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40 CFR Parts 59, 80, 85, et al.
Amendments Related to: Tier 3 Motor Vehicle Emission and Fuel Standards, Nonroad Engine and Equipment Programs, and MARPOL Annex VI Implementation; Direct Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 59, 80, 85, 86, 600, 1037, 1043, 1051, 1054, 1060, 1065, and 1066

[EPA–HQ–OAR–2011–0135; FRL–9922–31–OAR]

RIN 2060–AS36

Amendments Related to: Tier 3 Motor Vehicle Emission and Fuel Standards, Nonroad Engine and Equipment Programs, and MARPOL Annex VI Implementation

AGENCY: Environmental Protection Agency.

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking direct final action on several amendments involving technical clarifications for different mobile source regulations. First, we are making a variety of corrections to the Tier 3 motor vehicle emission and fuel standards. These changes generally correct or clarify various provisions from the Tier 3 rule without expanding the Tier 3 program or otherwise making substantive changes. Second, we are revising the test procedures and compliance provisions for nonroad spark-ignition engines at or below 19 kW (and for the corresponding nonroad equipment) to conform to current practices. The changes to evaporative emission test procedures also apply to some degree to other types of nonroad equipment powered by volatile liquid fuels. Third, we are addressing an ambiguity regarding permissible design approaches for portable fuel containers meeting evaporative emission standards. Fourth, we are revising the regulations to more carefully align with current requirements that apply to marine vessels with diesel engines as specified under MARPOL Annex VI. Fifth, we are correcting typographical errors in regulatory changes finalized in the Voluntary Quality Assurance Program rulemaking.

This rulemaking action is not expected to result in any significant changes in regulatory burdens or costs.

DATES: This final rule is effective on May 5, 2015, without further notice, unless EPA receives adverse comment by April 6, 2015. If EPA receives adverse comment on any provisions of the rule, we will publish a timely withdrawal in the **Federal Register** informing the public that those specific provisions will not take effect. The incorporation by reference of certain publications listed in this regulation is approved by the Director of the Federal Register as of May 5, 2015.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2011–0135, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email: A-and-R-Docket@epamail.epa.gov.*
- *Fax:* (202) 566–9744
- *Mail:* Air and Radiation Docket and Information Center, Environmental Protection Agency, Mailcode: 28221T, 1200 Pennsylvania Ave. NW., Washington, DC 20460.
- *Hand Delivery:* EPA Docket Center, EPA WJC West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2011–0135. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *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 *www.regulations.gov* or email. The *www.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 email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public 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. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *www.regulations.gov* index. 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, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA WJC West, 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 legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Alan Stout, Office of Transportation and Air Quality, Assessment and Standards Division (ASD), Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor MI 48105; Telephone number: (734) 214–4805; *stout.alan@epa.gov.*

SUPPLEMENTARY INFORMATION:

Why is EPA using a Direct Final Rule?

EPA is publishing this rule without a prior proposed rule because we view this as a noncontroversial action and anticipate no adverse comment. This is also intended to expedite the regulatory process to allow the modifications to take effect as soon as possible. However, in the ''Proposed Rules'' section of today's **Federal Register**, we are publishing a separate document that will serve as the proposed rule to adopt these same amendments if adverse comments are received on this direct final rule. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the **ADDRESSES** section of this document.

If EPA receives adverse comment on a distinct provision of this rulemaking, we will publish a timely withdrawal in the **Federal Register** indicating which provisions we are withdrawing. The provisions that are not withdrawn will become effective on the date set out above, notwithstanding adverse comment on any other provision. We would address all public comments in any subsequent final rule based on the proposed rule.

EPA is publishing this direct final rule to expedite corrections to the regulatory text and clarifications and adjustments that generally reduce the burden and/or confusion related to

compliance with regulatory requirements. If you comment on this rule, we request that you identify any portions of the action with which you agree and support as written, in addition to any comments regarding suggestions for improvement or provisions with which you disagree. In the case of a comment that is otherwise not clearly adverse, EPA would interpret relevant comments calling for more flexibility or less restrictions as supportive of the direct final action. In this way, EPA will be able to adopt those elements of this action that are supported and most needed without delay, while considering and addressing any constructive or adverse comments received on the proposed rule in the course of developing the final rule.

Does this action apply to me?

Entities potentially affected by this rule include gasoline refiners and importers, ethanol producers, ethanol denaturant producers, butane and pentane producers, gasoline additive manufacturers, transmix processors, terminals and fuel distributors, light-duty vehicle manufacturers, manufacturers of nonroad engines and equipment, manufacturers of marine compression-ignition engines, and owners and operators of ocean-going vessels and other commercial ships, and manufacturers of portable fuel containers.

Potentially regulated categories include:

Category	NAICS [a] Code	Examples of potentially affected entities
Industry	324110	Petroleum refineries (including importers).
Industry	325110	Butane and pentane manufacturers.
Industry	325193	Ethyl alcohol manufacturing.
Industry	324110, 211112	Ethanol denaturant manufacturers.
Industry	211112	Natural gas liquids extraction and fractionation.
Industry	325199	Other basic organic chemical manufacturing.
Industry	486910	Natural gas liquids pipelines, refined petroleum products pipelines.
Industry	424690	Chemical and allied products merchant wholesalers.
Industry	325199	Manufacturers of gasoline additives.
Industry	424710	Petroleum bulk stations and terminals.
Industry	493190	Other warehousing and storage-bulk petroleum storage.
Industry	336111, 336112	Light-duty vehicle and light-duty truck manufacturers.
Industry	335312, 336312, 336322, 336399, 811198.	Alternative fuel converters.
Industry	333618, 336120, 336211, 336312.	On-highway heavy-duty engine & vehicle (>8,500 lbs GVWR) manufacturers.
Industry	336611	Manufacturers of marine vessels.
Industry	336612	Manufacturers of marine vessels.
Industry	811310	Engine repair and maintenance.
Industry	483	Water transportation, freight and passenger.
Industry	424710, 424720	Petroleum Bulk Stations and Terminals; Petroleum and Petroleum Products Wholesalers.
Industry	483113	Coastal and Great Lakes Freight Transportation.
Industry	483114	Coastal and Great Lakes Passenger Transportation.
Industry	333618	Manufacturers of new engines.
Industry	333112	Manufacturers of lawn and garden tractors (home).
Industry	811112, 811198	Commercial importers of vehicles and vehicle components.
Industry	326199, 332431	Portable fuel container manufacturers.

[a] North American Industry Classification System (NAICS).

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

What should I consider as I prepare my comments for EPA?

A. *Submitting CBI.* Do not submit this information to EPA through *www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

B. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

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I. Introduction

In this action we are adopting several amendments that will make technical clarifications to different mobile source regulations. This section provides an overview of the organization of this preamble. Section II describes amendments to the Tier 3 motor vehicle emission standards. Section III describes amendments to the 40 CFR part 80 fuel standards: including the Tier 3 gasoline sulfur standards, other part 80 fuels regulations that were amended in the Tier 3 final rule, and amendments made in the Quality Assurance Program rulemaking. Section IV describes the changes to the testing and compliance provisions for nonroad spark-ignition engines, and Section V describes how we are changing the evaporative test procedures for nonroad equipment. Section VI describes amendments to the requirements that apply for portable fuel containers. Section VII summarizes the amendments related to our implementation of requirements for marine diesel engines and vessels under MARPOL Annex VI.

II. Tier 3 Motor Vehicle Emission Standards

On April 28, 2014, we published a final rule adopting new emission standards and fuel requirements for motor vehicles and for motor vehicle fuels (79 FR 23414). The final rule included Tier 3 emission standards to reduce exhaust and evaporative emissions from light-duty vehicles, light-duty trucks, and heavy-duty vehicles up to 14,000 pounds GVWR. In addition, the final rule specified corresponding changes to in-use fuel requirements.

The Tier 3 motor vehicle program included extensive changes to emission standards and the regulatory requirements related to certification. This included several provisions to harmonize requirements with a similar set of standards adopted by the California Air Resources Board (California ARB). It also included a wide range of alternative measures intended to facilitate each manufacturer's efforts to make an orderly transition to meeting the Tier 3 standards nationwide. The resulting Tier 3 regulations accordingly included several variations, alternatives, and ancillary provisions. We have learned since concluding the Tier 3 rulemaking that there are several instances where the regulatory text implementing the Tier 3 program requires correction or clarification to achieve the intended result. None of the amendments are intended to expand the Tier 3 program or otherwise make substantive changes. We are therefore making the following amendments to the Tier 3 vehicle program regulations:

Regulatory citation	Description
§ 85.2108	Remove section to reflect a recent change to Clean Air Act section 207.
§ 86.101, § 1066.301, and § 1066.305.	Adjust the procedures for determining road-load parameters to more carefully align with current practice, including the option for manufacturers to use alternate methodologies that are consistent with the reference procedure, subject to good engineering judgment and EPA confirmatory testing. We are also restoring provisions describing how to develop road-load parameters for cold testing; the provisions from § 86.229 were inadvertently replaced with a default instruction to use the same values for both FTP testing and cold testing. We are also changing terminology from "coastdown" to "road-load determination" for consistency.
§§ 86.095–35 and 1037.135.	Revise the labeling requirement for incomplete heavy-duty vehicles to require designation of maximum fuel tank capacity only in cases where the certifying manufacturer relies on a downstream manufacturer to design and install the vehicle's fuel tanks. If the certifying manufacturer designs or installs the fuel tank, there is no need for the emission control information label to identify the appropriate fuel tank capacity.
§§ 86.101 and 86.1844–01.	Clarify that reporting drive-cycle metrics to confirm driver accuracy continue to be optional until vehicles are subject to Tier 3 emission standards, and revise terminology for consistency with 40 CFR 1066.425.
§ 86.101	Clarify that manufacturers may continue to certify in 2022 and later model years based on carryover of emission data generated using the procedures from 40 CFR part 86, subpart B, even though we require new testing in that time frame to use the procedures in 40 CFR part 1066.
§ 86.113	Revise the format of the volatility specification to rely primarily on psi units and secondarily on kPa units. The kPa figures for non-evaporative testing also need to be corrected to align with the specified psi units. These changes align with the test fuel specifications that were in place before the Tier 3 rule. We are also revising the table format for octane specifications to clarify that the both ASTM D2699 and ASTM D2700 apply for determining octane values and octane sensitivity values.
§ 86.201	Clarify how the migration to testing under 40 CFR part 1066 works for cold temperature testing. This is analogous to the migration provisions for general testing in § 86.101.
§ 86.213	Revise the specified tolerance for olefin concentration in the test fuel from ±0.5 percent to ±5.0 percent. This reverses an inadvertent change made in the Tier 3 final rule. We are also revising the table format for octane specifications to clarify that both ASTM D2699 and ASTM D2700 apply for determining octane values and octane sensitivity values.
§ 86.513	Correct a typographical error for the 90% point in the distillation curve for gasoline test fuel. This was erroneously published as part of the Tier 3 rule with an extra "1" before the specified temperature of 148.9 °C. This change restores the temperature specification to what applied before we adopted the Tier 3 rule.
§ 86.513–2004	Remove obsolete section. Fuel specifications for motorcycles are now addressed in § 86.513 (with no model year designation), so the 2004 section is removed to avoid confusion.
§ 86.1801–12	Clarify how the requirements of subpart S relate to the engine and vehicle provisions in 40 CFR part 1036 and part 1037.
§ 86.1803–01	Revise the definition of "averaging set" to apply to all vehicles, not only heavy-duty vehicles.
§§ 86.1805–17 and 86.1811–17.	Address provisions for LDV above 6,000 pounds GVWR. A new paragraph describes how these vehicles are subject to the same transitional provisions that apply for LDV at or below 6,000 pounds GVWR. We are also clarifying useful life provisions for LDV above 6,000 pounds GVWR. We described the useful life provisions based on a simple cutpoint of 6,000 pounds GVWR, which doesn't address a small number of LDV models that have higher GVWR values. Instead of changing the useful life values adopted for cold temperature emission standards, we are using the terms LDV and LLDT to characterize the vehicles that are subject to a useful life of 10 years or 120,000 miles. We are also clarifying that MDPVs are the only HDVs subject to standards under § 86.1818.

Regulatory citation	Description
§ 86.1806–17	Correct the citation to California ARB's OBD regulations to refer to the entire range of relevant OBD standards.
§ 86.1810–01	Clarify that the provisions for determining NMOG from measured NMHC values also apply for Tier 2 vehicles, as specified in § 1066.635, except that manufacturers may continue to use a fixed adjustment factor of 1.04.
§ 86.1810–17	Clarify that the provisions for testing flexible fuel vehicles on more than just gasoline or diesel fuel do not apply for greenhouse gas standards.
§ 86.1811–17(b)(8)	Clarify how to calculate and use credits for manufacturers that certify some vehicles to a useful life of 120,000 miles and other vehicles to a useful life of 150,000 miles. The main point of clarification is that vehicles certified to the shorter useful life on an interim basis may exchange emission credits with vehicles certified to either useful life, but the fleet-average standard for a given set of vehicles must correspond to the averaging set. We are also listing the emission standards that correspond to a 120,000 mile useful life rather than describing how to calculate those standards.
§ 86.1811–17(b)(8)	Add a provision that Interim Tier 3 vehicles must continue to meet the 4000-mile SFTP standards for NMHC+NO_X and CO from Tier 2. This requirement was included in the preamble text for the proposed rule and the final rule, but was inadvertently omitted from the regulatory text.
§ 86.1811–17(b)(10)	Clarify provisions related to early credits: (1) Early credits may be used interchangeably (without adjustment) for vehicles certified to a useful life of either 120,000 miles or 150,000 miles. (2) Accumulated early credits should be used for demonstrating compliance with model year 2017 standards before doing the calculations to address proportionality relative to California emission credits. (3) Negative credits are subtracted from credit totals during the three-year period for calculating credit caps (rather than ignoring them). (4) The calculation for applying the cap/threshold relative to California credits must be corrected to use the proper baseline quantity.
§ 86.1811–17(b)(11)	Clarify provisions related to early certification to Tier 3 standards: (1) Bin 70 and cleaner vehicles are considered Tier 3 vehicles on a voluntary basis and are therefore subject to the 150,000 mile useful life. (2) The transitional aspects of the Tier 3 program apply equally to vehicles certified early to the Tier 3 standards.
§ 86.1811–17(g)	Revise the cold temperature testing specifications to clarify that CO and NMHC standards apply equally for certification and in-use testing, for low and high altitude, and for testing gasoline-only configurations of flexible-fuel vehicles.
§ 86.1813–17	Clarify that no separate fleet-average calculation is required for demonstrating compliance with high-altitude evaporative emission standards. These standards are determined as bin values relative to the standard that applies for testing at low-altitude conditions.
§ 86.1829–15	Adjust the refueling test waiver to state that it applies only for incomplete heavy-duty vehicles above 10,000 pounds GVWR, and for complete heavy-duty vehicles above 10,000 pounds GVWR with fuel tanks greater than 35 gallons, consistent with the preamble discussion in the final rule. These vehicles are the only ones that are newly subject to refueling emission standards. All smaller vehicles have already been subject to testing and certification requirements.
§ 86.1829–15	Add a paragraph to preserve the provisions related to measurement of N_2O emissions as originally adopted at § 86.1829–01(b)(2)(iii)(G).
§ 86.1829–15	Revise terminology to refer to ''durability groups'' rather than ''durability data groups'' for PM testing.
§ 86.1844–01	Specify that a manufacturer's application for certification must include a description of leak families in addition to evaporative/refueling families. Since leak families are defined broadly, many manufacturers may have only a single leak family even if they have multiple evaporative/refueling families.
§ 86.1845–01	Clarify that the PM measurement instructions are limited to vehicles subject to Tier 3 PM standards, as discussed in the final rule.
§ 86.1846–01	Adjust the exclusion of high-mileage vehicles to the terminology changes to § 86.1845–05. This change aligns with the current practice of not including the results from testing the designated high-mileage vehicle at low altitude for making an IUVP determination for the test group.
§ 86.1861–17	Clarify that the separate averaging set corresponding to 120,000 mile useful life applies only for NMOG+NO_X emission standards.
§§ 600.116–12 and 1066.501.	Clarify that certain portions of SAE J1711 apply separately for charge-depleting and charge-sustaining operation for hybrid-electric vehicles.
§ 600.117	Adjust the description to more clearly apply the interim allowance for using Tier 2 fuel to determine whether vehicles pass the ''litmus test'' for using derived 5-cycle testing for fuel economy, as described further below.
§ 600.117	Revise the description for test fuels to clarify that cold testing may be done with the higher-volatility fuel specified in § 86.213, and that the requirement for using a common test fuel related to 5-cycle testing refers to the ethanol content of the fuel, not the whole range of test fuel specifications.
§ 1037.103	Refer to § 86.1805 for useful life values as they apply for evaporative emission standards, rather than referring more broadly to useful life values in 40 CFR part 86 for ''criteria pollutants''.
§ 1037.104	Refer to the useful life values specified in § 86.1805 for model year 2014 vehicles for the HD GHG standards. This sets the useful life values for the HD GHG standards to a fixed value, rather than specifying a cross reference to a section of the regulations that describes changing useful life values.
§§ 1065.10 and 1066.10	Allow for a one-year lead time for upgrading to test procedure changes in 40 CFR part 86 where those changes would otherwise be required immediately with the effective date of the final rule. This is consistent with existing provisions for changes to 40 CFR part 1065 and part 1066. Note that this does not delay implementation of procedures corresponding to new emission standards.
§ 1065.610	Correct a sample calculation.
§ 1065.710	Correct the units for specifying hydrocarbon composition. These units were inadvertently changed in the Tier 3 rule from fractional to percent values. We are specifying these values in volume % to align with the associated ASTM procedure.
§ 1065.710	Revise the format of the volatility specification to include reference values in psi units.
§ 1066.125	Correct the description of calculating 1 Hz mean values.
§ 1066.125	Add a parenthetical reference to torque in pound-foot units corresponding to the primary value in Newtons.
§ 1066.420	Clarify that it is permissible to push the test vehicle onto the dynamometer to prepare for a hot-start or hot-stabilized test, as opposed to driving the vehicle onto the dynamometer.
§ 1066.605	Revise the sequence of calculations to determine a NO_X result. The proper sequence is to first correct for background concentration, then to correct for intake air humidity.

Regulatory citation	Description
§ 1066.615	Correct the equations to properly apply the NO_X humidity correction factor to account for humidity in the background measurement.
§ 1066.635	Clarify that the appropriate NMOG calculation for plug-in hybrid electric vehicles is based on operation over one full UDDS.
§ 1066.701	Correct a temperature that was inadvertently identified as 20 °C instead of 20 °F.
§ 1066.710	Clarify the instructions for heat settings during cold testing to more carefully differentiate between automatic systems that operate either in manual mode or in automatic mode. Automatic systems operating in manual mode should be set to a temperature of 72 °F ''or higher'' to align with current practice.
§ 1066.801	Correct an error in the testing flowchart so that the flowchart matches the procedure described in the regulations.
§ 1066.815	Reorganize the instructions for testing with and without bag 4 to improve the clarity of the test sequence.
§ 1066.831	Revise the description for testing heavy-duty vehicles at adjusted loaded vehicle weight to exclude MDPVs, which are tested like light-duty trucks.
§ 1066.835	Add a provision allowing for keeping the vehicle-cooling fan running while the vehicle is stopped if that is necessary for keeping ambient conditions within specified parameters.
§ 1066.845	Adjust the description of air conditioning settings during the AC17 test to describe how to account for systems with separate rear controls, and for systems that change default settings at key-off.
§ 1066.1005	Move the prefix ''n'' to be in the proper order.
Various	Change from ''LA–92'' to ''Hot-LA–92'' to allow us to specify that the referenced test procedure is only the first 1435 seconds of what is known as the LA–92 driving schedule. The full cycle is 1735 seconds. This change is necessary to accomplish the intended alignment with the California ARB standards.

We are also making various corrections for typographical errors and regulatory cross references. Note that one of these corrections is in the regulations for recreational vehicles at 40 CFR 1051.501 to maintain a proper cross reference to the driving schedules in Appendix I of 40 CFR part 86. We are also correcting a typographical error from § 86.529–98 that was published several years ago. The specified range of loaded vehicle masses corresponding to certain road-load force coefficients and inertia weights has an entry that should be listed as applying from 656 to 665 kg; the published entry mistakenly identifies the range as 565 to 665 kg.

One additional issue relates to test fuel for fuel economy testing. In the Tier 3 final rule, EPA changed the certification test fuel for the Tier 3 exhaust emission standards from a 9 psi RVP fuel with no ethanol (E0) (commonly referred to as Tier 2 fuel) to a 9 psi RVP fuel with 10 percent ethanol (E10). As an interim provision, EPA permitted vehicles certifying at levels above Bin 70 to use E0 fuel for Tier 3 certification through model year 2019. The rule also permits early certification to Tier 3 requirements using 7 psi RVP E10 test fuel, commonly referred to as LEV III fuel since the California LEV III program phase-in begins with model year 2015. The rule also provides manufacturers the option to use EPA 9RVP E0 fuel or 9RVP E10 fuel for certification for cold temperature testing since California does not specify a test fuel for that testing.

Under the fuel economy regulations, manufacturers use the results of their exhaust emission tests as the basis for calculating litmus test evaluations (see 40 CFR 600.115–11). However, in the Tier 3 rule EPA did not change the fuel economy test fuel specifications from E0 to E10 as was done for Tier 3 exhaust emissions. The preamble to the final rule recognized that the difference in the emission and fuel economy test fuels has the potential to require extra emission testing for the fuel economy evaluations. To minimize this burden, EPA included several provisions in the regulations to minimize this potential burden (see 40 CFR 600.117) and indicated a commitment to make any appropriate adjustments to the fuel economy regulations to accommodate the change to an E10 test fuel when the needed emission data become available.

As is discussed in the final rule (79 FR 23531–23533, April 28, 2014), central to the litmus test evaluation is the requirement that data be available for all five emission test cycles and that the data be generated using the same test fuel on each cycle. Some confusion has arisen as to what cold FTP test fuel should be used in the litmus evaluations for early Tier 3 certifications using LEV III test fuel and for Tier 3 certification above Bin 70 before model year 2020. This occurs because California ARB does not specify a cold FTP test fuel and, as a transitional measure, EPA permits certification to Tier 3 Bin 125 and Bin 160 using Tier 2 fuel. This amendment clarifies that the fuel economy test fuel requirements govern for the litmus test evaluations. As indicated in the preamble to the final rule at 79 FR 23533, manufacturers may use LEV III fuel (California Phase 3) in lieu of Tier 3 fuel, but any cold FTP testing must be done using the Tier 3 cold FTP fuel. Thus, for purposes of the litmus test cold temperature testing, manufacturers must use the same test fuel (E10) as used for the other four cycles. For early Tier 3 certifications using LEV III test fuel, the cold FTP test data must be generated using Tier 3 cold FTP test fuel and in the case of the higher bins in the Tier 3 program as discussed above, the cold FTP must be based on the same fuel as used for the other four test cycles. The flexibility afforded for exhaust emission certification does not carry over to the litmus test evaluations.

III. 40 CFR Part 80 Fuel Standards

After promulgation of the Tier 3 final rulemaking (79 FR 23414, April 28, 2014), we discovered some typographical errors and other areas in the part 80 regulations that we believe would benefit from some additional clarity. The following sections discuss the amendments to remedy these concerns.

A. Performance-Based Measurement Systems (PBMS)

Section	Description
80.8(e)(1)(iii)	Amended to update IBR to most recent ASTM standard practice D5842–14 (Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014).
80.46(d)	Amended to clarify that distillation precision criterion is based on the reproducibility of Table 10 Groups 2, 3 and 4 (Automated Method) contained in ASTM D86–07—clarifying note added to state that precision estimates in ASTM D86–12 do not apply.

