely to outweigh the evaporative emission benefits resulting from E15's lower volatility compared to commercially available E10.

Several commenters recommended that we wait for the results of the CRC E91 "Evaporative Emissions Durability Testing" program which is studying the impact of E10 and E20 on permeation emissions. The test results are expected by the end of 2011. The Agency does not believe it is necessary to await the program's results to decide the waiver request for MY2001–2006 light-duty motor vehicles. In view of the lack of ethanol-related problems documented in our IUVP, in-use surveillance, and defect report data and information, and our engineering analysis, we expect that MY2001–2006 light-duty motor vehicles are likely to have evaporative emission control systems with a margin of safety sufficient to generally enable them to operate on E15 without experiencing long-term deterioration. Any evaporative emission standard exceedances that might occur are expected to be small and offset by the environmental benefit of the evaporative emission benefits of E15 compared to E10.

C. Materials Compatibility

As explained previously, materials compatibility is a factor in considering a waiver request since poor materials compatibility can lead to serious exhaust and evaporative emissions compliance problems not only immediately upon using the new fuel or fuel additive, but especially over time.

1. Growth Energy's Submission and Public Comment Summary

As with the exhaust and evaporative emissions sections above, Growth Energy's submission and the information supplied by commenters regarding materials compatibility impacts of E15 were not specific to the model year of the motor vehicles. For information on Growth Energy's submission and public comments on materials compatibility, refer to section IV.A.4 for MY2007 and newer light-duty motor vehicles and section IV.C.3.d for MY2000 and older light-duty motor vehicles of the October Waiver Decision.

2. EPA Analysis and Conclusions

The Agency has reviewed the studies that have shown generally acceptable materials compatibility in newer motor vehicles with ethanol up to 10 vol%, but degradation of certain metals, elastomers, plastics, and vehicle finishes with higher dosages.[39] However, most of these studies, including the Minnesota Compatibility Study, were on component parts using laboratory bench tests rather than durability studies of whole vehicle fuel systems simulating real-world vehicle use. In addition, there is no way to correlate the results of the study with MY2001–2006 motor vehicles. Many different materials were used over the years and we do not have data that shows which manufacturers used which specific materials at various points in time.

As the Agency noted in the October Waiver Decision, newer motor vehicles, including NLEVs, were designed to encounter more regular ethanol exposure compared to earlier model year motor vehicles. The Agency believes that the CAP2000 in-use testing and durability demonstration requirements as well as the introduction of OBD leak detection monitors and enhanced evaporative emission test procedures have led manufacturers to design vehicles using materials that will continue to function properly with respect to evaporative emissions when ethanol blends are used. This includes materials compatible with long-term use of ethanol blends, as the standards apply for the useful life of the vehicle, and the IUVP test program and the OBD leak detection requirement monitor compliance throughout the useful life. As discussed in the long-term evaporative emissions section of this notice, data from IUVP, EPA's in-use surveillance program, and manufacturer emission defect information reports have not detected any failures attributable to ethanol up to E10. Based on the Agency's engineering judgment and this supplemental information, and the generally large evaporative emissions compliance margin for these vehicles, EPA does not expect that there will be materials compatibility issues with E15 that would cause MY2001–2006 light-duty motor vehicles to exceed their evaporative emission standards over their FUL. For exhaust emissions, the same kind of information supports the same conclusion. In addition, the results of the DOE Catalyst Study support this conclusion, as E15 was used for long-term aging of the vehicles and the Study did not uncover any emissions deterioration problems with E15 in comparison to E0 that would result in materials compatibility issues.

D. Driveability and Operability

1. Growth Energy's Submission and Public Comment Summary

As with the exhaust and evaporative emissions and material compatibility sections above, Growth Energy's submission and information supplied by commenters regarding driveability and operability impacts of E15 were not specific to the model year of the motor vehicles. For information on Growth Energy's submission and public comments on driveability and operability, refer to section IV.A.5 for MY2007 and newer light-duty motor vehicles and IV.C.3.e for MY2000 and older light-duty motor vehicles of the October Waiver Decision.

2. EPA Analysis and Conclusions

Our engineering judgment as confirmed by the results of DOE's Catalyst Study is that MY2001–2006 light-duty motor vehicles (NLEV and some remaining Tier 1 trucks) are similar enough to MY2007 and newer Tier 2 motor vehicles in design of the emissions control systems that the analysis and conclusions presented in the October Waiver Decision apply to MY2001–2006 light-duty motor vehicles applies. The Agency's review of the data

[39] SAE J1297, revised July, 2007, Surface Vehicle Information Report, Alternative Fuels.

and information from the different test programs finds no specific reports of driveability, operability or OBD issues across many different vehicles and duty cycles including lab testing and in-use operation. Thus, while the potential exists for some vehicles more sensitive to ethanol to experience driveability or operability issues, the frequency is likely not more than what is currently experienced in-use today. Therefore, the Agency does not anticipate that there will be driveability, operability or OBD issues with E15 on properly operated and maintained MY2001–2006 light-duty motor vehicles.