Section	Description
80.46(b)(1), (c)(2), (d), (e), (f)(1), and (g)(1).	Amended to clarify beginning January 1, 2016 a test method approved under 40 CFR 80.47 ''must'' be used, rather than ''may'' be used, by the regulated community for demonstrating compliance measurements to EPA fuels standards.
80.47(a)(7)	Amended to correct typographical error (''referee'' to ''reference'').
80.47(b)(1), (c)(1), (d)(1), (e)(1), (f)(1), (g)(1), (h)(1), (i)(1), (j)(1).	Amended to correct typographical error (''emissions'' to ''omissions''); and to add the statement ''tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days''.
80.47(c)(1), (c)(2)(i), (c)(2)(ii)	Amended to correct the examples listed for precision and accuracy demonstration for sulfur in butane to be consistent with the sulfur in gasoline 10 ppm average.
80.47(h)(1)	Amended to: correct typographical errors; clarify that distillation precision criterion is based on the reproducibility of Table 10 Groups 2, 3 and 4 (Automated Method) contained in ASTM D86–07 (clarifying note added stating that precision estimates in D86–12 do not apply); and revise IBR of D86 to the 2007 version.
80.47(i)(1)	Revised benzene precision criteria to 0.15 times R, rather than 0.3 times R to be consistent with preamble discussion.
80.47(l)	Amended to revise section heading and add paragraphs (l)(1)(ii) and (l)(2)(ii) to allow for Non-Voluntary Consensus Standard Based (non-VCSB) absolute fuel parameter of sulfur in gasoline and butane. Also clarifying that either a ''test facility or VCSB'' must meet the requirements of § 80.47(l).
80.47(m)(6)	Amended to correct reference for the use of the term ''cross-method reproducibility'' in ASTM D6708 from ''as required'' to ''as recommended'' and replaced the term ''cross-method reproducibility'' with ''between methods reproducibility'' to be consistent with D6708–13.
80.47(n)(2)(i), (o)(2)(i), (p)(3)(i).	Amended to correct references to D6299–13 with regards to use of a quality control material (paragraph 3.2.3 changed to 3.2.8), I Chart (section 7 changed to section 8) and MR charts (section A1.5.2 changed to A1.5.4).
80.47(n)(2)(ii), (o)(2)(ii), (p)(3)(ii).	Amended to correct references to D6299–13 with regards to use of an I Chart (changed section 7 to section 8.7).
80.47(n)(2)(iv), (o)(2)(iv), (p)(2)(iv); and (n)(1)(ii), (o)(1)(ii), (p)(1)(ii).	Amended to move the phrase ''The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.'' from paragraphs (n)(2)(iv), (o)(2)(iv), (p)(2)(iv) to paragraphs (n)(1)(ii), (o)(1)(ii), (p)(1)(ii), respectively.
80.47(o)(1)	Amended to clarify value of ARV when not provided in an Inter Laboratory Crosscheck Program, by adding the following: ''Facilities using a VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples.''
80.47(o)(1)	Amended to clarify that ILCPs are acceptable, by adding the following: ''(Examples of ILCP: ASTM Reformulated Gasoline ILCP or ASTM motor gasoline ILCP)''.
80.47(p)(1)	Amended to clarify value of ARV when not provided in ILCP, by adding the following: ''Facilities using a Non-VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in either a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples.''
80.47(p)(1)	Amended to address concern that reproducibility is not established with Non-VCSB test methods, by adding the following: ''The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the fuel parameter's respective designated test method must be investigated by the facility.''
80.47(r)(1)(i)	Amended to revise IBR of ASTM D86 to the 2007 version.
80.330(b)(1)(i), (b)(1)(ii), (b)(2).	Amended to update IBR to most recent ASTM standard practice D5842–14 (Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014), and for consistency with IBR language throughout subpart O.
80.584(a)(1) through (a)(3)	Amended to correct inconsistencies with PBMS in § 80.47 regarding requirements for PBMS for sulfur in diesel fuel and ECA Marine Fuel at § 80.584 with regards to frequency of testing for the precision demonstration and VCSB self-qualification starting January 1, 2016.
80.584(a)(1) through (a)(3)	Amended to insert phrase ''(tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days)'' in applicable areas for diesel and ECA marine fuel to be consistent with frequency of testing for precision demonstration at § 80.47.
80.585(a)	Amended to revise diesel and ECA marine fuel sulfur qualification regulations to be consistent with PBMS (i.e., starting January 1, 2016), VCSB test methods self-qualify and need not be reported to the Agency for approval.
80.585(a), (e)(1), (e)(4), (f)	Amended to correct inconsistencies with PBMS in § 80.47 regarding requirements for PBMS for sulfur in diesel fuel and ECA marine fuel at § 80.584 with regards to frequency of testing for the precision demonstration and VCSB self-qualification starting January 1, 2016; and to add a new paragraph (f) for IBR.
80.585(e)(1), (e)(2), (e)(4), (f).	Amended to update IBR and reference for use on ASTM D6299–13 in applicable diesel and ECA marine fuel sulfur regulations to be consistent with reference of use of ASTM D6299–13 in PBMS regulations at § 80.47, and to make minor formatting changes for IBR consistency throughout part 80.

B. Quality Assurance Program Amendments

This action also makes minor technical amendments to regulatory changes finalized in the Voluntary Quality Assurance Program Rulemaking (''QAP Rule'', 79 FR 42078, July 18, 2014). We are changing § 80.1471(d)(1) to reflect a change that industry widely requested and the public supported. In the final rulemaking we agreed to extend the notification period by an auditor for potentially invalid RINs from ''within the next business day'' to ''within five business days.'' We inadvertently neglected to change this reference in § 80.1471(d)(1) to the new ''within five business days'' language.

In the Notice of Proposed Rulemaking for the QAP Rule, we proposed a new section at § 80.1433 that would have changed the way parties that redesignated renewable fuels for non-qualifying uses would have to retire RINs, and we proposed new product transfer document (PTD) language at § 80.1453(a)(12) to help convey the requirement to separate and/or retire RINs for parties that wished to redesignate renewable fuel for a non-qualifying use. After careful consideration of the public comments received, we chose not to finalize the proposed § 80.1433 requirements. This action is removing the extraneous reference to § 80.1433 in § 80.1453.

Additionally, we are amending the PTD requirements at § 80.1453(a) to make the scope of these requirements consistent with similar requirements in other fuels programs. When we altered the scope of the PTD requirements at § 80.1453 to include both neat and blended renewable fuels, we did not intend to expand the scope of these PTD requirements to convey the information at § 80.1453 to the consumer of such fuels, in most cases. In the preamble to the final QAP Rule, we noted that these requirements were meant to apply to regulated parties (79 FR 42105, July 18, 2014).

Historically, EPA has required applicable information on PTDs accompanying fuels to be conveyed through to retail stations and wholesale purchaser-consumers. The EPA has, in most cases, included language that exempts parties that are transferring title or custody of fuel to the ultimate consumer (*e.g.,* the PTD requirements for detergents at § 80.158 and for E15 at § 80.1503) or dispensing the fuel from a retail station or wholesale purchaser-consumer's tank to a motor vehicle or nonroad engine (*e.g.,* the PTD requirements for diesel and gasoline sulfur at §§ 80.590 and 80.1651, respectively). Requiring PTD language to convey information all the way down to consumers fueling at a retail station or homes receiving heating oil has little benefit to the effectiveness of EPA's fuels programs and could be quite costly for retail stations and home heating oil distributors. Therefore, we are clarifying the scope of § 80.1453 by adding an exemption to the PTD requirements for renewable fuels dispensed into motor vehicles and nonroad vehicles, engines, and equipment (to include jet engines and home heating units).

Section	Description
80.1426(c)(7)	Amended to correct typographical error (''§ 80.1451(b)(1)(ii)(T)(3)'' to ''§ 80.1451(b)(1)(ii)(T)(2)'').
80.1453(a) introductory text	Amended for clarity in scope of requirements.
80.1453(a)(12) introductory text.	Amended to remove extraneous reference to 80.1433.
80.1471(d)	Amended to add to ''within five business days'', consistent with the intent stated in the QAP rule preamble.

C. Tier 3 Rulemaking Provisions Minor Technical Amendments

As mentioned above, this rule corrects minor typographical errors that were discovered following the promulgation of the Tier 3 final rule (both within 40 CFR part 80, subpart O, as well as additional 40 CFR part 80 provisions that were finalized as part of our regulatory streamlining efforts in the Tier 3 rulemaking). The following table contains a list of these amendments and a description of the change:

Section	Description
80.2(cccc)	Removed new definition of natural gas, as this definition already exists at § 80.2(tt).
80.75(a)(2)(xi)(G)	Amended to correct reference from ''§ 80.82(c) or (d)'' to ''§ 80.86(a)(3) or (a)(4)''.
80.82(e)(1)	Amended to clarify that the provisions of an EPA-approved State Implementation Plan (SIP) apply to butane blenders.
80.85(a)	Amended introductory text to correct typographical errors (''refinery'' to ''refiner'').
80.85(i)	Amended to correct typographical errors (''they'' to ''it'', ''comply'' to complies'').
80.86(b)(2)(iv) and (b)(3)(iii)	Amended to correct typographical errors (''complaint'' to ''compliant'').
80.86(c)	Amended to clarify that the PTD for pentane used by pentane blenders must contain the pentane producer or importer company name and facility registration number issued by EPA and the name and address of the transferor and transferee consistent with other part 80 PTD requirements.
80.315(b)(1)(iii), 80.1295(b)(1)(ii).	The Tier 3 rulemaking changed the due date for annual reports and credits from the end of February to March 31 for all 40 CFR part 80 fuels programs; these paragraphs are being amended because the February date was inadvertently left in §§ 80.315(b)(1)(iii) and 80.1295(b)(1)(ii).
80.330(c)(1), (d)(2)	Amended to correct year (''December 31, 20'' to ''December 31, 2015'').
80.597(d)(3)	Amended to correct reference from paragraph (d) to paragraph (d)(3).
80.1270(b)(2)	Amended to clarify that butane blenders using the provisions of § 80.82 and pentane blenders using the provisions of § 80.85 may not generate benzene credits.
80.1609(a)	Amended to correct typographical error and to correct a regulatory cite.
80.1611(a)(1),	Amended to improve the clarity in cases where producers of certified ethanol denaturants produce product to a lower sulfur maximum than the required 300 ppm maximum.
80.1611(c) introductory text, (c)(1), and (c)(2).	Amended for improved clarity and to correct typographical errors.
80.1611(d)	Amended to correct typographical error (''denaturant'' instead of ''oxygenate'').
80.1613(a)	Amended to correct typographical error (''less than 1.0'' replaces ''1.0 or less'').
80.1613(b)(3)	Added to clarify that it is a violation to exceed an additive manufacturer's recommended treatment level when doing so would contribute more than 3 ppm to the sulfur content of the resulting finished gasoline.

Section	Description
80.1615(d)(1), (d)(2)	Revised for clarity by moving the phrase ''From January 1, 2017 through December 31, 2019'' to the beginning of each paragraph.
80.1616(a)(4)	Amended to add a ''Reserved'' paragraph (a)(4) to fix numbering error.
80.1616(b)(2)	Amended language to clarify that credits expire on December 31 and are reported the following March 31.
80.1620(d)	Revised to correct year to 2012.
80.1620(e)(1), (e)(2), (f)(1)	Revised to correct dates to 2013.
80.1621(c), (d)	Reserved paragraph (c); added paragraph (d), which was inadvertently deleted from the regulations, but is referred to in the preamble and in § 80.1622(e).
80.1640(a)(2)	Amended to correct reference from paragraph (a)(5) to paragraph (a)(1).
80.1642(c)(3)	Amended paragraph to correct typographical errors.
80.1650	Amended to remove phrase ''whichever is earlier'' from paragraphs specifying the dates by which reports must be submitted, as this would contradict the ability of parties to register after the initial date that parties involved in a given activity must be registered.
80.1652(c)	Amended to correct word error (''producer'' instead of ''refiner'').
80.1667(c)(1)	Removed paragraph (c)(1) to match the intentions of § 80.1615(a) that refiners—including gasoline blenders (excluding those specified in § 80.1615(a)(3))—may generate Tier 3 credits beginning in 2014.

IV. Small SI Test Fuel and Bonding Provisions

On June 17, 2013, EPA modified the test procedures for measuring exhaust emissions from land-based nonroad small spark-ignition engines (small SI engines) to allow for exhaust emission certification testing with a test fuel that has 10 percent ethanol as specified by California ARB (78 FR 36370). We adopted that provision on an interim basis, through model year 2019, with the expectation that we would further evaluate the appropriate test fuel for onroad and nonroad applications. The Tier 3 motor vehicle emission standards include a new certification test fuel specification that is much like California ARB's Phase 3 test fuel in that it includes 10 percent ethanol (E10).

Small SI manufacturers have requested that we address the test fuel questions in a way that does not leave them uncertain about certification test fuel options starting in model year 2020. While the effort to adopt the new EPA nonroad test fuel specification lies ahead, we agree with the manufacturers that the new ethanol-based test fuel associated with the Tier 3 motor vehicle emission standards allows us to take the step of removing the expiration of the provision allowing for the use of the similar California ARB Phase 3 test fuel for small SI engines. In the future, we expect to go through a rulemaking to incorporate EPA's Tier 3 test fuel into the emission programs for small spark-ignition engines, including an assessment of how the changing test fuel relates to the stringency of the emission standards.

When we adopted Phase 3 exhaust emission standards for Small SI engines in 2008, we included a new set of requirements for manufacturers to post a bond as a means of ensuring compliance with regulatory requirements (73 FR 59034, October 8, 2008). Manufacturers have been complying with the bond requirements since 2010. The bond provisions are generally working as expected, but we have found several items that should be adjusted or clarified to help with ongoing implementation, as follows:

- Clarify that bonds are intended to cover any improperly funded compliance obligations relative only to engines that must comply with 40 CFR part 1054. The bond provisions are not intended to extend to engines that a manufacturer certifies under other EPA programs.
- Specify that small-volume engine manufacturers and small-volume equipment manufacturers (collectively small-volume manufacturers, as defined in 40 CFR 1054.801) are subject to an alternate minimum bond value of $25,000, rather than the $500,000 minimum that applies for other manufacturers. This arrangement has been the working policy under the broader allowance specified in § 1054.635(d). Codifying these terms allows us to streamline the process and remove uncertainty for small-volume manufacturers.
- Adopt a cap on the bond value that corresponds to the applicable bond-waiver threshold. Since U.S.-based assets are roughly analogous to bond values as a measure of our ability to compel compliance (or remedy deficiencies) for the different kinds of companies, this approach provides a measure of parity or fairness between those that must post bond and those that qualify for a bond waiver based on their assets in the United States. This is consistent with the approach we took on an interim basis to specify a maximum bond value of $10 million. The new provision replaces the $10 million cap in § 1054.145(o).
- Clarify how bond values may change within a given year, and in future years: (1) Bond values may be adjusted for a given year any time before the first importation or sale for that year; (2) once a bond value is fixed for a given year, that value may not be decreased during the year, even if sales volumes are less than anticipated; and (3) bond values may be reset with each new year, but these values must reflect actual sales volumes for the preceding three years. This arrangement allows a manufacturer to take a deliberate approach to resetting bond values if sales volumes change substantially over time.
- Change the protocol for adjusting thresholds and bond values for inflation. Small, annual changes create confusion and an implementation burden, with very small incremental benefit. To streamline that process and still account for the cumulative effects of inflation, we are specifying that we will adjust the thresholds and bond values in 2020, and every ten years after that, using a less precise rounding protocol. These changes will not require rulemaking to take effect, but we will likely modify the regulation to reflect these periodic adjustments.

V. Evaporative Test Procedures for Nonroad Equipment

We specify evaporative emission standards, test procedures, and certification requirements in 40 CFR part 1060. This includes measurement procedures for fuel permeation through fuel lines and fuel tanks, and for diurnal emissions from fuel tanks. We are making the following changes to these regulations:

- Clarify that boat builders and other equipment manufacturers that install uncertified components are required to certify those fuel-system components as if they were component manufacturers. The original regulatory language described a requirement for equipment manufacturers to certify as equipment manufacturers if they were installing uncertified components, but we have

found that the certification process is most straightforward if we treat them as component manufacturers.

• The test procedures originally allowed for manufacturers to use good engineering judgment to address technical concerns related to measuring emissions from narrow-diameter fuel lines. In 2013, SAE published a voluntary consensus standard (SAE J2996) specifying measurement procedures for these narrow-diameter fuel lines. We agree that the SAE standard reflects good engineering judgment in the effort to measure emissions and are therefore incorporating this standard by reference in § 1060.515. This alternative SAE standard was designed for Small SI products, but it may be used in other applications as well; note, however, that U.S. Coast Guard requires measurements based on SAE J1527 in some cases. We are including the following clarifications and adjustments related to the specified SAE standards for all fuel-line permeation testing: (1) The test requires emission sampling over a 14-day period; (2) Two days of non-testing per week are allowed to accommodate weekend work schedules; (3) To remove any ambiguity from the published SAE standards, we are stating in our regulations that testing must occur at 23±2 °C; and (4) The final test result is based on a simple arithmetic average of measured emission values over the 14-day sampling period. These changes allow for internal consistency, and generally align with the procedures adopted by California ARB. To the extent that there are remaining differences, manufacturers may ask for approval to use different procedures under § 1060.505(c)(2) or (c)(3).

• Correct a typographical error in the kPa pressure value for preconditioning fuel tanks for a permeation measurement. The psi value in the regulation is correct.

• Correct the sample calculation for determining an emission result from a diurnal emission test.

• Adjust the procedure to account for buoyancy effects in tank permeation measurements by replacing the requirement to use two identical tanks with a requirement to use a second tank that has a total volume that is within 5 percent of the test tank's total volume. This will allow manufacturers and test labs to rely on a smaller number of stock fuel tanks to make the necessary but minor corrections that result from fluctuating atmospheric pressure.

• Adjust and clarify diurnal test procedures: (1) Add a specification for in-tank thermocouples for tracking fuel temperature for testing marine fuel tanks; (2) Replace the hourly profile of fuel temperatures with clearer specification about tracking test fuel temperature from a specified starting point to a specified (calculated) endpoint. The vapor generation should be nearly constant between test runs as long as fuel temperature continues to increase from the low temperature to the high temperature; (3) Standardize the procedure for purging the evaporative canister to prepare for testing based on a simulation of the in-use experience; this is based on engine purge for land-based applications, and on passive (ambient) purge for marine applications. This canister preconditioning is a necessary step to establish a known starting point for designing a system that meets the diurnal emission standard; and (4) Include temperature tolerance bands for the diurnal temperature cycle. Note that we are not proposing or requesting comment on changing the test procedure for marine fuel tanks to base the temperature profile on ambient temperatures instead of fuel temperatures.

• Establish a gravimetric test method for determining mass of emissions for tanks with a diurnal emission standard of at least 2.0 grams of hydrocarbon. Emission test procedures involving an emission standard of less than 2.0 grams of hydrocarbon need the more accurate measurements available from using a flame ionization detector (FID) within a sealed enclosure.

VI. Portable Fuel Containers

On February 26, 2007, EPA adopted a set of requirements to reduce emissions from portable fuel containers (PFC) at 40 CFR part 59, subpart F (72 FR 8533). EPA review of PFC designs and discussions with PFC manufacturers suggest that the manufacturers may have read the provisions of 40 CFR part 59, subpart F, too narrowly and that their interpretations may have unnecessarily constrained some design approaches that may have otherwise allowed for improved in-use performance and consumer satisfaction. EPA did not intend to impact manufacturer design approaches beyond those deemed by the manufacturer as necessary to meet the emission control requirements as otherwise specified in 40 CFR part 59, and is including language in this rule to clarify regulatory requirements that apply to PFCs. Specifically, the revised regulation states that it is allowable for manufacturers to design PFCs with vents to relieve pressure, provided that the venting device is in place during emission testing, and provided that the venting device closes automatically when not in use.

The modifications to 40 CFR part 59, subpart F, do not change the regulatory requirements with regard to emission standards and test procedures, but better define some elements of design and clarify how various approaches would be considered in testing. Upon seeing these modifications to the regulations, PFC manufacturers may elect to pursue design approaches they deem appropriate, which they may have thought were not available to them previously.

VII. MARPOL Annex VI Implementation

The Act to Prevent Pollution from Ships (APPS) implements the provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI for the United States (33 U.S.C. 1901–1912). EPA adopted regulations in 2010 to summarize these requirements and to describe engine certification procedures and other relevant provisions as specified in APPS (75 FR 22896, April 30, 2010). MARPOL Annex VI has been amended since issuance of that **Federal Register** notice to include designation of the North American ECA and the U.S. Caribbean Sea ECA and various other changes. We are amending 40 CFR part 1043 in this rulemaking to align the regulations with the amendments of MARPOL Annex VI to facilitate stakeholder compliance, and to correct certain technical errors.

First, the most fundamental step in updating 40 CFR part 1043 is to cite the 2013 publication of MARPOL Annex VI and the further amendments concluded at MEPC 66 in April 2014 (see 40 CFR 1043.100). Likewise, MARPOL Annex VI was recently amended to waive the fuel-sulfur requirements for certain steamships until January 1, 2020. Part 1043 already includes such a waiver for steamships operating in the Great Lakes. We are codifying the additional temporary steamship exemption in § 1043.97. Note that covered steamships will be required to comply with the relevant sulfur limits when the exemption expires on January 1, 2020.

Second, we inadvertently adopted regulatory language in 40 CFR part 1043 that differs from the language of Annex VI. For example, we originally adopted the provisions in 40 CFR part 1043 with an erroneous date, stating that the 0.10% fuel-sulfur standard applies starting January 1, 2016, which should be January 1, 2015. The Annex VI specification is enforceable with or without this correction in 40 CFR part 1043, but we want to make the change to avoid any possible confusion. We also identified the NO_X standards based

on an engine's model year; this should identify the applicability of NO_X standards based on the build date of new vessels, or on the date of major modifications in other circumstances. We are correcting these errors in part 1043.

Third, we are adding clarifying language relating to public vessels. MARPOL Annex VI exempts public vessels from engine standards and fuel requirements. Public vessels are defined as ''warships, naval auxiliary vessels, and other vessels owned or operated by a sovereign country when engaged in noncommercial service.'' We want to clarify that any vessel that has a national security exemption (for engines or fuel) is automatically considered a public vessel.

Fourth, we are clarifying regulatory provisions to address whether or how emission credits apply for EPA certificates and EIAPP certificates. Engine manufacturers are interested in getting an EPA certificate under 40 CFR part 1042 and an EIAPP certificate under 40 CFR part 1043 for the same engine. This would allow them maximum flexibility in selling engines to boat builders for installation in vessels used in domestic or international service. Certification to EPA standards under 40 CFR part 1042 allows manufacturers to use emission credits to make some engines with emission levels that are above the specified standard. MARPOL Annex VI and 40 CFR part 1043 do not have such an allowance. We are modifying the regulation to clarify that an engine may not be covered by both an EPA certificate and an EIAPP certificate if its certification under 40 CFR part 1042 depends on using emission credits to allow for an emission level above the specified standard. If an engine has emission levels below the specified standard and it is used to generate emission credits under 40 CFR part 1042, this would not disqualify an engine from also getting an EIAPP certificate under 40 CFR part 1043.

Lastly, we are making clarifying edits to the fuels regulations under 40 CFR part 80 for MARPOL Annex VI implementation; the table below lists these edits. While some of these edits are purely corrections to typographical errors, we are also making edits to clarify the treatment of fuels under MARPOL Annex VI, Regulation 3 and Regulation 4. Regulation 3 authorizes trial programs that involve a permit allowing a ship operator to use fuel that exceeds the fuel-sulfur standards that would otherwise apply. Regulation 4 allows for flag states to approve the use of high-sulfur fuel for vessels that are equipped with technology that allows for an equivalent level of control. Specifically, we are amending the definition of ''ECA marine fuel'' at 40 CFR 80.2(ttt) to clarify that vessels with Regulation 3 permits or Regulation 4 equivalencies can in fact use fuel that exceeds the ECA marine fuel sulfur standard. Further, to provide producers, distributors, and marketers of fuel for use under a Regulation 3 permit or a Regulation 4 equivalency the ability to denote such fuel on their PTDs, we are amending 40 CFR 80.590 to provide these parties with express PTD statements that may be used in lieu of the statements that are currently in the regulations.

MARPOL Annex VI-Related Amendments to 40 CFR Part 80, Subpart I

Section	Description of change
80.2(ttt)	Amended the definition of ECA marine fuel to clarify that fuel allowed by MARPOL Annex VI Regulation 3 permits or Regulation 4 equivalencies under 40 CFR part 1043 is not required to meet the ECA marine fuel requirements.
80.510 section heading	Amending to clarify that this section applies to refiners and importers.
80.510(k) and 80.511(b)(9)	Amending to clarify that fuel allowed by Regulation 3 permits or Regulation 4 equivalencies is not required to meet the ECA marine fuel requirements.
80.574(b)	Amended to update the address for submitting ECA marine fuel alternative label requests.
80.590(b)	Amended to allow for PTD statements for use with fuel permitted for use under MARPOL Annex VI Regulation 3, Regulation 4, or both.
80.607 (a), (c), (d), (f)	Amended to remove references to ECA marine fuel, as research and development permits are separate from Regulation 3 permits under 40 CFR part 1043.
80.608(d)	Amended to correct minor typographical errors.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act

This action does not impose any new information collection burden under the PRA, since it merely clarifies and corrects existing regulatory language. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control numbers as noted in the table below.

Regulatory citation	Item	OMB Control No.
40 CFR part 86	Light-duty vehicle standards	2060–0104
40 CFR part 86	Heavy-duty vehicle standards	2060–0287
40 CFR part 86	In-use verification program	2060–0086
40 CFR part 80	In-use fuel standards	2060–0437
40 CFR part 1043	MARPOL Annex VI	2060–0641
40 CFR part 1054	Small SI exhaust emission standards	2060–0338
40 CFR part 1060	Nonroad SI evaporative emission standards	2060–0321, 2060–0338

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This rule merely clarifies and corrects existing regulatory language. We therefore anticipate no costs and therefore no regulatory burden associated with this rule. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

D. Unfunded Mandates Reform Act

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments. Requirements for the private sector do not exceed $100 million in any one year.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This rule merely corrects and clarifies regulatory provisions. Tribal governments would be affected only to the extent they purchase and use regulated vehicles or engines. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer Advancement Act

This action involves technical standards. EPA has decided to use the following voluntary consensus standards:

Organization	Standard	Available from
SAE International	SAE J2996, Small Diameter Fuel Line Permeation Test Procedure, Issued January 2013	*www.sae.org.*
ASTM International	ASTM D86–07, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved January 15, 2007.	*www.astm.org.*
ASTM International	ASTM standard practice D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012.	*www.astm.org.*
ASTM International	ASTM standard practice D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010.	*www.astm.org.*
ASTM International	ASTM standard practice D5842–14, Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014.	*www.astm.org.*
ASTM International	ASTM standard practice D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013.	*www.astm.org.*

This action also involves technical standards for marine diesel engines. There are no voluntary consensus documents that address these technical standards. EPA has therefore decided to use the following standards from the International Maritime Organization:

Organization	Standard	Available from
International Maritime Organization.	MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, Third Edition, 2013.	*www.imo.org.*
International Maritime Organization.	NO_X Technical Code 2008, 2013 Edition	*www.imo.org.*
International Maritime Organization.	Annex 12, Resolution MEPC.251(66) from the Report of the Marine Environment Protection Committee on its Sixty-Sixth Session, April 25, 2014.	*www.imo.org.*

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This action is not expected to have any adverse human health or environmental impacts; as a result, the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations.