E. Conclusions

As described in the preceding sections, EPA evaluated the potential impact of E15 with respect to the four emission-related categories for MY2001–2006 light-duty motor vehicles. Based on results from the DOE Catalyst Study and other information, coupled with our engineering judgment, EPA believes the evidence supports the conclusion that MY2001–2006 light-duty motor vehicles will not exceed their emission standards over their FUL when operated on E15. Where there is a possibility of such exceedances, the somewhat unique circumstances here warrant determining that such a possibility is not significant. Therefore, EPA is partially granting the waiver for MY2001–2006 light-duty motor vehicles.

The October Waiver Decision granted a partial waiver with respect to MY2007 and newer light-duty motor vehicles, and today's decision grants a partial waiver with respect to MY2001–2006 light-duty motor vehicles. The two waiver decisions taken together allow introduction of E15 into commerce for use in MY2001 and newer light-duty motor vehicles.

V. Legal Issues Arising In This Partial Waiver Decision

We fully incorporate by reference Section IX of the October Waiver Decision into this decision. Section IX, entitled "Legal Issues Arising in This Partial Waiver Decision," presents discussion regarding legal issues arising from issuing these partial waiver decisions. We incorporate that discussion here as our rationale is the same for this decision.

VI. Waiver Conditions

We fully incorporate by reference Section X of the October Waiver Decision into this decision. Section X, entitled "Waiver Conditions," provides a more detailed explanation regarding the conditions placed on these partial waiver decisions. We incorporate that discussion here as our rationale is the same for this decision.

VII. Partial Waiver Decision and Conditions

Based on all the data and information described above and in the October Waiver Decision, the waiver request application submitted by Growth Energy for its gasoline-ethanol blend with up to 15 vol% ethanol is partially and conditionally granted as follows:

(1) The partial waiver applies only to fuels or fuel additives introduced into commerce for use in MY2001 and newer light-duty motor vehicles, light-duty trucks, and medium duty passenger vehicles (hereafter "MY2001 and newer light-duty motor vehicles") as certified under Section 206 of the Act. The waiver does not apply to fuels or fuel additives introduced into commerce for use in pre-MY2001 motor vehicles, heavy-duty gasoline engines or vehicles, or motorcycles certified under section 206 of the Act, or any nonroad engines, nonroad vehicles, or motorcycles certified under section 213(a) of the Act.

(2) The waiver applies to the blending of greater than 10 vol% and no more than 15 vol% anhydrous ethanol into gasoline,[40] and the ethanol must meet the specifications for fuel ethanol found in the ASTM International specification D4806–10.[41]

(3) The final fuel must have a Reid Vapor Pressure not in excess of 9.0 psi during the time period from May 1 to September 15.

(4) Fuel and fuel additive manufacturers subject to this partial waiver must submit to EPA a plan, for EPA's approval, and must fully implement that EPA-approved plan, prior to introduction of the fuel or fuel additive into commerce as appropriate. The plan must include provisions that will implement all reasonable precautions for ensuring that the fuel or fuel additive (*i.e.* gasoline intended for use in E15, ethanol intended for use in E15, or final E15 blend) is only introduced into commerce for use in MY2001 and newer light-duty motor vehicles. The plan must be sent to the following address: Director, Compliance and Innovative Strategies Division, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Mail Code 6405J, Washington, DC 20460.

Reasonable precautions in a plan must include, but are not limited to, the following conditions on this partial waiver:

(a)(i) Reasonable measures for ensuring that any retail fuel pump dispensers that are dispensing a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol are clearly labeled for ensuring that consumers do not misfuel the waivered gasoline-ethanol blend into vehicles or engines not covered by the waiver. The label shall convey the following information:

(A) The fuel being dispensed contains 15% ethanol maximum;

(B) The fuel is for use in only MY2001 and newer gasoline cars, MY2001 and newer light-duty trucks and all flex-fuel vehicles;

(C) Federal law prohibits the use of the fuel in other vehicles and engines; and

(D) Using E15 in vehicles and engines not approved for use might damage those vehicles and engines.

(ii) The fuel or fuel additive manufacturer must submit the label it intends to use for EPA approval prior to its use on any fuel pump dispenser.

(b) Reasonable measures for ensuring that product transfer documents accompanying the shipment of a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol properly document the volume of ethanol.

(c)(i) Participation in a survey of compliance at fuel retail dispensing facilities. The fuel or fuel additive manufacturer must submit a statistically sound survey plan to EPA for its approval and begin implementing the survey plan prior to the introduction of E15 into the marketplace. The results of the survey must be provided to EPA.[42] The fuel or fuel additive manufacturer conducting a survey may choose from either of the following two options:

(ii) *Individual survey option:* Conduct a survey of labels and ethanol content at retail stations wherever your gasoline, ethanol, or ethanol blend may be distributed if it may be blended as E15. The survey plan must be approved by EPA prior to conducting the survey plan.