K. Congressional Review Act

This action is subject to the CRA, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

IX. Statutory Provisions and Legal Authority

Statutory authority for this action comes from 42 U.S.C. 7401–7671q and 33 U.S.C. 1901–1912.

List of Subjects

40 CFR Part 59

Environmental protection, Air pollution control, Confidential business information, Labeling, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

40 CFR Part 80

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Diesel fuel, Fuel additives, Gasoline, Imports, Incorporation by reference, Labeling, Motor vehicle pollution, Penalties, Petroleum, Reporting and recordkeeping requirements.

40 CFR Part 85

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 86

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 600

Environmental protection, Administrative practice and procedure, Electric power, Fuel economy, Labeling, Reporting and recordkeeping requirements.

40 CFR Part 1037

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1043

Environmental protection, Administrative practice and procedure, Air pollution control, Imports, Incorporation by reference, Vessels, Reporting and recordkeeping requirements.

40 CFR Parts 1051 and 1054

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1060

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Incorporation by reference, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Parts 1065 and 1066

Environmental protection, Administrative practice and procedure, Reporting and recordkeeping requirements, Research.

Dated: February 2, 2015.

Gina McCarthy,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as set forth below.

PART 59—NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR CONSUMER AND COMMERCIAL PRODUCTS

■ 1. The authority citation for part 59 continues to read as follows:

Authority: 42 U.S.C. 7414 and 7511b(e).

Subpart F—[Amended]

■ 2. Section 59.611 is amended by revising paragraph (c)(1)(ii) to read as follows:

§ 59.611 What evaporative emission requirements apply under this subpart?

* * * * *

(c) * * *

(1) * * *

(ii) For anyone to design, manufacture, or install emission control systems with features that disable, deactivate, reduce effectiveness, or bypass the emission controls, either actively or passively. However, you may include a vent that the operator can open to bypass emission controls if that vent closes automatically (*i.e.,* without operator involvement). You may include such design features if they operate during emission tests described in subpart F of this part. For example, you may include an integrated or external manually activated device in the portable fuel container's design to temporarily relieve pressure, provided that the device is in place during emission testing and closes automatically when not in use.

* * * * *

■ 3. Section 59.623 is amended by revising paragraph (a) to read as follows:

§ 59.623 What must I include in my application?

* * * * *

(a) Describe the emission family's specifications and other basic parameters of the emission controls. List each distinguishable configuration in the emission family. Include descriptions and part numbers for all detachable components such as spouts and caps and describe any devices designed for venting pressure, if applicable.

* * * * *

■ 4. Section 59.625 is amended by adding paragraph (b)(6) to read as follows:

§ 59.625 How do I select emission families?

* * * * *

(b) * * *

(6) Strategy for venting pressure.

* * * * *

PART 80—REGULATION OF FUELS AND FUEL ADDITIVES

■ 5. The authority citation for part 80 continues to read as follows:

Authority: 42 U.S.C. 7414, 7521, 7542, 7545, and 7601(a).

Subpart A—General Provisions

■ 6. Section 80.2 is amended by:

■ a. Revising paragraph (ttt).

■ b. Removing and reserving paragraph (cccc).

The revisions read as follows:

§ 80.2 Definitions.

* * * * *

(ttt) *ECA marine fuel* is diesel, distillate, or residual fuel that meets the criteria of paragraph (ttt)(1) of this section, but not the criteria of paragraph (ttt)(2) of this section.

(1) All diesel, distillate, or residual fuel used, intended for use, or made available for use in Category 3 marine vessels while the vessels are operating within an Emission Control Area (ECA), or an ECA associated area, is ECA marine fuel, unless it meets the criteria of paragraph (ttt)(2) of this section.

(2) ECA marine fuel does not include any of the following fuel:

(i) Fuel used by exempted or excluded vessels (such as exempted steamships), or fuel used by vessels allowed by the U.S. government pursuant to MARPOL Annex VI Regulation 3 or Regulation 4

to exceed the fuel sulfur limits while operating in an ECA or an ECA associated area (see 33 U.S.C. 1903).

(ii) Fuel that conforms fully to the requirements of this part for NRLM diesel fuel (including being designated as NRLM).

(iii) Fuel used, or made available for use, in any diesel engines not installed on a Category 3 marine vessel.

* * * * *

(cccc) [Reserved]

* * * * *

■ 7. Section 80.8 is amended by revising paragraph (e)(1) to read as follows:

§ 80.8 Sampling methods for gasoline, diesel fuel, fuel additives, and renewable fuels.

* * * * *

(e) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012 (''ASTM D4057'').

(ii) ASTM D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D4177'').

(iii) ASTM D5842–14, Standard Practice for Sampling and Handling of Fuels for Volatility Measurement, approved January 15, 2014 (''ASTM D5842'').

(iv) ASTM D5854–96 (Reapproved 2010), Standard Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D5854'').

* * * * *

Subpart D—Reformulated Gasoline

■ 8. Section 80.46 is amended by:
■ a. Revising paragraph (b)(1);
■ b. Revising paragraph (c)(2) introductory text;
■ c. Revising paragraph (d);
■ d. Revising paragraph (e);
■ e. Revising paragraph (f)(1);
■ f. Revising paragraph (g)(1); and
■ g. Revising paragraph (h)(1).

The revisions read as follows:

§ 80.46 Measurement of reformulated gasoline and conventional gasoline fuel parameters.

* * * * *

(b) * * *

(1) Through December 31, 2015, olefin content must be determined using ASTM D1319. Beginning January 1, 2016, the olefin content of gasoline must be determined by a test method approved under § 80.47.

* * * * *

(c) * * *

(2) Beginning January 1, 2016, RVP must be determined by a test method approved under § 80.47, except as provided in paragraph (c)(2)(i) of this section.

* * * * *

(d) *Distillation.* Through December 31, 2015, distillation parameters must be determined using ASTM D86. Beginning January 1, 2016, the distillation parameters must be determined by a test method approved under § 80.47. (Note: The precision estimates for reproducibility in ASTM D86–12 do not apply; see § 80.47(h).)

(e) *Benzene.* Through December 31, 2015, benzene content must be determined using ASTM D3606, except that instrument parameters shall be adjusted to ensure complete resolution of the benzene, ethanol and methanol peaks because ethanol and methanol may cause interference with ASTM D3606 when present. Beginning January 1, 2016, the benzene content must be determined by a test method approved under § 80.47.

(f)(1) Through December 31, 2015, aromatic content must be determined using ASTM D5769, except the sample chilling requirements in section 8 of this standard method are optional. Beginning January 1, 2016, the aromatic content must be determined by a test method approved under § 80.47.

* * * * *

(g) * * * (1) Through December 31, 2015, oxygen and oxygenate content must be determined using ASTM D5599. Beginning January 1, 2016, oxygen and oxygenate content must be determined by a test method approved under § 80.47.

* * * * *

(h) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D86–12, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved December 1, 2012 (''ASTM D86'').

(ii) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319'').

(iii) ASTM D2622–10, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, approved February 15, 2010 (''ASTM D2622'').

(iv) ASTM D3120–08, Standard Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry, approved December 15, 2008 (''ASTM D3120'').

(v) ASTM D3246–11, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, approved June 1, 2011 (''ASTM D3246'').

(vi) ASTM D3606–10, Standard Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography, approved October 1, 2010 (''ASTM D3606'').

(vii) ASTM D4468–85 (Reapproved 2011), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, approved November 1, 2011 (''ASTM D4468'').

(viii) ASTM D4815–13, Standard Test Method for Determination of MTBE, ETBE, TAME, DIPE, tertiary-Amyl Alcohol and C1 to C4 Alcohols in Gasoline by Gas Chromatography, approved October 1, 2013 (''ASTM D4815'').

(ix) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191'').

(x) ASTM D5453–12, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence, approved November 1, 2012 (''ASTM D5453'').

(xi) ASTM D5599–00 (Reapproved 2010), Standard Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection, approved October 1, 2010 (''ASTM D5599'').

(xii) ASTM D5769–10, Standard Test Method for Determination of Benzene, Toluene, and Total Aromatics in Finished Gasolines by Gas Chromatography/Mass Spectrometry, approved May 1, 2010 (''ASTM D5769'').

(xiii) ASTM D6550–10, Standard Test Method for Determination of Olefin Content of Gasolines by Supercritical-Fluid Chromatography, approved October 1, 2010 (''ASTM D6550'').

(xiv) ASTM D6667–10, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum

Gases by Ultraviolet Fluorescence, approved October 1, 2010 (''ASTM D6667'').

(xv) ASTM D6920–13, Standard Test Method for Total Sulfur in Naphthas, Distillates, Reformulated Gasolines, Diesels, Biodiesels, and Motor Fuels by Oxidative Combustion and Electrochemical Detection, approved September 15, 2013 (''ASTM D6920'').

(xvi) ASTM D7039–13, Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosine, Biodiesel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry, approved September 15, 2013 (''ASTM D7039'').

* * * * *

■ 9. Section 80.47 is amended by:
■ a. Revising paragraph (a)(7);
■ b. Revising paragraphs (b)(1), (b)(2)(i), and (b)(2)(ii);
■ c. Revising paragraphs (c)(1), (c)(2)(i), and (c)(2)(ii);
■ d. Revising paragraph (d)(1);
■ e. Revising paragraph (e)(1);
■ f. Revising paragraph (f)(1);
■ g. Revising paragraph (g)(1);
■ h. Revising paragraph (h)(1);
■ i. Revising paragraph (i)(1);
■ j. Revising paragraph (j)(1);
■ k. Revising paragraph (l);
■ l. Revising paragraph (m)(6);
■ m. Revising paragraphs (n)(1), (n)(2)(i), and (n)(2)(ii), and removing and reserving paragraph (n)(2)(iv);
■ n. Revising paragraphs (o)(1), (o)(2)(i), (o)(2)(ii), and removing and reserving paragraph (o)(2)(iv);
■ o. Revising paragraphs (p)(1), (p)(3)(i), and (p)(3)(ii), and removing and reserving paragraph (p)(3)(iv); and
■ p. Revising paragraph (r)(1).

The revisions read as follows:

§ 80.47 Performance-based Analytical Test Method Approach.

* * * * *

(a) * * *

(7) *Locally-named reference materials* are gasoline or diesel fuels that are usually from the regular production of the facility where they are used in laboratory quality control efforts and have been analyzed using the designated method (either by the facility's lab or by a reference lab) to obtain an estimate of their concentration.

* * * * *

(b) * * * (1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline sulfur standard at §§ 80.195 and 80.1603, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 1.5 times the repeatability ''r'' divided by 2.77, where ''r'' equals the ASTM repeatability of ASTM D7039 (Example: A 10ppm sulfur gasoline sample: Maximum allowable standard deviation of 20 tests≤1.5*(1.73ppm/2.77)=0.94 ppm). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) * * *

(i) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 1–10 ppm, say 10 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.70 ppm sulfur;

(ii) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 10–20 ppm, say 20 ppm, shall not differ from the ARV of the standard by more than 1.02 ppm sulfur; and

* * * * *

(c) * * * (1) *Precision.* Beginning January 1, 2016, for butane subject to the butane sulfur standard at §§ 80.82, 80.195, 80.340(b) and 80.1603, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available butane must be less than or equal to 1.5 times the repeatability (r) divided by 2.77, where ''r'' equals the ASTM repeatability of ASTM D6667 (Example: A 10 ppm sulfur butane sample: Maximum allowable standard deviation of 20 tests≤1.5*(1.15ppm/2.77) = 0.62 ppm). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) * * *

(i) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 1–10 ppm, say 10 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.47 ppm sulfur;

(ii) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 10–20 ppm, say 20 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.94 ppm sulfur; and

* * * * *

(d) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A gasoline containing 9 Vol% olefins: Maximum allowable standard deviation of 20 tests ≤0.3*(3.06 Vol%) = 0.92 Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(e) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be

arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A gasoline containing 32Vol% aromatics: Maximum allowable standard deviation of 20 tests ≤0.3*(3.7 Vol%) = 1.11Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(f) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D5599 (Example: A gasoline containing 3Mass% total oxygen: Maximum allowable standard deviation of 20 tests ≤0.3*(0.32 Mass%) = 0.10 Mass%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(g) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part and volatility standards at § 80.27, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D5191 (Example: A gasoline having a RVP of 6.8psi: Maximum allowable standard deviation of 20 tests withdrawn from a 250 milliliter container ≤0.3*(0.40psi) = 0.12 psi). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(h) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility in Table 10, Groups 2, 3 and 4 (Automated) of ASTM D86–07 for the initial boiling point, E10, E50, E90 and final boiling point. (Example: A gasoline having an initial boiling point of 26 °C and a final boiling point of 215 °C: Maximum allowable standard deviation of 20 tests for initial boiling point ≤0.3*(8.5 °C) = 2.55 °C, maximum allowable standard deviation of 20 tests for E10 ≤0.3*(3.0+2.64*Sc)°C, maximum allowable standard deviation of 20 tests for E50 ≤0.3*(2.9+3.97*Sc)°C, maximum allowable standard deviation of 20 tests for E90 ≤0.3*(2.0+2.53*Sc) °C, and maximum allowable standard deviation of 20 tests for final boiling point ≤0.3*(10.5 °C) = 3.15 °C), where Sc is the average slope (or rate of change) of the gasoline distillation curve as calculated in accordance with section 13.2 of ASTM D86–07. The 20 results must be a series of tests with a sequential record of analysis and no omissions. Note that the precision criteria described in this paragraph (h)(1) differ from what is specified in ASTM D86–12. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(i) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part and MSAT2 standards at §§ 80.41, 80.101, 80.1230, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.15 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D3606 (Example: A gasoline having a 1Vol% benzene: Maximum allowable standard deviation of 20 tests ≤0.15*(0.18 Vol%) = 0.027Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(j) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle diesel fuel subject to the motor vehicle diesel standards at § 80.520, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available diesel fuel must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A diesel fuel containing 35 Vol% aromatics: maximum allowable standard deviation of 20 tests ≤0.3*(3.3 Vol%) = 0.99Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the

exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(l) *Qualification criteria for Voluntary Consensus Standard Based (VCSB) Method-Defined Parameter Test Methods and Non-voluntary Consensus Standard Based (non-VCSB) Absolute Fuel Parameter of Sulfur in Gasoline and Butane.* (1)(i) Beginning January 1, 2016, the test facility or VCSB include full test method documentation by the Voluntary Consensus Standard Based (VCSB) organization, including a description of the technology and/or instrumentation that makes the method functional.

(ii) For the Non-voluntary Consensus Standard Based (non-VCSB) Absolute Fuel Parameter of Sulfur in Gasoline and Butane, the test facility include full test method documentation, including a description of the technology and/or instrumentation that makes the method functional.

(2)(i) The test facility or VCSB include information reported in the test method that demonstrates the test method meets the applicable precision information for the method-defined fuel parameter as described in this section.

(ii) For the Non-VCSB absolute fuel parameter of sulfur in gasoline and butane, the test facility include information reported in the test method that demonstrates the applicable accuracy criteria as described in § 80.47(b)(2) for gasoline and § 80.47(c)(2) for butane.

(3) The test facility or VCSB include information reported in the test method that demonstrates the test method has been evaluated using ASTM D6708 and whether the comparison is a ''null'' result or whether a correlation equation needs to be applied that predicts designated test method results from the applicable method-defined alternative test method.

(4) The test methods specified at §§ 80.2(w) and 80.46(a)(1), (a)(2), (b)(1), (c)(1), (d)(1), (e)(1), (f)(1), and (g)(1) and in use by a test facility prior to October 28, 2013 are exempt from the requirements of paragraphs (l)(1) through (3) of this section.

(m) * * *

(6) The candidate method-defined non-VCSB test method precision qualification must be conducted in the form of ''between methods reproducibility'' (Rcm) of the candidate method and applicable designated test method as recommended in ASTM D6708, where the Rcm must be equal to or less than 70 percent of the published reproducibility of the applicable designated test method using good laboratory practices.

* * * * *

(n) * * *

(1)(i) *Accuracy SQC.* Every facility shall conduct tests on every instrument with a commercially available gravimetric reference material, or check standard as defined in ASTM D6299 at least three times a year using good laboratory practices. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the test method, the cause of such difference must be investigated by the facility. Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

(2)(i) *Precision SQC.* Every facility shall conduct tests on every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure, if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(o) * * *

(1)(i) *Accuracy SQC.* Every facility shall conduct tests of every instrument with a commercially available check standard as defined in ASTM D6299 at least three times a year using good laboratory practices. The check standard must be an ordinary fuel with levels of the fuel parameter of interest close to either the applicable regulatory standard or the average level of use for the facility. For facilities using a VCSB designated method defined test method, the Accepted Reference Value of the check standard must be determined by the respective designated test method for the fuel parameter following the guidelines of ASTM D6299. Facilities using a VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA-designated test method using appropriate production samples. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the test method, the cause of such difference must be investigated by the facility. Participation in a VCSB ILCP at least three times a year satisfies this Accuracy SQC requirement (Examples of ILCP: ASTM Reformulated Gasoline ILCP or ASTM motor gasoline ILCP). Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus

named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

(2)(i) *Precision SQC.* Every facility shall conduct tests of every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(p) * * *

(1)(i) *Accuracy SQC for Non-VCSB Method-Defined test methods with minimal matrix effects.* Every facility shall conduct tests on every instrument with a commercially available check standard as defined in the ASTM D6299 at least three times a year using good laboratory practices. The check standard must be an ordinary fuel with levels of the fuel parameter of interest close to either the applicable regulatory standard or the average level of use for the facility. Facilities using a Non-VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in either a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the fuel parameter's respective designated test method, the cause of such difference must be investigated by the facility. Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

* * * * *

(3)(i) *Precision SQC.* Every facility shall conduct tests on every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure, if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(r) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D86–07, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved January 15, 2007 (''ASTM D86'').

(ii) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319'').

(iii) ASTM D3606–10, Standard Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography, approved October 1, 2010 (''ASTM D3606'').

(iv) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191'').

(v) ASTM D5599–00 (Reapproved 2010), Standard Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection, approved October 1, 2010 (''ASTM D5599'').

(vi) ASTM D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013 (''ASTM D6299'').

(vii) ASTM D6667–10, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, approved October 1, 2010 (''ASTM D6667'').

(viii) ASTM D6708–13, Standard Practice for Statistical Assessment and Improvement of Expected Agreement Between Two Test Methods that Purport to Measure the Same Property of a Material, approved May 1, 2013 (''ASTM D6708'').

(ix) ASTM D6792–13, Standard Practice for Quality System in Petroleum Products and Lubricants Testing Laboratories, approved May 15, 2013 (''ASTM D6792'').

(x) ASTM D7039–13, Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosine, Biodiesel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry, approved September 15, 2013, (''ASTM D7039'').

* * * * *

■ 10. Section 80.75 is amended by revising paragraph (a)(2)(xi)(G) to read as follows:

§ 80.75 Reporting requirements.

* * * * *

(a) * * *

(2) * * *

(xi) * * *

(G) The properties of the pentane batch specified by the pentane supplier, or the properties specified in § 80.86(a)(3) or (a)(4), as appropriate along with the test method used to measure these properties.

* * * * *

■ 11. Section 80.82 is amended by revising paragraph (e)(1) to read as follows:

§ 80.82 Butane blending.

* * * * *

(e)(1) When butane is blended with conventional gasoline under this section during the period May 1 through September 15, the refiner shall demonstrate through sampling and testing, using the test method for Reid vapor pressure in § 80.46 or § 80.47, as applicable, that each batch of conventional gasoline blended with butane meets the volatility standards specified in § 80.27 and in any EPA approved SIP.

* * * * *

■ 12. Section 80.85 is amended by revising paragraphs (a) introductory text, (b) introductory text, (g), and (i) to read as follows:

§ 80.85 Pentane blending.

* * * * *

(a) Any refiner that blends pentane for which the refiner has product transfer documents from a registered pentane supplier which demonstrate that the pentane is blender-commercial grade, as defined in § 80.86(a)(3), may demonstrate compliance with the standards in this part based on the properties specified in § 80.86(a)(3), or the properties specified by the pentane supplier, provided that the refiner does all the following:

* * * * *

(b) Any refiner that blends pentane for which the refiner has product transfer documents from a registered pentane supplier which demonstrate that the pentane is blender-non-commercial grade, as defined in § 80.86(a)(4), may demonstrate compliance with the standards in this part based on the properties specified in § 80.86(a)(4), or the properties specified by the pentane supplier, provided that the refiner does all the following:

* * * * *

(g) All pentane blended into gasoline during the annual averaging period must be included in annual average compliance calculations by a refiner for each of its refineries.

* * * * *

(i) If a refiner does not fully implement the requirements of this section, it may not rely on test results from the pentane producer, and may only blend pentane with gasoline if it fully complies with all applicable requirements of this part 80, including the sampling and testing requirements applicable to refiners who produce gasoline by adding blendstocks to PCG.

■ 13. Section 80.86 is amended by revising paragraphs (b)(2)(iv), (b)(3)(iii), and (c) to read as follows:

§ 80.86 Requirements for producers and importers of pentane used by pentane blenders.

* * * * *

(b) * * *

(2) * * *

(iv) A description of the production facility which demonstrates that the facility is capable of producing pentane that is compliant with the requirements of this section without significant modifications to the existing facility.

* * * * *

(3) * * *

(iii) A description of the importer's operating facility which demonstrates that the importer is capable of providing pentane that is compliant with the requirements of this section without significant modifications to the existing facility.

* * * * *

(c) *PTDs.* The producer or importer of pentane for use by pentane blenders must initiate a PTD for each batch that it ships from its facility which contains the information specified in paragraphs (c)(1) and (c)(2) of this section and the statement in paragraph (c)(3) or (c)(4) of this section, as applicable.

(1) The pentane producer or importer company name and facility registration number issued by EPA pursuant to paragraph (b) of this section.

(2) The name and address of the transferor and transferee.

(3) ''Blender commercial grade pentane for use by pentane blenders''.

(4) ''Blender non-commercial grade pentane for use by pentane blenders''.

(5) PTDs that are compliant with the requirements in paragraph (c) of this section must be transferred from each party transferring pentane for use by pentane blenders to each party that receives pentane for use by pentane blenders through to the pentane blender.

(6) Alternative PTD language to that specified in paragraphs (c)(3) and (c)(4) of this section may be used as approved by EPA.

* * * * *

Subpart H—Gasoline Sulfur

■ 14. Section 80.315 is amended by revising paragraph (b)(1)(iii) to read as follows:

§ 80.315 How are credits used and what are the limitations on credit use?

* * * * *

(b) * * *

(1) * * *

(iii) Any credit transfer takes place no later than March 31 following the calendar year averaging period when the credits are used.

* * * * *

■ 15. Section 80.330 is amended by:

■ a. Revising paragraphs (b)(1)(i), (b)(1)(ii), and (b)(2);

■ b. Revising paragraph (c)(1);

■ c. Revising paragraph (d)(2); and

■ d. Revising paragraph (e).

The revisions read as follows:

§ 80.330 What are the sampling and testing requirements for refiners and importers?

* * * * *

(b) * * *

(1) * * *

(i) ASTM D4057.

(ii) Samples collected under the applicable procedures in ASTM D5842 may be used for measuring sulfur content if there is no contamination present that could affect the sulfur test result.

(2) Automatic sampling of petroleum products in pipelines shall be performed according to the applicable procedures specified in ASTM D4177.

(c) * * *

(1) For purposes of paragraph (a) of this section, refiners and importers shall use the method provided in § 80.46(a)(1) or one of the alternative test methods listed in § 80.46(a)(3) to measure the sulfur content of gasoline they produce or import through December 31, 2015. Beginning January 1, 2016, for purposes of paragraph (a) of this section, refiners and importers shall use an approved method in § 80.47.

* * * * *

(d) * * *

(2) Except as provided in paragraph (d)(1) of this section, any ASTM sulfur test method for gaseous fuels may be used for quality assurance testing under §§ 80.340(b)(4) and 80.400, if the protocols of the ASTM method are followed and the alternative test method is correlated to the method provided in § 80.46(a)(2) through December 31, 2015, or in § 80.47 beginning January 1, 2016.

(e) *Materials incorporated by reference.* The published materials identified in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved materials are available for inspection at the Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. These approved materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* In addition, these materials are available from the sources listed below.

(1) ASTM International material. The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012 (''ASTM D4057'').

(ii) ASTM D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D4177'').

(iii) ASTM D5842–14, Standard Practice for Sampling and Handling of Fuels for Volatility Measurement, approved January 15, 2014 (''ASTM D5842'').

(2) [Reserved]

Subpart I— Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel

■ 16. Section 80.510 is amended by revising the section heading and paragraph (k) to read as follows:

§ 80.510 What are the standards and marker requirements for refiners and importers for NRLM diesel fuel and ECA marine fuel?

* * * * *

(k) Beginning June 1, 2014, all ECA marine fuel is subject to a maximum per-gallon sulfur content of 1,000 ppm. Note that ECA marine fuel does not include fuel used in exempted steamships (or other exempted or excluded vessels) or fuel that exceeds the fuel sulfur limits while operating in an ECA or an ECA associated area as allowed by the U.S. government consistent with MARPOL Annex VI Regulation 3 or Regulation 4 (see § 80.2(ttt)).

■ 17. Section 80.511 is amended by revising paragraph (b)(9) to read as follows:

§ 80.511 What are the per-gallon and marker requirements that apply to NRLM diesel fuel, ECA marine fuel, and heating oil downstream of the refiner or importer?

* * * * *

(b) * * *

(9) The per-gallon sulfur standard of § 80.510(k) shall apply to all ECA marine fuel beginning August 1, 2014, for all downstream locations other than retail outlets or wholesale purchaser-consumer facilities, shall apply to all ECA marine fuel beginning October 1, 2014, for retail outlets and wholesale purchaser-consumer facilities, and shall apply to all ECA marine fuel beginning December 1, 2014, for all locations. Note that ECA marine fuel does not include fuel used in exempted steamships (or other exempted or excluded vessels) or fuel that exceeds the fuel sulfur limits while operating in an ECA or an ECA associated area as allowed by the U.S. government consistent with MARPOL Annex VI Regulation 3 or Regulation 4 (see § 80.2(ttt)).

* * * * *

■ 18. Section 80.574 is amended by revising paragraph (b) to read as follows:

§ 80.574 What labeling requirements apply to retailers and wholesale purchaser-consumers of ECA marine fuel beginning June 1, 2014?

* * * * *

(b) Alternative labels to those specified in paragraph (a) of this section may be used as approved by EPA. Send requests to—

(1) *For U.S. Mail:* U.S. EPA, Attn: ECA Marine Fuel Alternative Label Request, 6406J, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

(2) *[Reserved]*

■ 19. Section 80.584 is amended by revising paragraph (a) to read as follows:

§ 80.584 What are the precision and accuracy criteria for approval of test methods for determining the sulfur content of motor vehicle diesel fuel, NRLM diesel fuel, and ECA marine fuel?

(a) *Precision.* (1) For motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.520(a)(1) and NRLM diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.510(b) and (c), a standard deviation less than 0.72 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 5–15 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) For motor vehicle diesel fuel subject to the 500 ppm sulfur standard of § 80.520(c), and for NRLM diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a), of a standard deviation less than 9.68 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 200–500 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(3) For ECA marine fuel subject to the 1,000 ppm sulfur standard of § 80.510(k), of a standard deviation less than 18.07 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 700–1,000 ppm. The 20 results must be a

series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

■ 20. Section 80.585 is amended by:

■ a. Revising paragraph (a);

■ b. Revising paragraphs (e)(1), (e)(2), and (e)(4); and

■ c. Adding a new paragraph (f).

The revisions and addition read as follows:

§ 80.585 What is the process for approval of a test method for determining the sulfur content of diesel or ECA marine fuel?

(a)(1) *Approval of test methods approved by voluntary consensus-based standards bodies.* Through December 31, 2015, for such a method to be approved, the following information must be submitted to the Administrator by each test facility for each test method that it wishes to have approved: Any test method approved by a voluntary consensus-based standards body, such as ASTM International or the International Organization for Standardization (ISO), shall be approved as a test method for determining the sulfur content of diesel fuel if it meets the applicable accuracy and precision criteria under § 80.584. The approval of a test method is limited to the single test facility that performed the testing for accuracy and precision. The individual facility must submit the accuracy and precision results for each method, including information on the date and time of each test measurement used to demonstrate precision, following procedures established by the Administrator.

(2) *Approval of test methods approved by voluntary consensus-based standards bodies.* Beginning January 1, 2016, any test method approved by a voluntary consensus-based standards body, such as the ASTM International or the International Organization for Standardization (ISO), shall be approved as a test method for determining the sulfur content of diesel fuel if it meets the applicable accuracy and precision criteria under § 80.584. These records must be kept by the facility for a period of five years.

* * * * *

(e) * * *

(1) Follow all mandatory provisions of ASTM D6299 and construct control charts from the mandatory quality control testing prescribed in paragraph 7.1 of the reference method, following guidelines under A 1.5.1 for individual observation charts and A 1.5.4 for moving range charts.

(2) Follow paragraph 7.3.1 of ASTM D6299 to check standards using a reference material at least monthly or following any major change to the laboratory equipment or test procedure. Any deviation from the accepted reference value of a check standard greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard), 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard), or 36.14 ppm (for ECA marine fuel subject to the 1,000 ppm sulfur standard must be investigated.

* * * * *

(4) Upon discovery of any quality control testing violation of paragraph A 1.5.1.3 for individual observation charts or A1.5.4.1 and A1.5.4.2 for moving range charts of ASTM D6299, or any check standard deviation greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard), 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard), or 36.14 ppm (for ECA marine fuel subject to the 1,000 ppm sulfur standard), conduct an investigation into the cause of such violation or deviation and, after restoring method performance to statistical control, retest retained samples from batches originally tested since the last satisfactory quality control material or check standard testing occasion.

(f) *Materials incorporated by reference.* The published materials identified in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved materials are available for inspection at the Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. These approved materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* In addition, these materials are available from the sources listed below.

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013 (''ASTM D6299'').

(ii) [Reserved]

(2) [Reserved]

■ 21. Section 80.590 is amended by revising paragraphs (a)(7)(vii) and (b) to read as follows:

§ 80.590 What are the product transfer document requirements for motor vehicle diesel fuel, NRLM diesel fuel, heating oil, ECA marine fuel, and other distillates?

(a) * * *

(7) * * *

(vii) *ECA marine fuel.* For ECA marine fuel produced or imported beginning June 1, 2014, ''1,000 ppm sulfur (maximum) ECA marine fuel. For use in Category 3 marine vessels only. Not for use in engines not installed on C3 marine vessels.''

(b) Any of the following may be substituted for the descriptions in paragraph (a) of this section, as appropriate:

(1) ''This is high sulfur diesel fuel for use only in Guam, American Samoa, or the Northern Mariana Islands.''

(2) ''This diesel fuel is for export use only.''

(3) ''This diesel fuel is for research, development, or testing purposes only.''

(4) ''This diesel fuel is for use in diesel highway vehicles or nonroad equipment under an EPA-approved national security exemption only.''

(5) ''High sulfur fuel. For use only in ships with an approved permit as allowed by MARPOL Annex VI, Regulation 3.''

(6) ''High sulfur fuel. For use only in ships as allowed by MARPOL Annex VI, Regulation 4.''

(7) ''High sulfur fuel. For use only in ships as allowed by MARPOL Annex VI, Regulation 3 or Regulation 4.''

* * * * *

■ 22. Section 80.597 is amended by revising paragraph (d)(3) introductory text to read as follows:

§ 80.597 What are the registration requirements?

* * * * *

(d) * * *

(3) Except as prescribed in paragraph (d)(6) of this section, each entity as defined in § 80.502 that intends to deliver or receive custody of any of the following fuels beginning June 1, 2014, must register with EPA by December 31, 2012, or prior to commencement of producing, importing, or distributing any distillate or residual fuel listed in this paragraph (d)(3):

* * * * *

■ 23. Section 80.607 is amended by:
■ a. Revising the section heading;
■ b. Revising paragraph (a);
■ c. Revising paragraphs (c)(3)(iv) and (c)(4)(iv);
■ d. Revising paragraphs (d)(1) and (d)(3); and
■ e. Revising paragraph (f).

The revisions and addition read as follows:

§ 80.607 What are the requirements for obtaining an exemption for diesel fuel used for research, development or testing purposes?

(a) *Written request for a research and development exemption.* Any person may receive an exemption from the provisions of this subpart for MVNRLM diesel fuel used for research, development, or testing purposes by submitting the information listed in paragraph (c) of this section to: U.S. EPA—Attn: Research and Development Exemption Request, 6406J, 1200 Pennsylvania Avenue NW., Washington, DC 20460.

* * * * *

(c) * * *

(3) * * *

(iv) The quantity of fuel which does not comply with the requirements of §§ 80.520 and 80.521 for motor vehicle diesel fuel, or § 80.510 for NRLM diesel fuel.

(4) * * *

(iv) The manner in which the party will ensure that the research and development fuel will be segregated from motor vehicle diesel fuel or NRLM diesel fuel, as applicable, and how fuel pumps will be labeled to ensure proper use of the research and development fuel.

* * * * *

(d) *Additional requirements.* (1) The product transfer documents associated with research and development diesel fuel must comply with the product transfer document requirements of § 80.590(b)(3).

* * * * *

(3) The research and development fuel must be kept segregated from non-exempt MVNRLM diesel fuel at all points in the distribution system.

* * * * *

(f) *Effects of exemption.* Motor vehicle diesel fuel or NRLM diesel fuel that is subject to a research and development exemption under this section is exempt from other provisions of this subpart provided that the fuel is used in a manner that complies with the purpose of the program under paragraph (c) of this section and the requirements of this section.

* * * * *

■ 24. Section 80.608 is amended by revising paragraph (d) to read as follows:

§ 80.608 What requirements apply to diesel fuel and ECA marine fuel for use in the Territories?

* * * * *

(d) Segregated from non-exempt MVNRLM diesel fuel and/or non-exempt ECA marine fuel at all points in the distribution system from the point the fuel is designated as exempt fuel only for use in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, while the exempt fuel is in the United States (including an Emission Control Area, or an ECA associated area per 40 CFR 1043.20) but outside these Territories.

Subpart L—Gasoline Benzene

■ 25. Section 80.1270 is amended by revising paragraph (b)(2) to read as follows:

§ 80.1270 Who may generate benzene credits under the ABT program?

* * * * *

(b) * * *

(2) Oxygenate blenders, butane blenders using the provisions of § 80.82, pentane blenders using the provisions of § 80.85, and transmix producers may not generate standard credits.

* * * * *

■ 26. Section 80.1295 is amended by revising paragraph (b)(1)(ii) to read as follows:

§ 80.1295 How are gasoline benzene credits used?

* * * * *

(b) * * *

(1) * * *

(ii) Any credit transfer takes place no later than March 31 following the calendar year averaging period when the credits are used.

* * * * *

Subpart M—Renewable Fuel Standard

■ 27. Section 80.1426 is amended by revising paragraph (c)(7) to read as follows:

§ 80.1426 How are RINs generated and assigned to batches of renewable fuel by renewable fuel producers or importers?

* * * * *

(c) * * *

(7) For renewable fuel oil that is heating oil as defined in paragraph (2) of the definition of heating oil in § 80.1401, renewable fuel producers and importers shall not generate RINs unless they have received affidavits from the final end user or users of the fuel oil as specified in § 80.1451(b)(1)(ii)(T)(*2*).

* * * * *

■ 28. Section 80.1453 is amended by revising paragraphs (a) introductory text and (a)(12) introductory text to read as follows:

§ 80.1453 What are the product transfer document (PTD) requirements for the RFS program?

(a) On each occasion when any party transfers custody or ownership of neat and/or blended renewable fuels, except when such fuel is dispensed into motor vehicles or nonroad vehicles, engines, or equipment, or separated RINs subject to this subpart, the transferor must provide to the transferee documents that include all of the following information, as applicable:

* * * * *

(12) For the transfer of renewable fuel for which RINs were generated, an accurate and clear statement on the product transfer document of the fuel type from Table 1 to § 80.1426, and designation of the fuel use(s) intended by the transferor, as follows:

* * * * *

■ 29. Section 80.1471 is amended by revising paragraph (d)(1) to read as follows:

§ 80.1471 Requirements for QAP auditors.

* * * * *

(d)(1) In the event that an independent third-party auditor identifies a RIN that may have been invalidly generated, the independent third-party auditor shall, within five business days, send notification of the potentially invalidly generated RIN to the EPA and the renewable fuel producer that generated the RIN.

* * * * *

Subpart O—Gasoline Sulfur

■ 30. Section 80.1609 is amended by revising paragraph (a) to read as follows:

§ 80.1609 Oxygenate blender requirements.

(a) Oxygenate blenders who blend only oxygenate that complies with the requirements of paragraph (b) of this section into gasoline downstream of the refinery that produced the gasoline or the import facility where the gasoline was imported are not subject to the refiner or importer requirements of this subpart for such gasoline, but are subject to the requirements and prohibitions applicable to downstream parties in this subpart. Such oxygenate blenders are subject to the requirements of paragraph (b) of this section, the requirements and prohibitions applicable to downstream parties, the requirements of § 80.1603(d)(2), and the prohibition specified in § 80.1660(e).

* * * * *

■ 31. Section 80.1611 is amended by:
■ a. Revising paragraph (a)(1);
■ b. Revising paragraphs (c) introductory text, (c)(1), and (c)(2); and
■ c. Revising paragraph (d).
■ The revisions read as follows:

§ 80.1611 Standards and requirements for certified ethanol denaturant.

* * * * *

(a) *Standards.* (1) The sulfur content must not be greater than 330 ppm as determined in accordance with the test requirements of § 80.1630. If the denaturant manufacturer represents a batch of denaturant as having a maximum sulfur content lower than 330 ppm in the PTD (for example, no greater than 120 ppm), then the actual sulfur content must be no greater than the stated value as determined in accordance with the requirements of § 80.1644.

* * * * *

(c) *PTDs.* In addition to any other product transfer document requirements under this part 80, on each occasion when any person transfers custody or title to any certified ethanol denaturant upstream of a DFE production or import facility, the transferor shall provide to the transferee product transfer documents which include all the following information.

(1) The following statement: ''Certified Ethanol Denaturant suitable for use in the manufacture of denatured fuel ethanol meeting EPA standards.''

(2) The PTD must state the sulfur content is 330 ppm or less, or if the certified ethanol denaturant manufacturer represents a batch of denaturant as having a maximum sulfur content lower than 330 ppm the PTD must state that lower sulfur maximum (*e.g.,* has a sulfur content of 120 ppm or less).

* * * * *

(d) *Batch numbers.* Every batch of certified ethanol denaturant produced or imported at a denaturant production or import facility shall be assigned a number (the ''batch number''), consisting of the EPA-assigned ethanol denaturant producer or importer registration number, the EPA facility registration number, the last two digits of the year in which the batch was produced, and a unique number for the batch, beginning with the number one for the first batch produced or imported each calendar year and each subsequent batch during the calendar year being assigned the next sequential number (*e.g.,* 4321–54321–95–000001, 4321–54321–95–000002, etc.).

■ 32. Section 80.1613 is amended by revising paragraph (a) introductory text and adding paragraph (b)(3) to read as follows:

§ 80.1613 Standards and other requirements for gasoline additive manufacturers and blenders.

* * * * *

(a) Gasoline additive manufacturers, as defined in 40 CFR 79.2(f), who manufacture additives with a maximum allowed treatment rate of less than 1.0 volume percent must meet all the following requirements:

* * * * *

(b) * * *

(3) The person does not add the additive at a concentration that contributes more than 3 ppm on a per gallon basis to the sulfur content of gasoline.

■ 33. Section 80.1615 is amended by revising paragraphs (d) introductory text, (d)(1), and (d)(2) to read as follows:

§ 80.1615 Credit generation.

* * * * *

(d) For approved small refiners and small volume refineries only, the number of credits generated from January 1, 2017 through December 31, 2019 shall be calculated annually for each applicable averaging period as follows:

(1) From January 1, 2017 through December 31, 2019, if a small refiner or small volume refinery has an annual average sulfur level (S_a) less than 30.00 ppm but greater than 10.00 ppm, the refiner may generate credits using the equation specified in paragraph (b) of this section for use in complying with the annual average standards of subpart H of this part.

(2) From January 1, 2017 through December 31, 2019, if a small refiner or small volume refinery has an annual average sulfur level (S_a) less than 10.00 ppm, the refiner may generate credits using the equation specified in paragraph (c) of this section for use in complying with the annual average standards of § 80.1603(c)(1) and the following equation for complying with the annual average standards of subpart H of this part:

$$CR_{T2} = V_a \times (20.00)$$

Where:

CR_{T2} = Credits generated for the averaging period for use in complying with the annual average standards of subpart H of this part only.

V_a = Total annual volume of gasoline produced at a refinery or imported during the averaging period.

(For example: A small refiner with an annual average sulfur level of 8 ppm in 2018 may generate CR_a = 2 ppm-volume credits (10–8) for compliance with the annual average standards of § 80.1603(c)(1) plus CR_{T2} = 20 ppm-volume credits (30–10) for compliance with the annual average sulfur standards of subpart H of this part.)

* * * * *

■ 34. Section 80.1616 is amended by adding and reserving paragraph (a)(4) and revising paragraph (b)(2) to read as follows:

§ 80.1616 Credit use and transfer.

(a) * * *

(4) [Reserved]

* * * * *

(b) * * *

(2) Credits generated under § 80.1615(b) through (d) are valid for use for five years after the year in which they are generated, except that any CR_a credits generated in 2015 and 2016 and any remaining CR_{T2} credits will expire and become invalid after December 31, 2019, (with the 2019 annual compliance report, due March 31, 2020).

* * * * *

■ 35. Section 80.1620 is amended by revising paragraphs (d), (e)(1), (e)(2), and (f)(1) to read as follows:

§ 80.1620 Small refiner definition.

* * * * *

(d) Notwithstanding the provisions of paragraphs (a) and (e)(1) of this section, a refiner that acquires or reactivates a refinery that was shut down or non-operational during calendar year 2012, may apply for small refiner status under this subpart O.

(e) * * *

(1) Refiners with refineries built or started up on or after January 1, 2013.

(2) Persons who exceed the employee or crude oil capacity criteria under this section on January 1, 2013, but who meet these criteria after that date, regardless of whether the reduction in employees or crude oil capacity is due

to operational changes at the refinery or a company sale or reorganization.

* * * * *

(f)(1) A refiner approved as a small refiner under § 80.1622 who subsequently ceases production of gasoline from processing crude oil through refinery processing units, employs more than 1,500 people, or exceeds the 155,000 bpcd crude oil capacity limit after January 1, 2013 as a result of merger with or acquisition of or by another entity, is disqualified as a small refiner, except as provided for under paragraph (f)(4) of this section. If such disqualification occurs, the refiner shall notify EPA in writing no later than 20 days following the disqualifying event.

* * * * *

■ 36. Section 80.1621 is amended by adding and reserving paragraph (c) and adding paragraph (d) to read as follows:

§ 80.1621 Small volume refinery definition.

* * * * *

(c) [Reserved]

(d)(1) A refinery approved as a small refinery under § 80.1622 that subsequently ceases production of gasoline from processing crude oil through refinery processing units or exceeds the 75,000 barrel average aggregate daily crude oil throughput limit is disqualified as a small refinery. If such disqualification occurs, the refinery shall notify EPA in writing no later than 20 days following the disqualifying event.

(2) Any refinery whose status changes under this paragraph (d) shall meet the applicable standards of § 80.1603 within a period of up to 30 months from the disqualifying event.

■ 37. Section 80.1640 is amended by revising paragraph (a)(2) to read as follows:

§ 80.1640 Standards and requirements that apply to refiners producing gasoline by blending blendstocks into previously certified gasoline (PCG).

(a) * * *

(2) To accomplish the exclusion required in paragraph (a)(1) of this section, the refiner must determine the volume and sulfur content of the PCG used at the refinery and the volume and sulfur content of the gasoline produced at the refinery, and use the compliance calculation procedures in paragraphs (a)(3) and (4) of this section.

* * * * *

■ 38. Section 80.1642 is amended by revising paragraphs (c)(1) and (c)(3) to read as follows:

§ 80.1642 Sampling and testing requirements for producers and importers of denatured fuel ethanol and other oxygenates for use by oxygenate blenders.

* * * * *

(c) * * *

(1) The sulfur content of the batch of DFE shall be calculated by volume weighting the sulfur contribution from the denaturant, and the neat ethanol used.

* * * * *

(3) The sulfur content of the certified denaturant used in the calculation in paragraph (c)(1) of this section must be consistent with the PTD obtained from a registered certified ethanol denaturant producer or importer in accordance with the requirements of § 80.1611. If the PTD from the certified ethanol denaturant states that the sulfur content is 330 ppm, then the sulfur content of the sulfur content of the ethanol denaturant must be assumed to be 330 ppm.

* * * * *

■ 39. Section 80.1645 is amended by revising the section heading and the introductory text to read as follows:

§ 80.1645 Sample retention requirements for producers and importers of certified ethanol denaturant.

Beginning January 1, 2017, or on the first day that any producer or importer of ethanol denaturant designates a batch of certified ethanol denaturant, whichever is earlier, the ethanol denaturant producer or importer shall do all the following:

* * * * *

■ 40. Section 80.1650 is amended by revising paragraphs (a)(4), (b), and (g)(3) to read as follows:

§ 80.1650 Registration.

* * * * *

(a) * * *

(4) Producer or importer of certified ethanol denaturant subject to the standards under § 80.1611.

(b) *Registration dates.* (1) Any gasoline refiner or importer required to register shall do so by December 1, 2016, or at least 30 days in advance of the first date that such person will produce or import reformulated gasoline, conventional gasoline, RBOB, or CBOB. If a previously unregistered refiner or importer intends to generate credits prior to January 1, 2017 (pursuant to § 80.1615), registration must occur at least 90 days prior to submitting an annual compliance report demonstrating credit generation.

(2) Any oxygenate producer or importer required to register shall do so by November 1, 2016, or at least 60 days in advance of the first date that such person will produce or import oxygenate.

(3) Any oxygenate blender required to register shall do so by November 1, 2016, or at least 90 days in advance of the first date that such person will blend oxygenate into RBOB.

(4) Any ethanol denaturant producer or importer required to register shall do so by November 1, 2016, or at least 60 days in advance of the first date that such person will produce or import ethanol denaturant.

* * * * *

(g) * * *

(3) Any oxygenate blender shall submit updated registration information to the Administrator within thirty days of any occasion when the registration information previously supplied becomes incomplete or inaccurate.

* * * * *

■ 41. Section 80.1652 is amended by revising paragraph (c) introductory text to read as follows:

§ 80.1652 Reporting requirements for gasoline refiners, gasoline importers, oxygenate producers, and oxygenate importers.

* * * * *

(c) *Oxygenate producer and importer annual reports.* Any oxygenate producer, for each of its production facilities, and any importer for the oxygenate it imports, shall submit a report for each calendar year period that includes all the following information:

* * * * *

§ 80.1667 [Amended]

■ 42. Section 80.1667 is amended by removing and reserving paragraph (c)(1).

PART 85—CONTROL OF AIR POLLUTION FROM MOBILE SOURCES

■ 43. The authority citation for part 85 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart V—[Amended]

§ 85.2108 [Removed]

■ 44. Remove § 85.2108.

PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

■ 45. The authority citation for part 86 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

■ 46. Section 86.1 is amended by revising paragraph (b) to read as follows:

§ 86.1 Incorporation by reference.

* * * * *

(b) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428–2959, (610) 832–9585, or *http://www.astm.org/:*

(1) ASTM C1549–09, Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer, approved August 1, 2009 (''ASTM C1549''), IBR approved for § 86.1869–12(b).

(2) ASTM D86–12, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved December 1, 2012 (''ASTM D86''), IBR approved for §§ 86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(3) ASTM D93–13, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, approved July 15, 2013 (''ASTM D93''), IBR approved for § 86.113–94(b).

(4) ASTM D445–12, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity), approved April 15, 2012 (''ASTM D445''), IBR approved for § 86.113–94(b).

(5) ASTM D613–13, Standard Test Method for Cetane Number of Diesel Fuel Oil, approved December 1, 2013 (''ASTM D613''), IBR approved for § 86.113–94(b).

(6) ASTM D975–13a, Standard Specification for Diesel Fuel Oils, approved December 1, 2013 (''ASTM D975''), IBR approved for § 86.1910(c).

(7) ASTM D976–06 (Reapproved 2011), Standard Test Method for Calculated Cetane Index of Distillate Fuels, approved October 1, 2011 (''ASTM D976''), IBR approved for § 86.113–94(b).

(8) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319''), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(9) ASTM D1945–03 (reapproved 2010), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, approved January 1, 2010 (''ASTM D1945''), IBR approved for §§ 86.113–94(e) and 86.513(d).

(10) ASTM D2163–07, Standard Test Method for Determination of Hydrocarbons in Liquefied Petroleum (LP) Gases and Propane/Propene Mixtures by Gas Chromatography, approved December 1, 2007 (''ASTM D2163''), IBR approved for §§ 86.113–94(f).

(11) ASTM D2622–10, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, approved February 15, 2010 (''ASTM D2622''), IBR approved for §§ 86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(12) ASTM D2699–13b, Standard Test Method for Research Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (''ASTM D2699''), IBR approved for §§ 86.113–04(a) and 86.213(a).

(13) ASTM D2700–13b, Standard Test Method for Motor Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (''ASTM D2700''), IBR approved for §§ 86.113–04(a) and 86.213(a).

(14) ASTM D3231–13, Standard Test Method for Phosphorus in Gasoline, approved June 15, 2013 (''ASTM D3231''), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(15) ASTM D3237–12, Standard Test Method for Lead in Gasoline by Atomic Absorption Spectroscopy, approved June 1, 2012 (''ASTM D3237''), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(16) ASTM D4052–11, Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter, approved October 15, 2011 (''ASTM D4052''), IBR approved for § 86.113–94(b).

(17) ASTM D5186–03 (Reapproved 2009), Standard Test Method for Determination of the Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography, approved April 15, 2009 (''ASTM D5186''), IBR approved for § 86.113–94(b).

(18) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191''), IBR approved for §§ 86.113–04(a), 86.213(a), and 86.513(a).