(iii) *Nationwide survey option:* Contract with an individual survey organization to perform a nationwide survey program of sampling and testing designed to provide oversight of all retail stations that sell gasoline. The

[40] Gasoline in this case may be gasoline blendstocks that produce gasoline upon the addition of the specified amount of ethanol covered by the waiver.

[41] ASTM International D4806–10, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel.

[42] In a Notice of Proposed Rulemaking published on November 4, 2010 in the **Federal Register** (*see* 75 FR 68044), EPA proposed a more detailed labeling, product transfer documents, and survey plan.

survey plan must be approved by EPA prior to conducting the survey plan.

(d) Any other reasonable measures EPA determines are appropriate.

(5) Failure to fully implement any condition of this partial waiver means the fuel or fuel additive introduced into commerce is not covered by this partial wavier.

These conditions are the same as those provided in the October partial waiver for MY2007 and newer light-duty motor vehicles. They have been modified here only to reflect the combined model years covering MY2001 and newer.

This partial waiver decision is final agency action of national applicability for purposes of section 307(b)(1) of the Act. Pursuant to CAA section 307(b)(1), judicial review of this final agency action may be sought only in the United States Court of Appeals for the District of Columbia Circuit. Petitions for review must be filed by March 28, 2011. Judicial review of this final agency action may not be obtained in subsequent proceedings, pursuant to CAA section 307(b)(2). This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

Dated: January 21, 2011.

Lisa P. Jackson,

Administrator.

[FR Doc. 2011–1646 Filed 1–25–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2010–0988; FRL–8856–2]

Pesticide Experimental Use Permit; Receipt of Application; Comment Request

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces EPA's receipt of an application 29964–EUP–RR from Pioneer Hi-Bred International, Inc. requesting an experimental use permit (EUP) for combined and single trait corn containing one or more of the following plant-incorporated protectants (PIPs): (1) [Bt11] *Bacillus thuringiensis* Cry1Ab delta-endotoxin and the genetic material (via elements of vector pZO1502) necessary for its production in corn (SYN–BTØ11–1), (2) [DAS–59122–7] *Bacillus thuringiensis* Cry34Ab1 and Cry35Ab1 proteins and the genetic material necessary for their production (PHP17662 T–DNA) in event DAS59122–7 corn (Organisation for Economic Co-operation and Development (OECD) Unique Identifier: DAS–59122–7), (3) [MIR162] *Bacillus thuringiensis* Vip3Aa20 and the genetic material necessary for its production (vector pNOV1300) in event MIR162 maize (SYN–IR162–4), (4) [MIR604] Modified Cry3A protein and the genetic material necessary for its production (via elements of pZM26) in corn (SYN–IR604–8), (5) [TC1507] *Bacillus thuringiensis* Cry1F protein and the genetic material (plasmid insert PHI8999A) necessary for its production in corn event DAS–Ø15Ø7–1, and (6) [MON810] *Bacillus thuringiensis* Cry1Ab delta-endotoxin and the genetic material necessary for its production (Vestor PV–ZMCT01) in event MON 810 corn (OECD Unique Identifier: MON–ØØ81Ø–6). The focus of the EUP are the three breeding stacks: (1) MIR604 × 1507 × 59122 × MON 810, (2) MIR604 × 59122 × MON810, and (3) MIR604 × 1507. The Agency has determined that the permit may be of regional and national significance. Therefore, in accordance with 40 CFR 172.11(a), the Agency is soliciting comments on this application.

DATES: Comments must be received on or before February 25, 2011.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2010–0988, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *Mail:* Office of Pesticide Programs (OPP) Regulatory Public Docket (7502P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001.
- *Delivery:* OPP Regulatory Public Docket (7502P), Environmental Protection Agency, Rm. S–4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. Deliveries are only accepted during the Docket Facility's normal hours of operation (8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays). Special arrangements should be made for deliveries of boxed information. The Docket Facility telephone number is (703) 305–5805.

Instructions: Direct your comments to docket ID number EPA–HQ–OPP–2010–0988. EPA's policy is that all comments received will be included in the docket without change and may be made available on-line at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through regulations.gov or e-mail. The regulations.gov Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the docket index available at *http://www.regulations.gov.* Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either in the electronic docket at *http://www.regulations.gov,* or, if only available in hard copy, at the OPP Regulatory Public Docket in Rm. S–4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. The hours of operation of this Docket Facility are from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The Docket Facility telephone number is (703) 305–5805.

FOR FURTHER INFORMATION CONTACT: Mike Mendelsohn, Biopesticides and Pollution Prevention Division (7511P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; telephone number: (703) 308–8715; e-mail address: *mendelsohn.mike@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This action is directed to the public in general. This action may, however, be of interest to those persons interested in agricultural biotechnology or those who