(19) ASTM E29–93a, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, approved March 15, 1993 (''ASTM E29''), IBR approved for §§ 86.004–15(c), 86.007–11(a), 86.007–15(m), 86.1803–01, 86.1823–01(a), 86.1824–01(c), 86.1825–01(c).

(20) ASTM E903–96, Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres, approved April 10, 1996 (''ASTM E903''), IBR approved for § 86.1869–12(b).

(21) ASTM E1918–06, Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field, approved August 15, 2006 (''ASTM E1918''), IBR approved for § 86.1869–12(b).

* * * * *

Subpart A—General Provisions for Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles, Light-Duty Trucks and Heavy-Duty Engines, and for 1985 and Later Model Year New Gasoline Fueled, Natural Gas-Fueled, Liquefied Petroleum Gas-Fueled and Methanol-Fueled Heavy-Duty Vehicles

■ 47. Section 86.007–35 is revised to read as follows:

§ 86.007–35 Labeling.

Section 86.007–35 includes text that specifies requirements that differ from § 86.095–35. Where a paragraph in § 86.095–35 is identical and applicable to § 86.007–35, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.095–35.''.

(a) The manufacturer of any motor vehicle (or motor vehicle engine) subject to the applicable emission standards (and family emission limits, as appropriate) of this subpart, shall, at the time of manufacture, affix a permanent legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles (or engines) available for sale to the public and covered by a Certificate of Conformity under § 86.007–30(a).

(a)(1)–(2) [Reserved]

(a)(3) heading through (b) [Reserved]. For guidance see § 86.095–35.

(c) Vehicles powered by model year 2007 through 2013 diesel-fueled engines must include permanent, readily visible labels on the dashboard (or instrument panel) and near all fuel inlets that state ''Use Ultra Low Sulfur Diesel Fuel Only''; or ''Ultra Low Sulfur Diesel Fuel Only''.

(d) through (g) [Reserved]

(h) [Reserved]. For guidance see § 86.095–35.

(i) [Reserved]

(j) The Administrator may approve in advance other label content and formats provided the alternative label contains information consistent with this section.

■ 48. Section 86.095–35 is amended by revising paragraph (a)(4) and removing and reserving paragraph (g) to read as follows:

§ 86.095–35 Labeling.

(a) * * *

(4) *Heavy-duty vehicles employing a fuel or fuels covered by evaporative*

emission standards. This paragraph (a)(4) applies for vehicles subject to evaporative emission standards under this subpart, as described in § 86.016–1(a)(4). See 40 CFR part 1037 for provisions that apply in later model years.

(i) A permanent, legible label shall be affixed in a readily visible position in the engine compartment. If such vehicles do not have an engine compartment, the label required in this paragraph (a)(4) shall be affixed in a readily available position on the operator's enclosure or on the engine.

(ii) The label shall be affixed by the vehicle manufacturer who has been issued the Certificate of Conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label. The label shall not be affixed to any equipment which is easily detached from such vehicle.

(iii) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(A) The label heading: Vehicle Emission Control Information;

(B) Full corporate name and trademark of manufacturer;

(C) Evaporative family identification;

(D) The maximum nominal fuel tank capacity (in gallons), as specified in 40 CFR 1037.135; and

(E) An unconditional statement of compliance with the appropriate model year U.S. Environmental Protection Agency regulations which apply to XXX-fueled heavy-duty vehicles.

(F) Vehicles granted final admission under § 85.1505 of this chapter must comply with the labeling requirements contained in § 85.1510 of this chapter.

* * * * *

(g) [Reserved]

* * * * *

Subpart B—Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles and New Light-Duty Trucks and New Otto-Cycle Complete Heavy-Duty Vehicles; Test Procedures

■ 49. Section 86.101 is amended by revising paragraphs (b)(1), (b)(2)(i), and (b)(3) to read as follows:

§ 86.101 General applicability.

* * * * *

(b) * * *

(1) Through model year 2021, manufacturers may use the test procedures specified in paragraph (c) or (d) of this section or, using good engineering judgement, elements of both. For any EPA testing before model year 2022, EPA will use the manufacturer's selected procedures for applying acceptable speed-tolerance criteria (either § 86.115–78 or 40 CFR 1066.425(c)). For any other parameters, EPA may conduct testing using either of the specified procedures. As allowed under this part, manufacturers may use carryover data from previous model years to demonstrate compliance with emission standards, without regard to the provisions of this section.

(2) * * *

(i) For vehicles certified to any of the Tier 3 emission standards specified in subpart S of this part, determine overall driver accuracy based on drive-cycle metrics as described in 40 CFR 1066.425(j).

* * * * *

(3) For model years 2022 and later, manufacturers must use the test procedures specified in paragraph (d) of this section. Manufacturers may continue to use data based on the test procedures specified in paragraph (c) of this section for an engine family in 2022 and later model years, as long as the engine family is eligible for certification with carryover emission data.

* * * * *

■ 50. Section 86.113–04 is amended by revising paragraph (a)(1) to read as follows:

§ 86.113–04 Fuel specifications.

* * * * *

(a) *Gasoline fuel.* (1) Gasoline meeting the following specifications, or substantially equivalent specifications approved by the Administrator, must be used for exhaust and evaporative emission testing:

TABLE 1 OF § 86.113–04—TEST FUEL SPECIFICATIONS FOR GASOLINE WITHOUT ETHANOL

Item	Regular	Reference procedure [1]
Research octane, Minimum [2]	93	ASTM D2699; ASTM D2700
Octane sensitivity [2]	7.5	ASTM D2699; ASTM D2700
Distillation Range (°F):		
Evaporated initial boiling point [3]	75–95	ASTM D86
10% evaporated	120–135.	
50% evaporated	200–230.	
90% evaporated	300–325.	
Evaporated final boiling point	415 Maximum.	
Hydrocarbon composition (vol %):		
Olefins	10% Maximum	ASTM D1319
Aromatics	35% Maximum.	
Saturates	Remainder.	
Lead, g/gallon (g/liter), Maximum	0.050 (0.013)	ASTM D3237
Phosphorous, g/gallon (g/liter), Maximum	0.005 (0.0013)	ASTM D3231
Total sulfur, wt. % [4]	0.0015–0.008	ASTM D2622
Dry Vapor Pressure Equivalent (*DVPE*), psi (kPa) [5]	8.7–9.2 (60.0–63.4)	ASTM D5191

[1] ASTM procedures are incorporated by reference in § 86.1.

[2] Octane specifications are optional for manufacturer testing.

[3] For testing at altitudes above 1,219 m (4000 feet), the specified range is 75–105 °F.

[4] Sulfur concentration will not exceed 0.0045 weight percent for EPA testing.

[5] For testing unrelated to evaporative emission control, the specified range is 8.0–9.2 psi (55.2–63.4 kPa). For testing at altitudes above 1,219 m (4000 feet), the specified range is 7.6–8.0 psi (52.4–55.2 kPa). Calculate dry vapor pressure equivalent, *DVPE,* based on the measured total vapor pressure, p_T, using the following equation: *DVPE* (psi) = $0.956 \cdot p_T - 0.347$ (or *DVPE* (kPa) = $0.956 \cdot p_T - 2.39$). *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

* * * * *

Subpart C—Emission Regulations for 1994 and Later Model Year Gasoline-Fueled New Light-Duty Vehicles, New Light-Duty Trucks and New Medium-Duty Passenger Vehicles; Cold Temperature Test Procedures

■ 51. Section 86.201 is revised to read as follows:

§ 86.201 General applicability.

(a) Vehicles are subject to cold temperature testing requirements as described in subpart S of this part and 40 CFR part 600.

(b) *Migration to 40 CFR parts 1065 and 1066.* This subpart transitions to rely on the test procedure specifications in 40 CFR parts 1065 and 1066 as follows:

(1) Through model year 2021, manufacturers may use the test procedures specified in paragraph (c) or (d) of this section or, using good engineering judgement, elements of both. For any EPA testing before model year 2022, EPA will use the manufacturer's selected procedures for applying acceptable speed-tolerance criteria. For any other parameters, EPA may conduct testing using either of the specified procedures. As allowed under this part, manufacturers may use carryover data from previous model years to demonstrate compliance with emission standards, without regard to the provisions of this section.

(2) For vehicles certified before model year 2022 to any of the Tier 3 emission standards specified in subpart S of this part, manufacturers must determine overall driver accuracy based on driven cycle energy as described in 40 CFR 1066.425(j).

(c) *Interim procedures.* Through model year 2021, manufacturers may certify vehicles based on data collected according to previously published cold temperature and intermediate temperature testing procedures.

(d) *Long-term procedures.* Starting in model year 2022, perform testing to measure CO and NMHC emissions and determine fuel economy as described in 40 CFR part 1066; see especially 40 CFR 1066.710. We may approve the use of previously published cold temperature and intermediate temperature testing procedures for later model years as an alternative procedure under 40 CFR 1066.10(c). Perform intermediate temperature testing as follows:

(1) For testing during ambient temperatures of less than 50 °F (10 °C), perform testing as described in 40 CFR part 1066, subpart H.

(2) For testing at temperatures of 50 °F (10 °C) or higher, perform FTP testing as described in 40 CFR part 1066.

(e) Section 86.213 describes special provisions related to test fuel specifications.

■ 52. Section 86.213 is amended by revising Table 1 in paragraph (a)(2) to read as follows:

§ 86.213 Fuel specifications.

(a) * * *

(2) * * *

TABLE 1 OF § 86.213—COLD TEMPERATURE TEST FUEL SPECIFICATIONS FOR GASOLINE WITHOUT ETHANOL

Item	Regular	Premium	Reference procedure [1]
(RON+MON)/2 [2]	87.8±0.3	92.3±0.5	ASTM D2699; ASTM D2700
Sensitivity [3]	7.5	7.5	ASTM D2699; ASTM D2700
Distillation Range (°F):			
Evaporated initial boiling point	76–96	76–96	ASTM D86
10% evaporated	98–118	105–125.	
50% evaporated	179–214	195–225.	
90% evaporated	316–346	316–346.	
Evaporated final boiling point	413 Maximum	413 Maximum.	
Hydrocarbon composition (vol %):			
Olefins	12.5±5.0	10.5±5.0	ASTM D1319
Aromatics	26.4±4.0	32.0±4.0.	
Saturates	Remainder	Remainder.	
Lead, g/gallon	0.01, Maximum	0.01, Maximum	ASTM D3237
Phosphorous, g/gallon	0.005, Maximum	0.005, Maximum	ASTM D3231
Total sulfur, wt. % [3]	0.0015–0.008	0.0015–0.008	ASTM D2622
RVP, psi	11.5±0.3	11.5±0.3	ASTM D5191

[1] ASTM procedures are incorporated by reference in § 86.1.
[2] Octane specifications are optional for manufacturer testing. The premium fuel specifications apply for vehicles designed to use high-octane premium fuel.
[3] Sulfur concentration will not exceed 0.0045 weight percent for EPA testing.

* * * * *

Subpart F—Emission Regulations for 1978 and Later New Motorcycles; Test Procedures

■ 53. Section 86.513 is amended by revising paragraph (a)(1) to read as follows:

§ 86.513 Fuel and engine lubricant specifications.

(a) * * *

(1) Gasoline meeting the following specifications, or substantially equivalent specifications approved by the Administrator, must be used for exhaust and evaporative emission testing:

TABLE 1 OF § 86.513—GASOLINE TEST FUEL SPECIFICATIONS

Item	Value	Procedure [1]
Distillation Range:		
1. Initial boiling point, °C	23.9–35.0 [2]	ASTM D86

TABLE 1 OF § 86.513—GASOLINE TEST FUEL SPECIFICATIONS—Continued

Item	Value	Procedure [1]
2. 10% point, °C	48.9–57.2.	
3. 50% point, °C	93.3–110.0.	
4. 90% point, °C	148.9–162.8.	
5. End point, °C	212.8 maximum.	
Hydrocarbon composition:		
1. Olefins, volume %	10 maximum	ASTM D1319
2. Aromatics, volume %	35 maximum.	
3. Saturates	Remainder.	
Lead (organic), g/liter	0.013 maximum	ASTM D3237
Phosphorous, g/liter	0.0013 maximum	ASTM D3231
Sulfur, weight %	0.008 maximum	ASTM D2622
Dry Vapor Pressure Equivalent (*DVPE*), kPa	55.2 to 63.4 [3]	ASTM D5191

[1] ASTM procedures are incorporated by reference in § 86.1.
[2] For testing at altitudes above 1,219 m, the specified initial boiling point range is (23.9 to 40.6) °C.
[3] For testing at altitudes above 1,219 m, the specified volatility range is 52 to 55 kPa. Calculate dry vapor pressure equivalent, *DVPE,* based on the measured total vapor pressure, p_T, using the following equation: *DVPE* (kPa) = $0.956 \cdot p_T - 2.39$ (or *DVPE* (psi) = $0.956 \cdot p_T - 0.347$). *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

* * * * *

§ 86.513–2004 [Removed]

■ 54. Remove § 86.513–2004.

§ 86.529–98 [Amended]

■ 55. Section 86.529–98 paragraph (b) is amended in Figure F98–9, under the first column titled ''Loaded vehicle mass (kg)'' by removing ''565–665'' and adding ''656–665'' in its place.

Subpart S—General Compliance Provisions for Control of Air Pollution From New and In-Use Light-Duty Vehicles, Light-Duty Trucks, and Heavy-Duty Vehicles

■ 56. The heading for subpart S is revised as set forth above.

■ 57. Section 86.1801–12 is amended by:

■ a. Revising paragraph (a)(2)(ii);

■ b. Adding paragraph (a)(2)(iii);

■ c. Revising paragraph (a)(3) introductory text;

■ d. Removing paragraph (a)(4); and

■ e. Redesignating paragraph (a)(5) as paragraph (a)(4).

The revisions and addition read as follows:

§ 86.1801–12 Applicability.

(a) * * *

(2) * * *

(ii) Greenhouse gas emission standards apply as specified in 40 CFR part 1037 instead of the standards specified in this subpart.

(iii) The provisions of this subpart are optional for diesel-fueled Class 3 heavy-duty vehicles in a given model year if those vehicles are equipped with engines certified to the appropriate standards in § 86.007–11 for which less than half of the engine family's sales for the model year in the United States are for complete Class 3 heavy-duty vehicles. This includes engines sold to all vehicle manufacturers. If you are the original manufacturer of the engine and the vehicle, base this showing on your sales information. If you manufacture the vehicle but are not the original manufacturer of the engine, you must use your best estimate of the original manufacturer's sales information.

(3) The provisions of this subpart generally do not apply to incomplete heavy-duty vehicles or to complete vehicles above 14,000 pounds GVWR (see subpart A of this part and 40 CFR parts 1036 and 1037). However, this subpart applies to such vehicles in the following cases:

* * * * *

■ 58. Section 86.1803–01 is amended by revising the definition of ''Averaging set'' to read as follows:

§ 86.1803–01 Definitions.

* * * * *

Averaging set means a category or subcategory of vehicles within which test groups can average and trade emission credits with one another.

* * * * *

■ 59. Section 86.1805–17 is amended by revising paragraphs (a), (b), and (c) to read as follows:

§ 86.1805–17 Useful life.

(a) *General provisions.* The useful life values specified in this section apply for all exhaust, evaporative, refueling, and OBD emission requirements described in this subpart, except for standards that are specified to apply only at certification. These useful life requirements also apply to all air conditioning leakage credits, air conditioning efficiency credits, and other credit programs used by the manufacturer to comply with the fleet-average CO_2 emission standards in § 86.1818. Useful life values are specified as a given number of calendar years or miles of driving, whichever comes first.

(b) *Greenhouse gas pollutants.* The emission standards in § 86.1818 apply for a useful life of 10 years or 120,000 miles for LDV and LLDT and 11 years or 120,000 miles for HLDT and MDPV. Manufacturers may alternatively certify based on a longer useful life as specified in paragraph (d) of this section.

(c) *Cold temperature emission standards.* The cold temperature NMHC emission standards in § 86.1811 apply for a useful life of 10 years or 120,000 miles for LDV and LLDT, and 11 years or 120,000 miles for HLDT and HDV. The cold temperature CO emission standards in § 86.1811 apply for a useful life of 5 years or 50,000 miles.

* * * * *

■ 60. Section 86.1806–17 is amended by revising paragraph (a)(8) to read as follows:

§ 86.1806–17 Onboard diagnostics.

* * * * *

(a) * * *

(8) Apply thresholds for exhaust emission malfunctions from Tier 3 vehicles based on the thresholds calculated for the corresponding bin standards in the California LEV II program as prescribed for the latest model year in 13 CCR 1968.2(e) and (f). For example, for Tier 3 Bin 160 standards, apply the threshold that applies for the LEV standards. For cases involving Tier 3 standards that have no corresponding bin standards from the California LEV II program, use the next highest LEV II bin. For example, for Tier 3 Bin 50 standards, apply the threshold that applies for the ULEV standards. You may apply thresholds that are more

stringent than we require under this paragraph (a)(8).

* * * * *

■ 61. Section 86.1810–01 is amended by revising paragraph (o) and removing paragraph (p) to read as follows:

§ 86.1810–01 General standards; increase in emissions; unsafe condition; waivers.

* * * * *

(o) *NMOG determination procedures.* Measure NMOG emissions or determine NMOG emissions based on NMHC measurements using the procedures described in 40 CFR 1066.635. For Tier 2 and interim non-Tier 2 vehicles fueled by gasoline, manufacturers may instead measure NMHC and multiply the result by an adjustment factor of 1.04 before comparing with the NMOG standard to determine compliance with that standard.

■ 62. Section 86.1810–17 is amended by revising paragraph (h)(1) to read as follows:

§ 86.1810–17 General requirements.

* * * * *

(h) * * *

(1) For criteria exhaust emissions, we may identify the worst-case fuel blend for testing in addition to what is required for gasoline-fueled vehicles. The worst-case fuel blend may be the fuel specified in 40 CFR 1065.725, or it may consist of a combination of the fuels specified in 40 CFR 1065.710(b) and 1065.725. We may waive testing with the worst-case blended fuel for US06 and/or SC03 duty cycles; if we waive only SC03 testing, substitute the SC03 emission result using the standard test fuel for gasoline-fueled vehicles to calculate composite SFTP emissions.

* * * * *

■ 63. Section 86.1811–04 is amended by revising paragraph (j) to read as follows:

§ 86.1811–04 Emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

* * * * *

(j) *Highway NO_X exhaust emission standard.* The NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR 1066.840 must not be greater than 1.33 times the applicable FTP NO_X standard to which the manufacturer certifies the test group. Both the measured emissions and the product of the NO_X standard and 1.33 must be rounded to the nearest 0.01 g/mi before being compared.

* * * * *

■ 64. Section 86.1811–17 is amended by:

■ a. Revising paragraph (a);

■ b. Revising paragraphs (b)(2), (b)(8), (b)(9) introductory text, (b)(10), and (b)(11);

■ c. Adding paragraph (b)(14); and

■ d. Revising paragraphs (c) and (g).

The revisions and addition read as follows:

§ 86.1811–17 Exhaust emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

(a) *Applicability and general provisions.* This section describes exhaust emission standards that apply for model year 2017 and later light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles. MDPVs are subject to all the same emission standards and certification provisions that apply to LDT4. Some of the provisions of this section also apply to heavy-duty vehicles as specified in § 86.1816. See § 86.1818 for greenhouse gas emission standards. See § 86.1813 for evaporative and refueling emission standards. This section may apply to vehicles from model years earlier than 2017 as specified in paragraph (b)(11) of this section.

(b) * * *

(2) Table 1 of this section describes fully phased-in Tier 3 standards that apply as specified in this paragraph (b) for the identified driving schedules. The FTP standards for NMOG+NO_X apply on a fleet-average basis using discrete bin standards as described in paragraph (b)(4) of this section. The bin standards include additional emission standards for high-altitude testing and for CO emissions when testing over the FTP driving schedule. The SFTP standards for NMOG+NO_X apply on a fleet-average basis as described in paragraph (b)(5) of this section. Table 1 follows:

TABLE 1 OF § 86.1811–17—FULLY PHASED-IN TIER 3 EXHAUST EMISSION STANDARDS (g/mile)

NMOG+NO_X		PM		CO	Formaldehyde
FTP [1]	SFTP	FTP	US06	SFTP	FTP
0.030	0.050	0.003	0.006	4.2	0.004

[1] The fleet-average FTP emission standard for NMOG+NO_X is 0.026 g/mile for LDV and LDT1 test groups certified to standards based on a useful life of 120,000 miles or 10 years in a given model year.

* * * * *

(8) The following provisions describe the primary approach for phasing in the Tier 3 standards other than PM in 2025 and earlier model years:

(i) *FTP phase-in.* The fleet-average FTP emission standard for NMOG+NO_X phases in over several years as described in this paragraph (b)(8)(i). You must identify FELs as described in paragraph (b)(4) of this section and calculate a fleet-average emission level to show that you meet the FTP emission standard for NMOG+NO_X that applies for each model year. For model year 2017, do not include vehicles above 6,000 pounds GVWR. Through model year 2019, you may also certify to transitional Bin 85 or Bin 110 standards, which consist of all-altitude FTP emission standards for NMOG+NO_X of 0.085 or 0.110 g/mile, respectively; additional FTP standards for PM, CO, and formaldehyde apply as specified in this section for vehicles certified to Bin 125 standards. Fleet-average FTP emission standards decrease through the phase-in period as shown in the following table:

TABLE 3 OF § 86.1811–17—DECLINING FLEET-AVERAGE TIER 3 FTP EMISSION STANDARDS FOR NMOG+NO_X (g/mile)

Model year	LDV, LDT1—150,000 mile useful life [1]	LDV, LDT1—120,000 mile useful life [1]	LDT2, HLDT
2017 [2]	0.086	0.073	0.101
2018	0.079	0.067	0.092
2019	0.072	0.061	0.083

TABLE 3 OF § 86.1811–17—DECLINING FLEET-AVERAGE TIER 3 FTP EMISSION STANDARDS FOR NMOG+NO_X (g/mile)—Continued

Model year	LDV, LDT1—150,000 mile useful life [1]	LDV, LDT1—120,000 mile useful life [1]	LDT2, HLDT
2020	0.065	0.055	0.074
2021	0.058	0.049	0.065
2022	0.051	0.043	0.056
2023	0.044	0.037	0.047
2024	0.037	0.031	0.038
2025	0.030	0.026	0.030

[1] Vehicles certified to standards based on a useful life of 120,000 miles may comply based on the fleet-average standard specified for 150,000 mile useful life in certain circumstances as specified in paragraph (b)(8)(iii)(A) of this section.
[2] HLDT and MDPV must meet the Tier 3 standards starting with model year 2018.

(ii) *SFTP phase-in.* The fleet-average SFTP emission standard for NMOG+NO_X phases in over several years as described in this paragraph (b)(8)(ii). You must identify FELs as described in paragraph (b)(5) of this section and calculate a fleet-average emission level to show that you meet the SFTP emission standard for NMOG+NO_X that applies for each model year.

(A) Calculate the fleet-average emission level together for all your light-duty vehicles and light-duty trucks, except for those certified using the provisions of paragraph (b)(8)(ii)(C) of this section. For model year 2017, do not include vehicles above 6,000 pounds GVWR (in the numerator or denominator).

(B) Fleet-average SFTP emission standards decrease through the phase-in period as shown in the following table:

TABLE 4 OF § 86.1811–17—DECLINING FLEET-AVERAGE TIER 3 SFTP EMISSION STANDARDS

Model year	NMOG+NO_X (g/mile)
2017 [1]	0.103
2018	0.097
2019	0.090
2020	0.083
2021	0.077
2022	0.070
2023	0.063
2024	0.057
2025	0.050

[1] HLDT and MDPV must meet the Tier 3 standards starting with model year 2018.

(C) You may use the SFTP stand-alone option specified in 13 CCR 1961.2 (a)(7)(A)1 of the LEV III program to demonstrate compliance with EPA's SFTP standards. Do not include any such test groups when demonstrating compliance with the phased-in fleet-average SFTP standards specified in this paragraph (b)(8)(ii). Note that this option is not available for vehicles certified to the transitional bins described in paragraph (b)(8)(i) of this section.

(iii) *Interim provisions.* (A) For vehicles certified to bins higher than Bin 70 under this section through model year 2019, the Tier 2 useful life period applies as specified in § 86.1805–12 for all criteria pollutants other than PM. However, LDV and LDT1 test groups certified to bin standards above Bin 70 through model year 2019 may be included in the same averaging set with vehicles meeting standards over a 150,000 mile useful life, notwithstanding the provisions of § 86.1861–17(b)(1)(iii). Any such vehicles you include in the averaging set for 150,000 mile useful life are also subject to the fleet-average NMOG+NO_X standard specified for 150,000 mile useful life; similarly, any such vehicles you include in the averaging set for 120,000 mile useful life are also subject to the fleet-average NMOG+NO_X standard specified for 120,000 mile useful life.

(B) You may use the E0 test fuel specified in § 86.113 through model year 2019 for gasoline-fueled vehicles certified to bins higher than Bin 70. You may not certify these vehicles using carryover data after model year 2019.

(C) Vehicles must continue to comply with the Tier 2 SFTP emission standards for NMHC+NO_X and CO for 4,000-mile testing as specified in § 86.1811–04(f)(1) if they are certified to transitional Bin 85 or Bin 110 standards, or if they are certified based on a fuel without ethanol, or if they are not certified to the Tier 3 p.m. standard.

(iv) You may use the alternative phase-in provisions described in paragraph (b)(9) of this section to transition to the Tier 3 exhaust emission standards on a different schedule.

(9) This paragraph (b)(9) describes an alternative approach to phasing in the Tier 3 emission standards for vehicles above 6,000 pounds GVWR. If you choose this approach, you must phase in the Tier 3 standards for all your vehicles above 6,000 pounds GVWR that are subject to this section according to this schedule. Under this alternative phase-in, you must meet the fully phased-in standards specified in this paragraph (b) with 40, 70, and 100 percent of your projected nationwide sales of all vehicles above 6,000 pounds GVWR that are subject to this section in model years 2019 through 2021, respectively. Any vehicles not subject to Tier 3 standards during the phase-in period must continue to comply with the Tier 2 standards in § 86.1811–04(c) and (f), including the Tier 2 SFTP emission standards for NMHC+NO_X and CO for 4,000-mile testing as specified in § 86.1811–04(f)(1). Vehicles subject to Tier 2 standards under this paragraph (b)(9) are subject to the useful life provisions in § 86.1805–12 relative to exhaust emission standards. Each vehicle counting toward the phase-in percentage under this paragraph (b)(9) must meet all the standards that apply throughout the useful life as specified in § 86.1805–17, and must use the Tier 3 test fuel specified in § 86.113–15. The following exceptions and special provisions apply under this paragraph (b)(9):

* * * * *

(10) You may not use credits generated from Tier 2 vehicles for demonstrating compliance with the Tier 3 standards except as specified in this paragraph (b)(10). You may generate early credits with U.S. sales of Tier 2 vehicles in the two model years before the Tier 3 standards start to apply for a given vehicle model. Vehicles certified to the Tier 2 standards must meet all the Tier 2 requirements in § 86.1811–10, including the fleet-average Tier 2 standards. Calculate early Tier 3 emission credits as described in § 86.1861 by subtracting the appropriate Tier 2 fleet-average value for FTP

emissions of NMOG+NO_X from 0.160 g/mile. Calculate your fleet-average value for the model year based on vehicles at or below 6,000 pounds GVWR in 2015, on all sizes of vehicles in 2016, and on vehicles above 6,000 pounds GVWR in 2017. You may use these early credits as described in § 86.1861 for demonstrating compliance with the FTP emission standard for NMOG+NO_X starting in model year 2017. You may use these early credits interchangeably for vehicles certified based on a useful life of either 120,000 or 150,000 miles. For model years 2018 and later, you may use any remaining early credits for banking or trading subject to a limitation based on credits generated in California, as follows:

(i) For the applicable model years in which you generate emission credits relative to California's LEV III fleet-average NMOG+NO_X standard, determine the actual California sales of light-duty vehicles and light-duty trucks and the actual nationwide sales of those same vehicles. (Note: If you have a credit deficit in a given model year for your LEV III vehicles, apply the provisions of this paragraph (b)(10)(i) based on the appropriate negative credit quantity.) In 2015, count sales only from vehicle models at or below 6,000 pounds GVWR. For each model year, multiply the credits generated under the California program by the ratio of nationwide vehicle sales to LEV III vehicle sales to calculate an effective nationwide quantity. Sum these results for model years 2015 through 2017. Note that this calculation results in a maximum credit quantity based on vehicle sales in all states, even though the initial credit calculation does not include vehicle sales in California or the section 177 states. If you comply with the LEV III standards based on pooled emission credits for California and the section 177 states, use those pooled emission credits and corresponding sales for calculating the maximum credit quantity under this paragraph (b)(10)(i).

(ii) You may not use more early credits generated under this paragraph (b)(10) for banking or trading to demonstrate compliance with Tier 3 emission standards than the calculated value of the effective nationwide credit quantity summed in paragraph (b)(10)(i) of this section. If your generated credits are greater than this threshold, determine the ratio by which your generated early credits exceed the threshold. Calculate an adjusted quantity of early credits generated under this paragraph (b)(10) by dividing the generated credit quantity from each model year by this ratio of generated credits relative to the applicable threshold. This adjusted quantity of credits may be used for banking or trading relative to the Tier 3 standards, subject to the five-year credit life described in § 86.1861.

(11) You may certify vehicles to the Tier 3 standards starting in model year 2015. To do this, you may either sell all your LEV III vehicle models nationwide, or you may certify a subset of your fleet to alternate fleet-average emission standards as follows:

(i) The alternate fleet-average FTP emission standards for NMOG+NO_X are 0.100 g/mile in 2015 and 0.093 g/mile in 2016 for LDV and LDT1.

(ii) The alternate fleet-average FTP emission standards for NMOG+NO_X are 0.119 g/mile in 2015, 0.110 g/mile in 2016, and 0.101 g/mile in 2017 for LDT2 and HLDT.

(iii) The alternate fleet-average SFTP emission standards for NMOG+NO_X are 0.140 in 2015 for all vehicles, 0.110 in 2016 for all vehicles, and 0.103 in 2017 for LDT2 and HLDT.

(iv) The vehicles must meet FTP and SFTP standards for PM as specified in § 86.1811–04. The PM testing provisions of § 86.1829–01(b)(1)(iii)(B) apply for these vehicles.

(v) Vehicles not certified to the Tier 3 standards in a given model year must meet all the requirements that apply for Tier 2 vehicles in that model year.

(vi) For cold temperature testing and for high-altitude testing, you may use the E0 fuel specified in § 86.113–04(a) or § 86.213 instead of the E10 test fuel specified in § 86.113–15.

(vii) Vehicles certified under this paragraph (b)(11) to a bin standard at or below Bin 70 must be certified to a useful life of 150,000 miles.

(viii) The interim provisions described in paragraph (b)(8)(iii) of this section apply for vehicles certified under this paragraph (b)(11), except that credits generated under this paragraph (b)(11) may be used interchangeably for vehicles certified based on a useful life of either 120,000 or 150,000 miles.

(ix) For vehicles certified under this paragraph (b)(11), you may generate emission credits and use those credits for demonstrating compliance with Tier 3 standards as described in paragraph (b)(10) of this section or as described in § 86.1861.

* * * * *

(14) This subpart describes several ways that the transition to Final Tier 3 standards applies differently for vehicles above and below 6,000 pounds GVWR. All these distinctions apply only for LDT. LDV as a category is defined independent of GVWR, so any LDV above 6,000 pounds GVWR are subject to the same provisions that apply for LDV at or below 6,000 pounds GVWR. Where this section refers to ''vehicles above 6,000 pounds GVWR,'' this should be understood to include LDT above 6,000 pounds GVWR and MDPV (or HLDT and MDPV), and to exclude all LDV.

(c) *Highway NMOG+NO_X exhaust emission standard.* NMOG+NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR 1066.840 may not exceed the applicable FTP bin standard for NMOG+NO_X. Demonstrate compliance with this standard for low-mileage vehicles by applying the appropriate deterioration factor. For vehicles not certified to any Tier 3 emission standards specified in paragraph (b) of this section, the provisions of § 86.1811–04(j) apply instead of this paragraph (c).

* * * * *

(g) *Cold temperature exhaust emission standards.* The standards in this paragraph (g) apply for certification and in-use vehicles tested over the test procedures specified in subpart C of this part, for testing at both low-altitude conditions and high-altitude conditions. These standards apply only to gasoline-fueled vehicles. Multi-fuel, bi-fuel or dual-fuel vehicles must comply with requirements using gasoline only. Testing with other fuels such as a high-level ethanol-gasoline blend, or testing on diesel vehicles, is not required.

(1) Cold temperature CO standards. Cold temperature CO exhaust emission standards apply as follows:

(i) For LDV and LDT1, the standard is 10.0 g/mile CO.

(ii) For LDT2, LDT3 and LDT4, the standard is 12.5 grams per mile CO.

(2) Cold temperature NMHC standards. The following fleet average cold temperature NMHC standards apply as follows:

* * * * *

■ 65. Section 86.1813–17 is amended by revising paragraphs (a)(1)(iv) and (a)(2)(i) to read as follows:

§ 86.1813–17 Evaporative and refueling emission standards.

* * * * *

(a) * * *

(1) * * *

(iv) Emissions are generally measured with a flame ionization detector (FID). In the case of rig, diurnal, hot soak, and running loss testing with E10 test fuel, multiply measured (unspeciated) FID values by 1.08 to account for the FID's reduced response to ethanol. However, you may instead determine total hydrocarbon equivalent for E10 testing

based on speciated measurements as described in § 86.143–96(c). You may use different methods (with or without speciation) for different test elements for a given test vehicle; however, you must always use the same method for diurnal and hot soak testing. In addition, any later testing with vehicles from that evaporative/refueling family must use the same method that was used for the original testing. Similarly, any evaporative/refueling families certified in later model years using carryover data must use the same method that was used for the original testing. We may do testing with or without speciation, but we will apply the 1.08 correction factor to unspeciated measurements for any of these four categories of evaporative emissions only if you also use it to determine your final test results.

(2) * * *

(i) The emission standard for the sum of diurnal and hot soak measurements from the two-diurnal test sequence and the three-diurnal test sequence is based on a fleet average in a given model year. You must specify a family emission limit (FEL) for each evaporative family. The FEL serves as the emission standard for the evaporative family with respect to all required diurnal and hot soak testing. Calculate your fleet-average emission level as described in § 86.1860 based on the FEL that applies for low-altitude testing to show that you meet the specified standard. For multi-fueled vehicles, calculate fleet-average emission levels based only on emission levels for testing with gasoline. You may generate emission credits for banking and trading and you may use banked or traded credits for demonstrating compliance with the diurnal plus hot soak emission standard for vehicles required to meet the Tier 3 standards, other than electric vehicles and gaseous-fueled vehicles, as described in § 86.1861 starting in model year 2017. You comply with the emission standard for a given model year if you have enough credits to show that your fleet-average emission level is at or below the applicable standard. You may exchange credits between or among evaporative families within an averaging set as described in § 86.1861. Separate diurnal plus hot soak emission standards apply for each evaporative/refueling emission family as shown for high-altitude conditions. The sum of diurnal and hot soak measurements may not exceed the following Tier 3 standards:

TABLE 1 OF § 86.1813–17—TIER 3 DIURNAL PLUS HOT SOAK EMISSION STANDARDS

[grams per test]

Vehicle category	Low-altitude conditions—fleet-average	High-altitude conditions
LDV, LDT1	0.300	0.65
LDT2	0.400	0.85
HLDT	0.500	[1] 1.15
HDV	0.600	1.75

[1] 1.25 g/test for MDPVs.

* * * * *

■ 66. Section 86.1816–18 is amended by revising paragraphs (b)(1)(ii)(C), (b)(8) introductory text, (b)(12)(iii), and (c) to read as follows:

§ 86.1816–18 Emission standards for heavy-duty vehicles.

* * * * *

(b) * * *

(1) * * *

(ii) * * *

(C) For Class 3 vehicles, the Hot LA–92 driving schedule as specified in paragraph (c) of Appendix I of this part.

* * * * *

(8) This paragraph (b)(8) describes an alternative approach to phasing in the Tier 3 emission standards. If you choose this approach, you must phase in the Tier 3 standards for all your vehicles subject to this section according to this schedule. Under this alternative phase in, you must meet all the standards specified in paragraph (b)(2) of this section according to the phase-in schedule specified in Table 6 of this section based on the indicated percentage of your projected nationwide sales in each model year. These vehicles must meet the applicable FTP emission standard for CO and the HD–SFTP emission standards for NMOG+NO_X and CO that apply for Class 2b Bin 170 and Class 3 Bin 230 as described in paragraph (b)(4) of this section. Any vehicles not subject to Tier 3 standards during the phase-in period must continue to comply with the gaseous exhaust emission standards in § 86.1816–08. Each vehicle counting toward the PM phase-in percentage under this paragraph (b)(8) in model years 2019 and 2020 must also be included in the portion of the fleet meeting the Tier 3 standards for pollutants other than PM. Each vehicle counting toward the phase-in percentage for any pollutant must use the Tier 3 test fuel specified in § 86.113–15. The following exceptions and special provisions apply under this paragraph (b)(8):

* * * * *

(12) * * *

(iii) Alternate in-use FTP and HD–SFTP standards for NMOG+NO_X apply as specified in the following table:

TABLE 7 OF § 86.1816–18—ALTERNATE IN-USE NMOG+NO_X STANDARDS

[g/mile]

Class	FEL name	FTP	HD–SFTP [1]
2b	Bin 250 ..	0.370	1.120
Bin 200 ..	0.300	1.120	.....
Bin 170 ..	0.250	0.630	.....
Bin 150 ..	0.220	0.630	.....
3	Bin 400 ..	0.600	0.770
Bin 270 ..	0.400	0.770	.....
Bin 230 ..	0.340	0.490	.....
Bin 200 ..	0.300	0.490	.....

[1] For Class 2b vehicles with a power-to-weight ratio at or below 0.024 hp/pound that are certified to optional standards under paragraphs (b)(2) and (4) of this section, the following alternate in-use HD–SFTP standards for NMOG+NO_X apply instead of those identified in the table: 0.490 g/mile for Bin 150 and Bin 170; and 0.770 g/mile for Bin 200 and Bin 250. Note that vehicles certified to transitional Tier 3 FTP bins are not subject to HD–SFTP standards.

* * * * *

(c) *Highway NMOG+NO_X exhaust emission standard.* For vehicles certified to any of the Tier 3 standards specified in paragraph (b) of this section, NMOG+NO_X emissions measured on the highway test cycle in 40 CFR 1066.840 may not exceed the applicable NMOG+NO_X bin standard for FTP testing. Demonstrate compliance with this standard for low-mileage vehicles by applying the appropriate deterioration factor.

* * * * *

■ 67. Section 86.1829–15 is amended by:

■ a. Revising paragraphs (b)(2) and (d)(1);

■ b. Adding paragraph (d)(6); and

■ c. Revising paragraph (e)(9).

The revisions and addition read as follows:

§ 86.1829–15 Durability and emission testing requirements; waivers.

* * * * *

(b) * * *

(2) Test one EDV in each test group using the FTP, SFTP, and HFET test procedures in 40 CFR part 1066 to

demonstrate compliance with other exhaust emission standards.

* * * * *

(d) * * *

(1) For vehicles subject to the Tier 3 PM standards in § 86.1811, a manufacturer may provide a statement in the application for certification that vehicles comply with applicable PM standards instead of submitting PM test data for a certain number of vehicles. However, each manufacturer must test vehicles from a minimum number of durability groups as follows:

(i) Manufacturers with a single durability group subject to the Tier 3 PM standards in § 86.1811 must submit PM test data for that group.

(ii) Manufacturers with two to eight durability groups subject to the Tier 3 PM standards in § 86.1811 must submit PM test data for at least two durability groups each model year. EPA will work with the manufacturer to select durability groups for testing, with the general expectation that testing will rotate to cover a manufacturer's whole product line over time. If a durability group has been certified in an earlier model year based on submitted PM data, and that durability group is eligible for certification using carryover test data, that carryover data may count toward meeting the requirements of this paragraph (d)(1), subject to the selection of durability groups.

(iii) Manufacturers with nine or more durability groups subject to the Tier 3 PM standards in § 86.1811 must submit PM test data for at least 25 percent of those durability groups each model year. We will work with the manufacturer to select durability groups for testing as described in paragraph (d)(1)(ii) of this section.

* * * * *

(6) For model years 2012 through 2016, a manufacturer may provide a statement in its application for certification that vehicles comply with the applicable standards instead of measuring N_2O emissions. Such a statement may also be used for model year 2017 and 2018 vehicles only if the application for certification for those vehicles is based upon data carried over from a prior model year, as allowed under this subpart. No model year 2019 and later vehicles may be waived from testing for N_2O emissions. Vehicles certified to N_2O standards using a compliance statement instead of submitting test data are not required to collect and submit N_2O emission data under the in-use testing requirements of § 86.1845.

(e) * * *

(9) For complete vehicles above 10,000 pounds GVWR with fuel tanks exceeding 35 gallons nominal fuel tank capacity, and for any incomplete vehicles above 10,000 pounds GVWR, a manufacturer may provide a statement in the application for certification that vehicles comply with refueling emission standards instead of submitting test data, consistent with 40 CFR 1037.103(c).

* * * * *

■ 68. Section 86.1844–01 is amended by revising paragraphs (d)(3) and (d)(7)(i) to read as follows:

§ 86.1844–01 Information requirements: Application for certification and submittal of information upon request.

* * * * *

(d) * * *

(3) A description of applicable evaporative/refueling families and leak families in accordance with the criteria listed in § 86.1821–01, or as otherwise used to group a product line.

* * * * *

(7) * * *

(i) For vehicles certified to any Tier 3 emission standards, include a comparison of drive-cycle metrics as specified in 40 CFR 1066.425(j) for each drive cycle or test phase, as appropriate.

* * * * *

■ 69. Section 86.1845–04 is amended by revising paragraphs (b)(5), (c)(5), and (f)(2) to read as follows:

§ 86.1845–04 Manufacturer in-use verification testing requirements.

* * * * *

(b) * * *

(5) *Testing.* (i) Each test vehicle of a test group shall be tested in accordance with the FTP and the US06 portion of the SFTP as described in subpart B of this part, when such test vehicle is tested for compliance with applicable exhaust emission standards under this subpart. Test vehicles subject to applicable exhaust CO_2 emission standards under this subpart shall also be tested in accordance with the HFET as described in 40 CFR 1066.840.

(ii) For vehicles subject to Tier 3 p.m. standards, manufacturers must measure PM emissions over the FTP and US06 driving schedules for at least 50 percent of the vehicles tested under paragraph (b)(5)(i) of this section.

(iii) Starting with model year 2018 vehicles, manufacturers must demonstrate compliance with the Tier 3 leak standard specified in § 86.1813, if applicable, as described in this paragraph (b)(5)(iii). Manufacturers must evaluate each vehicle tested under paragraph (b)(5)(i) of this section, except that leak testing is not required for vehicles tested under paragraph (b)(5)(iv) of this section for diurnal emissions. In addition, manufacturers must evaluate at least one vehicle from each leak family for a given model year. Manufacturers may rely on OBD monitoring instead of testing as follows:

(A) A vehicle is considered to pass the leak test if the OBD system completed a leak check within the previous 750 miles of driving without showing a leak fault code.

(B) Whether or not a vehicle's OBD system has completed a leak check within the previous 750 miles of driving, the manufacturer may operate the vehicle as needed to force the OBD system to perform a leak check. If the OBD leak check does not show a leak fault, the vehicle is considered to pass the leak test.

(C) If the most recent OBD leak check from paragraph (b)(5)(iii)(A) or (B) of this section shows a leak-related fault code as specified in § 86.1806–17(b), the vehicle is presumed to have failed the leak test. Manufacturers may perform the leak measurement procedure described in 40 CFR 1066.985 for an official result to replace the finding from the OBD leak check.

(D) Manufacturers may not perform repeat OBD checks or leak measurements to over-ride a failure under paragraph (b)(5)(iii)(C) of this section.

(iv) For nongaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the supplemental 2-diurnal-plus-hot-soak evaporative emission and refueling emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. For gaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the 3-diurnal-plus-hot-soak evaporative emission and refueling emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. The test vehicles tested to fulfill the evaporative/refueling testing requirement of this paragraph (b)(5)(iv) will be counted when determining compliance with the minimum number of vehicles as specified in Table S04–06 and Table S04–07 in paragraph (b)(3) of this section for testing under paragraph (b)(5)(i) of this section only if the vehicle is also tested for exhaust emissions under the requirements of paragraph (b)(5)(i) of this section.

* * * * *

(c) * * *

(5) *Testing.* (i) Each test vehicle shall be tested in accordance with the FTP and the US06 portion of the SFTP as described in subpart B of this part when such test vehicle is tested for compliance with applicable exhaust emission standards under this subpart. Test vehicles subject to applicable exhaust CO_2 emission standards under this subpart shall also be tested in accordance with the HFET as described in 40 CFR 1066.840. One test vehicle from each test group shall be tested over the FTP at high altitude. The test vehicle tested at high altitude is not required to be one of the same test vehicles tested at low altitude. The test vehicle tested at high altitude is counted when determining the compliance with the requirements shown in Table S04–06 and Table S04–07 in paragraph (b)(3) of this section or the expanded sample size as provided for in this paragraph (c).

(ii) For vehicles subject to Tier 3 p.m. standards, manufacturers must measure PM emissions over the FTP and US06 driving schedules for at least 50 percent of the vehicles tested under paragraph (c)(5)(i) of this section.

(iii) Starting with model year 2018 vehicles, manufacturers must evaluate each vehicle tested under paragraph (c)(5)(i) of this section to demonstrate compliance with the Tier 3 leak standard specified in § 86.1813, except that leak testing is not required for vehicles tested under paragraph (c)(5)(iv) of this section for diurnal emissions. In addition, manufacturers must evaluate at least one vehicle from each leak family for a given model year. Manufacturers may rely on OBD monitoring instead of testing as described in paragraph (b)(5)(iii) of this section.

(iv) For nongaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the supplemental 2-diurnal-plus-hot-soak evaporative emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. For gaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the 3-diurnal-plus-hot-soak evaporative emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. The vehicles tested to fulfill the evaporative/refueling testing requirement of this paragraph (c)(5)(iv) will be counted when determining compliance with the minimum number of vehicles as specified in Table S04–06 and table S04–07 in paragraph (b)(3) of this section for testing under paragraph (c)(5)(i) of this section only if the vehicle is also tested for exhaust emissions under the requirements of paragraph (c)(5)(i) of this section.

* * * * *

(f) * * *

(2) For flexible-fueled vehicles certified to NMOG (or NMOG+NO_X) standards, the manufacturer may ask for EPA approval to demonstrate compliance using an equivalent NMOG emission result calculated from a ratio of ethanol NMOG exhaust emissions to gasoline NMHC exhaust emissions. Ethanol NMOG exhaust emissions are measured values from testing with the ethanol test fuel, expressed as NMOG. Gasoline NMHC exhaust emissions are measured values from testing with the gasoline test fuel, expressed as NMHC. This ratio must be established during certification for each emission-data vehicle for the applicable test group. Use good engineering judgment to establish a different ratio for each duty cycle or test interval as appropriate. Identify the ratio values you develop under this paragraph (f)(2) and describe the duty cycle or test interval to which they apply in the Part II application for certification. Calculate the equivalent NMOG emission result by multiplying the measured gasoline NMHC exhaust emissions for a given duty cycle or test interval by the appropriate ratio.

* * * * *

■ 70. Section 86.1846–01 is amended by revising paragraphs (b)(1)(i) and (ii) to read as follows:

§ 86.1846–01 Manufacturer in-use confirmatory testing requirements.

* * * * *

(b) * * *

(1) * * *

(i) Additional testing is not required under this paragraph (b)(1) based on Supplemental FTP testing or evaporative/refueling testing. Testing conducted at high altitude under the requirements of § 86.1845–04(c) will be included in determining if a test group meets the criteria triggering the testing required under this section.

(ii) The vehicle designated for testing under the requirements of § 86.1845–04(c)(2) with a minimum odometer reading of 105,000 miles or 75% of useful life, whichever is less, will not be included in determining if a test group meets the triggering criteria.

* * * * *

■ 71. Section 86.1861–17 is amended by revising paragraphs (a) and (b)(1) to read as follows:

§ 86.1861–17 How do the NMOG+NO_X and evaporative emission credit programs work?

* * * * *

(a) Calculate emission credits as described in this paragraph (a) instead of using the provisions of 40 CFR 1037.705. Calculate positive or negative emission credits relative to the applicable fleet-average standard. Calculate positive emission credits if your fleet-average level is below the standard. Calculate negative emission credits if your fleet-average value is above the standard. Calculate credits separately for each type of standard and for each averaging set. Calculate emission credits using the following equation, rounded to the nearest whole number:

$$\textit{Emission credit} = \textit{Volume} \cdot [\textit{Fleet average standard} - \textit{Fleet average value}]$$

Where:

Emission credit = The positive or negative credit for each discrete fleet-average standard, in units of vehicle-grams per mile for NMOG+NO_X and vehicle-grams per test for evaporative emissions.

Volume = Sales volume in a given model year from the collection of test groups or evaporative families covered by the fleet-average value, as described in § 86.1860.

(b) * * *

(1) Except as specified in paragraph (b)(2) of this section, emission credits may be exchanged only within an averaging set, as follows:

(i) HDV represent a separate averaging set with respect to all emission standards.

(ii) Except as specified in paragraph (b)(1)(iii) of this section, LDV and LDT represent a single averaging set with respect to all emission standards. Note that FTP and SFTP credits are not interchangeable.

(iii) LDV and LDT1 certified to standards based on a useful life of 120,000 miles and 10 years together represent a single averaging set with respect to NMOG+NO_X emission standards. Note that FTP and SFTP credits are not interchangeable.

(iv) The following separate averaging sets apply for evaporative emission standards:

(A) LDV and LDT1 together represent a single averaging set.

(B) LDT2 represents a single averaging set.

(C) HLDT represents a single averaging set.

(D) HDV represents a single averaging set.

* * * * *

■ 72. Appendix I to part 86 is amended by revising paragraph (c) introductory text to read as follows:

Appendix I to Part 86—Dynamometer Schedules

* * * * *

(c) *EPA driving schedule for class 3 heavy-duty vehicles.* This driving schedule is also known as the LA–92 cycle. The first 1,435 seconds are the Hot LA–92 driving schedule.

* * * * *

PART 600—FUEL ECONOMY AND GREENHOUSE GAS EXHAUST EMISSIONS OF MOTOR VEHICLES

■ 73. The authority citation for part 600 continues to read as follows:

Authority: 49 U.S.C. 32901–23919q, Pub. L. 109–58.

Subpart B—[Amended]

■ 74. Section 600.116–12 is amended by revising paragraph (c)(5) to read as follows:

§ 600.116–12 Special procedures related to electric vehicles and hybrid electric vehicles.

* * * * *

(c) * * *

(5) The End-of-Test criterion is based on a 1 percent Net Energy Change as specified in Section 3.8 of SAE J1711. We may approve alternate Net Energy Change tolerances as specified in Section 3.9.1 of SAE J1711 for charge-depleting tests or Appendix C of SAE J1711 for charge-sustaining tests if the 1 percent threshold is insufficient or inappropriate. For charge-sustaining tests, we may approve the use of alternate Net Energy Change tolerances as specified in Appendix C of SAE J1711 to correct final fuel economy values, CO_2 emissions, and carbon-related exhaust emissions. For charge-sustaining tests, do not use alternate Net Energy Change tolerances to correct emissions of criteria pollutants. Additionally, if we approve an alternate End-of-Test criterion or Net Energy Change tolerances for a specific vehicle, we may use the alternate criterion or tolerances for any testing we conduct on that vehicle.

* * * * *

■ 75. Section 600.117 is amended by revising paragraphs (a), (b), (c), and (d) to read as follows:

§ 600.117 Interim provisions.

* * * * *

(a) Except as specified in paragraph (e) of this section, manufacturers must demonstrate compliance with greenhouse gas emission standards and determine fuel economy values using E0 gasoline test fuel as specified in 40 CFR 86.113–04(a)(1), regardless of any testing with Tier 3 test fuel under paragraph (b) of this section.

(b) Manufacturers may demonstrate that vehicles comply with Tier 3 emission standards as specified in 40 CFR part 86, subpart S, during fuel economy measurements using the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1), as long as this test fuel is used in fuel economy testing for all applicable duty cycles specified in 40 CFR part 86, subpart S. If a vehicle fails to meet a Tier 3 emission standard using the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1), the manufacturer must retest the vehicle using the Tier 3 test fuel specified in 40 CFR 1065.710(b) (or the equivalent LEV III test fuel for California) to demonstrate compliance with all applicable emission standards over that test cycle.

(c) If a manufacturer demonstrates compliance with emission standards for criteria pollutants over all five test cycles using the Tier 3 test fuel specified in 40 CFR 1065.710(b) (or the equivalent LEV III test fuel for California), the manufacturer may use test data with the same test fuel to determine whether a test group meets the criteria described in § 600.115 for derived 5-cycle testing for fuel economy labeling. Such vehicles may be tested over the FTP and HFET cycles with the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1) under this paragraph (c); the vehicles must meet the Tier 3 emission standards over those test cycles as described in paragraph (b) of this section.

(d) Manufacturers may perform testing with the appropriate gasoline test fuels specified in 40 CFR 86.113–04(a)(1), 40 CFR 86.213(a)(2), and in 40 CFR 1065.710(b) to evaluate whether their vehicles meet the criteria for derived 5-cycle testing under 40 CFR 600.115. All five tests must use test fuel with the same nominal ethanol concentration.

* * * * *

PART 1037—CONTROL OF EMISSIONS FROM NEW HEAVY-DUTY MOTOR VEHICLES

■ 76. The authority citation for part 1037 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—Emission Standards and Related Requirements

■ 77. Section 1037.103 is amended by revising paragraphs (b)(6) and (f) to read as follows:

§ 1037.103 Evaporative and refueling emission standards.

* * * * *

(b) * * *

(6) Vehicles not yet subject to the Tier 3 standards in 40 CFR 86.1813 must meet evaporative emission standards as specified in §§ 86.008–10(b)(1) and (2) for Otto-cycle applications and 86.007–11(b)(3)(ii) and (b)(4)(ii) for diesel-cycle applications.

* * * * *

(f) *Useful life.* Your vehicles must meet the evaporative emission standards of this section throughout their useful life, expressed in service miles or calendar years, whichever comes first. The useful life values for the standards of this section are described in 40 CFR 86.1805.

* * * * *

■ 78. Section 1037.104 is amended by revising paragraph (e) to read as follows:

§ 1037.104 Exhaust emission standards for CO_2, CH_4, and N_2O for heavy-duty vehicles at or below 14,000 pounds GVWR.

* * * * *

(e) *Useful life.* Your vehicles must meet the exhaust emission standards of this section throughout their full useful life, expressed in service miles or calendar years, whichever comes first. The useful life values for the standards of this section are those that apply to model year 2014 vehicles for criteria pollutants under 40 CFR part 86.1805–12.

* * * * *

■ 79. Section 1037.135 is amended by revising paragraph (c)(9) to read as follows:

§ 1037.135 Labeling.

* * * * *

(c) * * *

(9) If you rely on another company to design and install fuel tanks in incomplete vehicles that use an evaporative canister for controlling diurnal emissions, include the following statement: ''THIS VEHICLE IS DESIGNED TO COMPLY WITH EVAPORATIVE EMISSION STANDARDS WITH UP TO x GALLONS OF FUEL TANK CAPACITY.'' Complete this statement by identifying the maximum specified fuel tank capacity associated with your certification.

* * * * *

PART 1043—CONTROL OF NO_X, SO_X, AND PM EMISSIONS FROM MARINE ENGINES AND VESSELS SUBJECT TO THE MARPOL PROTOCOL

■ 80. The authority citation for part 1043 is revised to read as follows:

Authority: 33 U.S.C. 1901–1912.

§ 1043.5 [Amended]

■ 81. Section 1043.5 is amended by removing and reserving paragraph (b).

■ 82. Section 1043.10 is amended by revising paragraphs (a)(2) introductory text, (a)(2)(iii), and (b)(2) to read as follows:

§ 1043.10 Applicability.

(a) * * *

(2) Vessels that operate only domestically and conform to the requirements of this paragraph (a)(2) are excluded from Regulation 13 of Annex VI and the NO_X-related requirements of this part (including the requirement to obtain an EIAPP certificate and to keep a Technical File and an Engine Book of Record Parameters). For the purpose of this exclusion, the phrase ''operate only domestically'' means the vessels do not enter waters subject to the jurisdiction or control of any foreign country, except for Canadian portions of the Great Lakes. (See §§ 1043.60 and 1043.70 for provisions related to fuel use by such vessels). To be excluded, the vessel must conform to each of the following provisions:

* * * * *

(iii) Any engine installed in the vessel that is not covered by an EIAPP certificate must be labeled as specified in 40 CFR 1042.135 with respect to whether it meets the requirements of Regulation 13 of Annex VI.

(b) * * *

(2) For non-public vessels flagged by a country that is not a party to Annex VI, the requirements of this part apply in the same manner as apply for Party vessels, except as otherwise provided in this part. For example, see § 1043.30(c)(4) for provisions related to showing compliance with this requirement without an EIAPP certificate. See § 1043.60 for specific operating requirements.

* * * * *

■ 83. Section 1043.20 is amended by revising the definitions for ''2008 Annex VI'', ''Emission control area (ECA)'', and ''Public vessels'' to read as follows:

§ 1043.20 Definitions.

* * * * *

2008 Annex VI means Annex VI to the MARPOL Protocol, including the amendments from Annex 12, adopted through April 2014 (incorporated by reference in § 1043.100). This version of Annex VI does not include any amendments that may be adopted in the future. This 2008 version applies for certain provisions of this part such as those applicable for internal waters and for non-Party vessels.

* * * * *

Emission control area (ECA) means an area designated pursuant to Annex VI as an Emission Control Area that is in force.

* * * * *

Public vessels means warships, naval auxiliary vessels, and other vessels owned or operated by a sovereign country when engaged in noncommercial service. Vessels with a national security exemption under 40 CFR 80.606 or 1042.635 are deemed to be public vessels.

* * * * *

■ 84. Section 1043.40 is amended by redesignating paragraphs (d) through (f) as paragraphs (e) through (g), adding a new paragraph (d), and revising the newly redesignated paragraph (g) to read as follows:

§ 1043.40 EIAPP certificates.

* * * * *

(d) EPA may issue both an EPA certificate and an EIAPP certificate for the same engine, as long as the manufacturer and the engine meet all applicable requirements. EPA may not issue an EIAPP certificate if the engine is certified with an FEL under 40 CFR part 1042 that is higher than the applicable NO_X emission standard under Annex VI.

* * * * *

(g) This paragraph (g) applies for engines that were originally excluded from this part because they were intended for domestic use and were introduced into U.S. commerce without an EIAPP certificate. Note that such engines must be labeled as specified under 40 CFR 1042.135 to indicate that they are intended for domestic use. Such engines may be installed on vessels not intended only for domestic operation provided the engine manufacturer, vessel manufacturer, or vessel owner obtains an EIAPP certificate. Similarly, vessels originally intended only for domestic operation may be used internationally provided the engine manufacturer, vessel manufacturer, or vessel owner obtains an EIAPP certificate. The limitations for engine manufacturers described in paragraphs (a) and (d) of this section also apply for all EIAPP certificates issued under this paragraph (g). In either case, the Technical File must specify that the engine was originally certified for domestic use only, prior to being covered by an EIAPP certificate. Engine manufacturers may provide a supplemental label to clarify that the engine is no longer limited to domestic service. An engine manufacturer, vessel manufacturer, or vessel owner may also ask to apply the provisions of this paragraph (g) to engines originally certified for public vessels.

■ 85. Section 1043.60 is amended by revising paragraphs (a) and (b) to read as follows:

§ 1043.60 Operating requirements for engines and vessels subject to this part.

* * * * *

(a) Except as specified otherwise in this part, NO_X emission limits apply to all vessels subject to this part as specified in the following table:

TABLE 1 TO § 1043.60 ANNEX VI NO_X EMISSION STANDARDS (g/kW-hr)

Tier	Area of applicability	Implementation date [a]	Maximum in-use engine speed		
			Less than 130 RPM	130–2000 RPM [b]	Over 2000 RPM
Tier I	All U.S. navigable waters and EEZ	January 1, 2004–December 31, 2010.	17.0	$45.0 \cdot n^{(-0.20)}$	9.8
Tier II	All U.S. navigable waters and EEZ	January 1, 2011–December 31, 2015.	14.4	$44.0 \cdot n^{(-0.23)}$	7.7
Tier II	All U.S. navigable waters and EEZ, exluding ECA and ECA associated areas.	January 1, 2016 and later	14.4	$44.0 \cdot n^{(-0.23)}$	7.7
Tier III	ECA and ECA associated areas	January 1, 2016 and later [c]	3.4	$9.0 \cdot n^{(-0.20)}$	2.0

[a] Standards apply for engines installed on vessels with a build date in the specified time frame, or for engines that undergo a major conversion in the specified time frame.

[b] Applicable standards are calculated from *n* (maximum in-use engine speed, in RPM, as specified in § 1042.140). Round the standards to one decimal place.

[c] In the case of recreational vessels of less than 500 gross tonnage with length at or above 24 meters, the Tier III standards start to apply January 1, 2021.

(b) Except as specified otherwise in this part, fuel sulfur limits apply to all vessels subject to this part as specified in the following table:

TABLE 2 TO § 1043.60 ANNEX VI FUEL SULFUR LIMITS (wt %) [a]

Calendar years	Sulfur limit in all U.S. navigable waters and EEZ (percent)	Sulfur limit in ECA and ECA associated areas (percent)
2010–2011	4.50	1.00
2012–2014	3.50	1.00
2015–2019	3.50	0.10
2020 and later	0.50	0.10

[a] Note that Regulation 3 and Regulation 4 of Annex VI allow for the use of noncompliant fuel in certain circumstances.

* * * * *

■ 86. Section 1043.70 is amended by revising paragraph (a) to read as follows:

§ 1043.70 General recordkeeping and reporting requirements.

(a) Under APPS, owners and operators of Party vessels must keep records related to NO_X standards and in-use fuel specifications such as the Technical File, the Engine Book of Record Parameters, and bunker delivery notes. Owners and operators of non-Party vessels must keep these records as specified in the NO_X Technical Code and Regulations 13, 14, and 18 of 2008 Annex VI (incorporated by reference in § 1043.100). We may inspect these records as allowed by APPS. As part of our inspection, we may require that the owner submit copies of these records to us.

* * * * *

■ 87. Section 1043.80 is amended by revising paragraph (b)(9) to read as follows:

§ 1043.80 Recordkeeping and reporting requirements for fuel suppliers.

* * * * *

(b) * * *

(9) A signed statement by an authorized representative of the fuel supplier certifying that the fuel supplied conforms to Regulations 14 and 18 of Annex VI consistent with its designation, intended use, and the date on which it is to be used. For example, with respect to conformity to Regulation 14 of Annex VI, a fuel designated and intended for use in an ECA any time on or after January 1, 2015 may not have a sulfur content above 0.10 weight percent. This statement is not required if the vessel is not subject to fuel standards of Regulation 14 of Annex VI. The statement described in this paragraph (b)(9) is deemed to be a submission to EPA.

* * * * *

■ 88. Section 1043.95 is amended by revising the section heading, the introductory text, and paragraph (b)(1)(ii) to read as follows:

§ 1043.95 Great Lakes provisions.

The provisions of this section apply for vessels operating exclusively in the Great Lakes.

* * * * *

(b) * * *

(1) * * *

(ii) We may approve the use of an engine meeting less stringent standards if the owner can demonstrate that it took possession of the engine before October 30, 2009, and that engine is a new engine that has not been installed in a non-marine application. Such an engine must at a minimum be certified to the Annex VI NO_X emission standard referenced in § 1043.60 that applies based on its build date.

* * * * *

■ 89. Add § 1043.97 to read as follows:

§ 1043.97 Interim provisions.

(a) The fuel-related requirements under APPS for operation in the North American ECA, the United States Caribbean Sea ECA, and ECA-associated areas do not apply until January 1, 2020 for steamships built on or before August 1, 2011 if they are powered by propulsion boilers that were not originally designed for continued operation on marine distillate fuel or natural gas.

(b) [Reserved]

■ 90. Section 1043.100 is amended by revising paragraph (a) to read as follows:

§ 1043.100 Reference materials.

* * * * *

(a) *IMO material.* This paragraph (a) lists material from the International Maritime Organization that we have incorporated by reference. Anyone may purchase copies of these materials from the International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or *www.imo.org, or 44-(0)20–7735–7611.*

(1) MARPOL Annex VI, Regulations for the Prevention of Air Pollution from Ships, Third Edition, 2013, and NO_X Technical Code 2008.

(i) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, Third Edition, 2013 (''2008 Annex VI''); IBR approved for § 1043.1 introductory text, 1043.20, 1043.30(f), 1043.60(c), and 1043.70(a).

(ii) NO_X Technical Code 2008, Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, 2013 Edition, (''NO_X Technical Code''); IBR approved for §§ 1043.20, 1043.41(b) and (h), and 1043.70(a).

(iii) Annex 12, Resolution MEPC.251(66) from the Report of the Marine Environment Protection Committee on its Sixty-Sixth Sesson, April 25, 2014. This document describes new and revised provisions that are considered to be part of Annex VI and NO_X Technical Code 2008 as referenced in paragraphs (a)(1)(i) and (ii) of this section. IBR approved for § 1043.1 introductory text, 1043.20, 1043.30(f), 1043.41(b) and (h), 1043.60(c), and 1043.70(a).

(2) [Reserved]

* * * * *

PART 1051—CONTROL OF EMISSIONS FROM RECREATIONAL ENGINES AND VEHICLES

■ 91. The authority citation for part 1051 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart F—Test Procedures

■ 92. Section 1051.501 is amended by revising paragraph (b) to read as follows:

§ 1051.501 What procedures must I use to test my vehicles or engines?

* * * * *

(b) *Motorcycles and ATVs.* For motorcycles and ATVs, use the equipment, procedures, and duty cycle in 40 CFR part 86, subpart F, to determine whether your vehicles meet the exhaust emission standards in § 1051.105 or § 1051.107. Measure the emissions of all the pollutants we regulate in § 1051.105 or § 1051.107. Measure CO_2, N_2O, and CH_4 as described in § 1051.235. If we allow you to certify ATVs based on engine testing, use the equipment, procedures, and duty cycle described or referenced in the section that allows engine testing. For motorcycles with engine displacement at or below 169 cc and all ATVs, use the driving schedule in paragraph (b) of appendix I to 40 CFR part 86. For all other motorcycles, use the driving schedule in paragraph (a) of Appendix I to part 86. With respect to vehicle-speed governors, test motorcycles and ATVs in their ungoverned configuration, unless we approve in advance testing in a governed configuration. We will only approve testing in a governed configuration if you can show that the governor is permanently installed on all production vehicles and is unlikely to be removed in use. With respect to engine-speed governors, test motorcycles and ATVs in their governed configuration. Run the test engine, with all emission-control systems operating, long enough to stabilize emission levels; you may consider emission levels stable without measurement if you accumulate 12 hours of operation.

* * * * *

PART 1054—CONTROL OF EMISSIONS FROM NEW, SMALL NONROAD SPARK-IGNITION ENGINES AND EQUIPMENT

■ 93. The authority citation for part 1054 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—Emission Standards and Related Requirements

■ 94. Section 1054.135 is amended by revising paragraph (c)(8) to read as follows:

§ 1054.135 How must I label and identify the engines I produce?

* * * * *

(c) * * *

(8) Include one of the following statements:

(i) If you are an integrated equipment manufacturer certifying engines with respect to exhaust emissions and meeting all applicable evaporative emission requirements under 40 CFR part 1060, state—

''THIS ENGINE MEETS U.S. EPA EXH/EVP REGS FOR [MODEL YEAR].''

(ii) In all other cases, state—

''THIS ENGINE MEETS U.S. EPA EXH REGS FOR [MODEL YEAR].''

* * * * *

■ 95. Section 1054.145 is amended by revising paragraph (n) introductory text and removing paragraph (o) to read as follows:

§ 1054.145 Are there interim provisions that apply only for a limited time?

* * * * *

(n) *California test fuel.* You may perform testing with a fuel meeting the requirements for certifying the engine in California instead of the fuel specified in § 1054.501(b)(2), as follows:

* * * * *

Subpart F—Test Procedures

■ 96. Section 1054.501 is amended by revising paragraph (b)(2) to read as follows:

§ 1054.501 How do I run a valid emission test?

* * * * *

(b) * * *

(2) Use the appropriate fuels and lubricants specified in 40 CFR part 1065, subpart H, for all the testing we require in this part. Except as specified in paragraph (d) of this section, use gasoline specified for general testing. For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use. Note that § 1054.145(n) allows for testing with gasoline test fuels specified by the California Air Resources Board for any individual engine family.

* * * * *

Subpart G—Special Compliance Provisions

■ 97. Section 1054.690 is amended by adding the introductory text and revising paragraphs (a) through (f) to read as follows:

§ 1054.690 What bond requirements apply for certified engines?

This section generally applies for certifying engine manufacturers. It also applies to importers that do not certify engines as described in paragraph (j) of this section.

(a) Before introducing certified engines into U.S. commerce, you must post a bond to cover any potential compliance or enforcement actions under the Clean Air Act with respect to engines certified under this part unless you demonstrate to us in your application for certification that you are able to meet any potential compliance- or enforcement-related obligations, as described in this section. Note that you might also need to post bond under this section to meet your obligations under § 1054.120(f).

(b) The bonding requirements apply if you do not have long-term assets in the United States meeting any of the following thresholds:

(1) A threshold of $3 million applies if you have been a certificate holder in each of the preceding ten years without failing a test conducted by EPA officials or having been found by EPA to be noncompliant under applicable regulations.

(2) A threshold of $6 million applies if you are a secondary engine manufacturer.

(3) A threshold of $10 million applies if you do not qualify for the smaller bond thresholds in paragraph (b)(1) or (2) of this section.

(c) For the purpose of establishing your level of long-term assets under paragraph (b) of this section, include the values from your most recent balance sheet for buildings, land, and fixed equipment, but subtract depreciation and related long-term liabilities (such as a mortgage). If you have sufficient long-term assets to avoid bond payments under this section, you must identify the location of these assets in your application for certification.

(d) Determine the value of the bond as follows:

(1) Calculate a value based on the per-engine bond values shown in Table 1 to this section and on the projected U.S.-directed production volume from each displacement grouping for the model year. For example, if you have projected U.S.-directed production volumes of 10,000 engines with 180 cc displacement and 10,000 engines with 400 cc displacement in 2013, the calculated bond amount is $750,000. If the calculated value is less than $500,000, the appropriate bond amount is $500,000. If the calculated value exceeds the applicable threshold value specified in paragraph (b) of this section, use the applicable threshold value as the appropriate value of the bond. These values may be adjusted as described in paragraphs (d)(2) through (4) of this section. You may generally change your projected U.S.-directed production volume under § 1054.225

during the model year; however, you may not decrease your bond based on new projected U.S.-directed production volumes once you have imported or otherwise introduced into U.S. commerce your first engine from that model year.

TABLE 1 TO § 1054.690—PER-ENGINE BOND VALUES

For engines with displacement falling in the following ranges . . .	The per-engine bond value is . . .
Disp. < 225 cc	$25
225 ≤ Disp. < 740 cc	50
740 ≤ Disp. ≤ 1,000 cc	100
Disp. > 1,000 cc	200

(2) If your estimated or actual U.S.-directed production volume increases beyond the level appropriate for your current bond payment, you must post additional bond to reflect the increased volume within 90 days after you change your estimate or determine the actual production volume. You may not decrease your bond in a given year, but you may calculate a lower bond value in a later year based on the highest actual U.S.-directed production volumes from the preceding three years.

(3) If you sell engines without aftertreatment components under the provisions of § 1054.610, you must increase the per-engine bond values for the current year by 20 percent.

(4) The minimum bond value is $25,000 instead of $500,000 if you are a small-volume engine manufacturer or a small-volume equipment manufacturer that has been a certificate holder in each of the preceding five years without failing a test conducted by EPA officials or having been found by EPA to be noncompliant under applicable regulations.

(e) The threshold identified in paragraph (b) of this section and the bond values identified in paragraph (d) of this section are in 2008 dollars. We will adjust these values for 2020 and later, and every 10 years after that, by considering the current Consumer Price Index values published by the Bureau of Labor Statistics relative to 2008. We will generally round values for thresholds and total bond obligations as follows:

(1) Round calculated values at or below $125,000 to the nearest $5,000.

(2) Round calculated values above $125,000 and at or below $2.25 million to the nearest $50,000.

(3) Round calculated values above $2.25 million to the nearest $500,000.

(f) If you are required to post a bond under this section, you must get the bond from a third-party surety that is cited in the U.S. Department of Treasury Circular 570, ''Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies'' (*http://www.fms.treas.gov/c570/c570.html#certified*). You must maintain this bond for every year in which you sell certified engines. The surety agent remains responsible for obligations under the bond for two years after the bond is cancelled or expires without being replaced.

* * * * *

PART 1060—CONTROL OF EVAPORATIVE EMISSIONS FROM NEW AND IN-USE NONROAD AND STATIONARY EQUIPMENT

■ 98. The authority citation for part 1060 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Overview and Applicability

■ 99. Section 1060.5 is amended by revising paragraphs (b)(2), (e), and (f), including Tables 1 through 3, to read as follows:

§ 1060.5 Do the requirements of this part apply to me?

* * * * *

(b) * * *

(2) Vessel manufacturers are subject to all the requirements of this part 1060 that apply to Marine SI engines and fuel systems. However, they must certify to the emission standards specified in §§ 1060.102 through 1060.105 only if one or more of the following conditions apply:

(i) Vessel manufacturers must certify fuel system components they install in their vessels if the components are not certified to meet all applicable evaporative emission standards, including both permeation and diurnal standards. This would include vessel manufacturers that make their own fuel tanks. Vessel manufacturers would need to act as component manufacturers to certify under this part 1060.

(ii) Vessel manufacturers must certify their vessels only if they intend to generate or use evaporative emission credits. Vessel manufacturers would certify under part 40 CFR part 1045 using the emission-credit provisions in subpart H of that part to demonstrate compliance with the emission standard.

* * * * *

(e) *Small SI.* Certify engines, equipment, and fuel-system components as follows:

(1) Component manufacturers must certify their fuel lines and fuel tanks intended for Small SI engines and equipment under this part 1060, except as allowed by § 1060.601(f).

(2) Equipment manufacturers must certify fuel system components they install in their equipment if the components are not certified to meet applicable evaporative emission standards. Equipment manufacturers would need to act as component manufacturers to certify fuel-system components under this part 1060.

(3) Engine manufacturers must meet all the requirements of this part 1060 that apply to equipment manufacturers for all fuel-system components they install on their engines. Engine manufacturers that produce Small SI engines with complete fuel systems are considered the equipment manufacturers for those engines under this part 1060.

(4) Equipment manufacturers must certify their equipment and are subject to all the requirements of this part 1060; however, this does not apply for equipment using portable nonroad fuel tanks.

(f) *Summary of certification responsibilities.* Tables 1 through 3 of this section summarize the certification responsibilities for different kinds of manufacturers as described in paragraphs (b) through (e) of this section. The term ''No'' as used in the tables means that a manufacturer is not required to obtain a certificate of conformity under paragraphs (b) through (e) of this section. In situations where multiple manufacturers are subject to the standards and other requirements of this part, such a manufacturer must nevertheless certify if the manufacturer who is required to certify under paragraphs (b) through (e) of this section fails to obtain a certificate of conformity.

TABLE 1 TO § 1060.5—SUMMARY OF ENGINE MANUFACTURER EVAPORATIVE CERTIFICATION RESPONSIBILITIES

Equipment type	Is the engine manufacturer required to certify for evaporative emission standards? [a]	Code of Federal Regulations Cite for Certification
Marine SI	No.	
Large SI	Yes	40 CFR part 1048.
Recreational vehicles	No.	
Small SI	No, unless engines are sold with complete fuel systems	40 CFR part 1060.

[a] Fuel lines and fuel tanks that are attached to or sold with engines must be covered by a certificate of conformity.

TABLE 2 TO § 1060.5—SUMMARY OF EQUIPMENT MANUFACTURER EVAPORATIVE CERTIFICATION RESPONSIBILITIES

Equipment type	Is the equipment manufacturer required to certify for evaporative emission standards?	Code of Federal Regulations Cite for Certification
Marine SI	Yes, but only if vessel manufacturers install uncertified fuel lines or fuel tanks, or they intend to generate or use evaporative emission credits.	40 CFR part 1060.[a]
Large SI	Allowed but not required	40 CFR part 1060.
Recreational vehicles	Yes, even if vehicle manufacturers install certified components	40 CFR part 1051.
Small SI	Yes, unless the equipment uses portable nonroad fuel tanks	40 CFR part 1060.[a]

[a] See the exhaust standard-setting part for provisions related to generating or using evaporative emission credits.

TABLE 3 OF § 1060.5—SUMMARY OF COMPONENT MANUFACTURER CERTIFICATION RESPONSIBILITIES

Equipment type	Is the component manufacturer required to certify fuel lines and fuel tanks?	Code of Federal Regulations Cite for Certification
Marine SI	Yes, including portable marine fuel tanks and associated fuel lines [a]	40 CFR part 1060.
Large SI	Allowed but not required	40 CFR part 1060.
Recreational vehicles	Allowed but not required	40 CFR part 1060.
Small SI	Yes [a]	40 CFR part 1060.

[a] See § 1060.601 for an allowance to make contractual arrangements with engine or equipment manufacturers instead of certifying.

Subpart F—Test Procedures

■ 100. Section 1060.515 is amended by revising paragraphs (c) and (d) and adding paragraph (e) to read as follows:

§ 1060.515 How do I test EPA Nonroad Fuel Lines and EPA Cold-Weather Fuel Lines for permeation emissions?

* * * * *

(c) Except as specified in paragraph (d) of this section, measure fuel line permeation emissions using the equipment and procedures for weight-loss testing specified in SAE J30 or SAE J1527 (incorporated by reference in § 1060.810). Start the measurement procedure within 8 hours after draining and refilling the fuel line. Perform the emission test over a sampling period of 14 days. You may omit up to two daily measurements in any seven day period. Determine your final emission result based on the average of measured values over the 14-day period. Maintain an ambient temperature of 23±2 °C throughout the sampling period.

(d) For fuel lines with a nominal inner diameter below 5.0 mm, you may alternatively measure fuel line permeation emissions using the equipment and procedures for weight-loss testing specified in SAE J2996 (incorporated by reference in § 1060.810). Determine your final emission result based on the average of measured values over the 14-day sampling period. Maintain an ambient temperature of 23±2 °C throughout the sampling period.

(e) Use good engineering judgment to test short fuel line segments. For example, you may need to join individual fuel line segments using proper connection fittings to achieve enough length and surface area for a proper measurement. Size the fuel reservoir appropriately for the tested fuel line.

■ 101. Section 1060.520 is amended by revising paragraphs (a)(1), (c)(1), and (d)(9) to read as follows:

§ 1060.520 How do I test fuel tanks for permeation emissions?

* * * * *

(a) * * *

(1) *Pressure cycling.* Perform a pressure test by sealing the tank and cycling it between +13.8 and −3.4 kPa (+2.0 and −0.5 psig) for 10,000 cycles at a rate of 60 seconds per cycle. The purpose of this test is to represent environmental wall stresses caused by pressure changes and other factors (such as vibration or thermal expansion). If your tank cannot be tested using the pressure cycles specified by this paragraph (a)(1), you may ask to use special test procedures under § 1060.505.

* * * * *

(c) * * *

(1) Obtain a second tank whose total volume is within 5 percent of the test tank's volume. You may not use a tank that has previously contained fuel or any other contents that might affect its mass stability.

* * * * *

(d) * * *

(9) Record the difference in mass between the reference tank and the test tank for each measurement. This value is M_i, where i is a counter representing the number of days elapsed. Subtract M_i from M_o and divide the difference by the internal surface area of the fuel tank. Divide this g/m² value by the number of test days (using at least two decimal places) to calculate the emission rate in g/m²/day. Example: If a tank with an internal surface area of 0.720 m² weighed 1.31 grams less than the reference tank at the beginning of the test and weighed 9.86 grams less than

the reference tank after soaking for 10.03 days, the emission rate would be—

$((-1.31\ g)-(-9.86\ g))/0.720\ m^2/10.03\ days = 1.1839\ g/m^2/day$

* * * * *

■ 102. Section 1060.525 is revised to read as follows:

§ 1060.525 How do I test fuel systems for diurnal emissions?

Use the procedures of this section to determine whether your fuel tanks meet diurnal emission standards as specified in § 1060.105.

(a) Use the following procedure to measure diurnal emissions:

(1) Diurnal measurements are based on representative temperature cycles, as follows:

(i) Diurnal fuel temperatures for marine fuel tanks that will be installed in nontrailerable boats must undergo repeat temperature swings of 2.6 °C between nominal values of 27.6 and 30.2 °C.

(ii) Diurnal fuel temperatures for other installed marine fuel tanks must undergo repeat temperature swings of 6.6 °C between nominal values of 25.6 and 32.2 °C.

(iii) For fuel tanks installed in equipment other than marine vessels, the following table specifies a profile of ambient temperatures:

TABLE 1 TO § 1060.525—DIURNAL TEMPERATURE PROFILES FOR NONMARINE FUEL TANKS

Time (hours)	Ambient temperature profile (°C)
0	22.2
1	22.5
2	24.2
3	26.8
4	29.6
5	31.9
6	33.9
7	35.1
8	35.4
9	35.6
10	35.3
11	34.5
12	33.2
13	31.4
14	29.7
15	28.2
16	27.2
17	26.1
18	25.1
19	24.3
20	23.7
21	23.3
22	22.9
23	22.6
24	22.2

(2) Fill the fuel tank to 40 percent of nominal capacity with the gasoline specified in 40 CFR 1065.710 for general testing.

(3) Install a vapor line from any vent ports that would not be sealed in the final in-use configuration. Use a length of vapor line representing the largest inside diameter and shortest length that would be expected with the range of in-use installations for the emission family.

(4) If the fuel tank is equipped with a carbon canister, load the canister with butane or gasoline vapors to its canister working capacity as specified in § 1060.240(e)(2)(i) and attach it to the fuel tank in a way that represents a typical in-use configuration. Purge the canister as follows to prepare for emission measurement:

(i) For marine fuel tanks, perform a single heating and cooling cycle as specified in paragraph (a)(7) of this section without measuring emissions.

(ii) For nonmarine fuel tanks, establish a characteristic purge volume by running an engine with the fuel tank installed to represent an in-use configuration. Measure the volume of air flowing through the canister while the engine operates for 30 minutes over repeat cycles of the appropriate duty cycle used for certifying the engine for exhaust emissions. Set up the loaded canister for testing by purging it with the characteristic purge volume from the engine simulation run.

(5) Stabilize the fuel tank to be within 2.0 °C of the nominal starting temperature specified in paragraph (a)(1) of this section. In the case of marine fuel tanks, install a thermocouple meeting the requirements of 40 CFR 86.107–96(e) in the approximate mid-volume of fuel and record the temperature at the end of the stabilization period to the nearest 0.1 °C. For sealed fuel systems, replace the fuel cap once the fuel reaches equilibrium at the appropriate starting temperature.

(6) Prepare the tank for mass measurement using one of the following procedures:

(i) Place the stabilized fuel tank in a SHED meeting the specifications of 40 CFR 86.107–96(a)(1) that is equipped with a FID analyzer meeting the specifications of 40 CFR 1065.260. Take the following steps in sequence:

(A) Purge the SHED.

(B) Close and seal the SHED.

(C) Zero and span the FID analyzer.

(D) Within ten minutes of sealing the SHED, measure the initial hydrocarbon concentration. This is the start of the sampling period.

(ii) If your testing configuration involves mass emissions at the standard of 2.0 grams or more, you may alternatively place the stabilized fuel tank in any temperature-controlled environment and establish mass emissions as a weight loss relative to a reference fuel tank using the procedure specified in § 1060.520(d) instead of calculating it from changing hydrocarbon concentrations in the SHED.

(7) Control temperatures as follows:

(i) For marine fuel tanks, supply heat to the fuel tank for continuously increasing temperatures such that the fuel reaches the maximum temperature in 8 hours. Set the target temperature by adding the temperature swing specified in paragraph (a)(1) of this section to the recorded starting temperature. Hold the tank for approximately 60 minutes at a temperature no less than 0.1 °C below the target temperature. For example, if the recorded starting fuel temperature for a fuel tank that will be installed in a nontrailerable vessel is 27.1 °C, the target temperature is 29.7 °C and the fuel must be stabilized for 60 minutes with fuel temperatures not falling below 29.6 °C. For EPA testing, fuel temperatures may not go 1.0 °C above the target temperature at any point during the heating or stabilization sequence. Measure the hydrocarbon concentration in the SHED at the end of the high-temperature stabilization period. Calculate the diurnal emissions for this heating period based on the change in hydrocarbon concentration over this sampling period. Allow the fuel temperature to cool sufficiently to stabilize again at the starting temperature without emission sampling. Repeat the heating and measurement sequence for three consecutive days, starting each heating cycle no more than 26 hours after the previous start.

(ii) For nonmarine fuel tanks, follow the air temperature trace from paragraph (a)(1)(iii) of this section for three consecutive 24-hour periods. Measured temperatures must follow the profile with a maximum deviation of 1.7 °C for any hourly measurement and an average temperature deviation not to exceed 1.0 °C, where the average deviation is calculated using the absolute value of each measured deviation. Start measuring emissions when you start the temperature profile. The end of the first, second, and third emission sampling periods must occur 1440±6, 2880±6, and 4320±6 minutes, respectively, after starting the measurement procedure.

(8) Use the highest of the three emission levels to determine whether your fuel tank meets the diurnal emission standard.

(9) For emission control technologies that rely on a sealed fuel system, you may omit the preconditioning steps in paragraph (a)(4) of this section and the last two 24-hour periods of emission

measurements in paragraph (a)(7) of this section. For purposes of this paragraph (a), sealed fuel systems include those that rely on pressure-relief valves, limiting flow orifices, bladder fuel tanks, and volume-compensating air bags.

(b) You may subtract your fuel tank's permeation emissions from the measured diurnal emissions if the fuel tank is preconditioned with diurnal test fuel as described in § 1060.520(b) or if you use good engineering judgment to otherwise establish that the fuel tank has stabilized permeation emissions. Measure permeation emissions for subtraction as specified in § 1060.520(c) and (d) before measuring diurnal emissions, except that the permeation measurement must be done with diurnal test fuel at 28±2 °C. Use appropriate units and corrections to subtract the permeation emissions from the fuel tank during the diurnal emission test. You may not subtract a greater mass of emissions under this paragraph (b) than the fuel tank would emit based on meeting the applicable emission standard for permeation.

■ 103. Section 1060.810 is revised to read as follows:

§ 1060.810 What materials does this part reference?

(a) *Materials incorporated by reference.* Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave. NW., Room B102, EPA West Building, Washington, DC 20460, (202) 202–1744, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(b) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428–2959, (610) 832–9585, or *http://www.astm.org/:*

(1) ASTM D471–06, Standard Test Method for Rubber Property—Effect of Liquids, approved October 1, 2006 (''ASTM D471''), IBR approved for § 1060.515(a).

(2) ASTM D2862–97 (Reapproved 2004), Standard Test Method for Particle Size Distribution of Granular Activated Carbon, approved April 1, 2004 (''ASTM D2862''), IBR approved for § 1060.240(e).

(3) ASTM D3802–79 (Reapproved 2005), Standard Test Method for Ball-Pan Hardness of Activated Carbon, approved October 1, 2005 (''ASTM D3802''), IBR approved for § 1060.240(e).

(4) ASTM D4806–07, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel, approved July 15, 2007 (''ASTM D4806''), IBR approved for § 1060.501(c).

(5) ASTM D5228–92 (Reapproved 2005), Standard Test Method for Determination of Butane Working Capacity of Activated Carbon, approved October 1, 2005 (''ASTM D5228''), IBR approved for § 1060.801.

(c) *SAE International material.* The following standards are available from SAE International, 400 Commonwealth Dr., Warrendale, PA 15096–0001, (877) 606–7323 (U.S. and Canada) or (724) 776–4970 (outside the U.S. and Canada), or *http://www.sae.org:*

(1) SAE J30, Fuel and Oil Hoses, Revised June 1998, IBR approved for § 1060.515(c).

(2) SAE J1527, Marine Fuel Hoses, Revised February 1993, IBR approved for § 1060.515(c).

(3) SAE J2260, Nonmetallic Fuel System Tubing with One or More Layers, Revised November 2004, IBR approved for § 1060.510.

(4) SAE J2659, Test Method to Measure Fluid Permeation of Polymeric Materials by Speciation, Issued December 2003, IBR approved for § 1060.801.

(5) SAE J2996, Surface Vehicle Recommended Practice, Small Diameter Fuel Line Permeation Test Procedure, Issued January 2013, IBR approved for § 1060.515(d).

(d) *California Air Resources Board.* The following documents are available from the California Air Resources Board, 1001 I Street, Sacramento, CA, 95812, (916) 322–2884, or *http://www.arb.ca.gov:*

(1) Final Regulation Order, Article 1, Chapter 15, Division 3, Title 13, California Code of Regulations, July 26, 2004, IBR approved for § 1060.105(e), and 1060.240(e).

(2) [Reserved]

(e) *American Boat and Yacht Council Material.* The following documents are available from the American Boat and Yacht Council, 613 Third Street, Suite 10, Annapolis, MD 21403 or (410) 990–4460 or *http://www.abycinc.org/:*

(1) ABYC H–25, Portable Marine Gasoline Fuel Systems, July 2010, IBR approved for § 1060.105(f).

(2) [Reserved]

PART 1065—ENGINE-TESTING PROCEDURES

■ 104. The authority citation for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Applicability and General Provisions

■ 105. Section 1065.10 is amended by revising paragraph (c)(6) to read as follows:

§ 1065.10 Other procedures.

* * * * *

(c) * * *

(6) During the 12 months following the effective date of any change in the provisions of this part 1065 (and 40 CFR part 1066 for vehicle testing), you may use data collected using procedures specified in the previously applicable version of this part 1065 (and 40 CFR part 1066 for vehicle testing). This also applies for changes to test procedures specified in the standard-setting part to the extent that these changes do not correspond to new emission standards. This paragraph (c)(6) does not restrict the use of carryover certification data otherwise allowed by the standard-setting part.

* * * * *

Subpart E—Engine Selection, Preparation, and Maintenance

§ 1065.410 [Amended]

■ 106. Section 1065.410 is amended by removing paragraph (e).

Subpart G—Calculations and Data Requirements

■ 107. Section 1065.610 is amended by republishing paragraph (a)(1)(vi), adding paragraph (a)(1)(vii), and removing paragraph (a)(1)(viii) to read as follows:

§ 1065.610 Duty cycle generation.

* * * * *

(a) * * *

(1) * * *

(vi) Determine the lowest and highest engine speeds corresponding to the value calculated in paragraph (a)(1)(v) of this section, using linear interpolation as appropriate. Calculate f_{ntest} as the average of these two speed values.

(vii) The following example illustrates a calculation of f_{ntest}:

$P_{max} = 230.0$

($f_{n1} = 2360$, $P_1 = 222.5$, $f_{nnorm1} = 1.002$, $P_{norm1} = 0.9675$)

($f_{n2} = 2364$, $P_2 = 226.8$, $f_{nnorm2} = 1.004$, $P_{norm2} = 0.9859$)

($f_{n3} = 2369$, $P_3 = 228.6$, $f_{nnorm3} = 1.006$, $P_{norm3} = 0.9940$)

($f_{n4} = 2374$, $P_4 = 218.7$, $f_{nnorm4} = 1.008$, $P_{norm4} = 0.9508$)

Sum of squares = $(1.002^2 + 0.9675^2) = 1.94$

Sum of squares = $(1.004^2 + 0.9859^2) = 1.98$

Sum of squares = $(1.006^2 + 0.9940^2) = 2.00$

Sum of squares = $(1.008^2 + 0.9508^2) = 1.92$

$$f_{ntest} = \frac{\left(\left(2360 + (2364 - 2360) \cdot \frac{0.98 \cdot 2.0 - 1.94}{1.98 - 1.94}\right) + \left(2369 + (2374 - 2369) \cdot \frac{0.98 \cdot 2.0 - 2.0}{1.92 - 2.0}\right)\right)}{2}$$

$$= \frac{2362.0 + 2371.5}{2} = 2366.8 \text{ r/min}$$

$$f_{npmax} = \frac{\left(\left(2360 + (2364 - 2360) \cdot \frac{0.98 \cdot 230.0 - 222.5}{226.8 - 222.5}\right) + \left(2369 + (2374 - 2369) \cdot \frac{0.98 \cdot 230.0 - 228.6}{218.7 - 228.6}\right)\right)}{2}$$

$$= \frac{2362.7 + 2370.6}{2} = 2366.7 \text{ r/min}$$

* * * * *

■ 108. Section 1065.650 is amended by revising paragraph (c)(1)(i) to read as follows:

§ 1065.650 Emission calculations.

* * * * *

(c) * * *

(1) * * *

(i) Correct all gaseous emission analyzer concentration readings, including continuous readings, sample bag readings, and dilution air background readings, for drift as described in § 1065.672. Note that you must omit this step where brake-specific emissions are calculated without the drift correction for performing the drift validation according to § 1065.550(b). When applying the initial THC and CH_4 contamination readings according to § 1065.520(f), use the same values for both sets of calculations. You may also use as-measured values in the initial set of calculations and corrected values in the drift-corrected set of calculations as described in § 1065.520(f)(7).

* * * * *

Subpart H—Engine Fluids, Test Fuels, Analytical Gases and Other Calibration Standards

■ 109. Section 1065.710 is amended by revising paragraph (c), including Table 2 to read as follows:

§ 1065.710 Gasoline.

* * * * *

(c) The specifications of this paragraph (c) apply for testing with neat gasoline. This is sometimes called indolene or E0 test fuel. Gasoline for testing must have octane values that represent commercially available fuels for the appropriate application. Test fuel specifications apply as follows:

TABLE 2 OF § 1065.710—TEST FUEL SPECIFICATIONS FOR NEAT (E0) GASOLINE

Property	Unit	Specification		Reference procedure [1]
		General testing	Low-temperature testing	
Distillation Range:				
Evaporated initial boiling point	°C	24–35[2]	24–36	ASTM D86
10% evaporated		49–57	37–48.	
50% evaporated		93–110	82–101.	
90% evaporated		149–163	158–174.	
Evaporated final boiling point		Maximum, 213	Maximum, 212.	
Hydrocarbon composition:				
Olefins	volume %	Maximum, 10	Maximum, 17.5	ASTM D1319
Aromatics		Maximum, 35	Maximum, 30.4.	
Saturates		Remainder	Remainder.	
Lead	g/liter	Maximum, 0.013	Maximum, 0.013	ASTM D3237
Phosphorous	g/liter	Maximum, 0.0013	Maximum, 0.005	ASTM D3231
Total sulfur	mg/kg	Maximum, 80	Maximum, 80	ASTM D2622
Dry vapor pressure equivalent [3]	kPa (psi)	60.0–63.4 [2,4] (8.7–9.2)	77.2–81.4 (11.2–11.8)	ASTM D5191

[1] ASTM procedures are incorporated by reference in § 1065.1010. See § 1065.701(d) for other allowed procedures.

[2] For testing at altitudes above 1219 m, the specified initial boiling point range is (23.9 to 40.6) °C and the specified volatility range is (52.0 to 55.2) kPa ((7.5 to 8.0) psi).

[3] Calculate dry vapor pressure equivalent, *DVPE,* based on the measured total vapor pressure, p_T, in kPa using the following equation: *DVPE* (kPa) = $0.956 \cdot p_T - 2.39$ or *DVPE* (psi) = $0.956 \cdot p_T - 0.347$. *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

[4] For testing unrelated to evaporative emissions, the specified range is (55.2 to 63.4) kPa ((8.0 to 9.2) psi).

* * * * *

PART 1066—VEHICLE–TESTING PROCEDURES

■ 110. The authority citation for part 1066 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Applicability and General Provisions

■ 111. Section 1066.10 is amended by revising paragraph (c) to read as follows:

§ 1066.10 Other procedures.

* * * * *

(c) *Exceptions.* You may use procedures other than those specified in this part as described in 40 CFR 1065.10(c). All the test procedures noted as exceptions to the specified procedures are considered generically as ''other procedures.'' Note that the terms ''special procedures'' and ''alternate procedures'' have specific meanings; ''special procedures'' are those allowed by 40 CFR 1065.10(c)(2) and ''alternate procedures'' are those allowed by 40 CFR 1065.10(c)(7). If we require you to request approval to use other procedures under this paragraph (c), you may not use them until we approve your request.

Subpart B—Equipment, Measurement Instruments, Fuel, and Analytical Gas Specifications

■ 112. Section 1066.125 is amended by revising paragraph (a)(1) to read as follows:

§ 1066.125 Data updating, recording, and control.

* * * * *

(a) * * *

(1) This paragraph (a)(1) applies where we specify a minimum command and control frequency that is greater than the minimum recording frequency, such as for sample flow rates from a CVS that does not have a heat exchanger. For these measurements, the rate at which you read and interpret the signal must be at least as frequent as the minimum command and control frequency. You may record values at the same frequency, or you may record them as mean values, as long as the frequency of the mean values meets the minimum recording frequency. You must use all read values, either by recording them or using them to calculate mean values. For example, if your system reads and controls the sample flow rate at 10 Hz, you may record these values at 10 Hz, record them at 5 Hz by averaging pairs of consecutive points together, or record them at 1 Hz by averaging ten consecutive points together.

* * * * *

Subpart C—Dynamometer Specifications

■ 113. Section 1066.235 is amended by revising paragraph (c)(1)(i) to read as follows:

§ 1066.235 Speed verification procedure.

* * * * *

(c) * * *

(1) * * *

(i) Set the dynamometer to speed-control mode. Set the dynamometer speed to a value of approximately 4.5 m/s (10 mph); record the output of the frequency counter after 10 seconds. Determine the roll speed, v_{act}, using the following equation:

$$v_{act} = \frac{f \cdot d_{roll} \cdot \pi}{n} \qquad \text{Eq. 1066.235-1}$$

Where:

f = frequency of the dynamometer speed sensing device, accurate to at least four significant figures.

d_{roll} = nominal roll diameter, accurate to the nearest 1.0 mm, consistent with § 1066.225(d).

n = the number of pulses per revolution from the dynamometer roll speed sensor.

Example:

f = 2.9231 Hz = 2.9231 s^{-1}

d_{roll} = 904.40 mm = 0.90440 m

n = 1 pulse/rev

$$v_{act} = \frac{2.9231 \cdot 0.90440 \cdot \pi}{1}$$

v_{act} = 8.3053 m/s

* * * * *

■ 114. Section 1066.255 is amended by revising paragraph (d) to read as follows:

§ 1066.255 Parasitic loss verification.

* * * * *

(d) *Performance evaluation.* Some dynamometers automatically update the parasitic loss curve for further testing. If this is not the case, compare the new parasitic loss curve to the original parasitic loss curve from the dynamometer manufacturer or the most recent parasitic loss curve you programmed into the dynamometer. You may reprogram the dynamometer to accept the new curve in all cases, and you must reprogram the dynamometer if any point on the new curve departs from the earlier curve by more than ±9.0 N (±2.0 lbf) for dynamometers capable of testing vehicles at or below 20,000 pounds GVWR, or ±36.0 N (±8.0 lbf) for dynamometers not capable of testing vehicles at or below 20,000 pounds GVWR.

■ 115. Section 1066.270 is amended by revising paragraph (c)(4) to read as follows:

§ 1066. 270 Unloaded coastdown verification.

* * * * *

(c) * * *

(4) Determine the average coastdown force, F, for each speed and inertia setting for each of the coastdowns performed using the following equation:

$$F = \frac{I \cdot \left(v_{init} - v_{final}\right)}{t} \qquad \text{Eq. 1066.270-1}$$

Where:

F = the average force measured during the coastdown for each speed interval and inertia setting, expressed in lbf · s^2/ft and rounded to four significant figures.

I = the dynamometer's inertia setting, in lbf · s^2/ft.

v_{init} = the speed at the start of the coastdown interval, expressed in ft/s to at least four significant figures.

v_{final} = the speed at the end of the coastdown interval, expressed in ft/s to at least four significant figures.
t = coastdown time for each speed interval and inertia setting, accurate to at least 0.01 s.

Example:
I = 2000 lbm = 62.16 lbf · s²/ft
v_{init} = 25 mph = 36.66 ft/s
v_{final} = 15 mph = 22.0 ft/s
t = 5.00 s

$$F = \frac{62.16 \cdot (36.66 - 22.0)}{5.00}$$

F = 182.2 lbf

* * * * *

Subpart D—Coastdown

■ 116. Section 1066.301 is revised to read as follows:

§ 1066.301 Overview of road-load determination procedures.

(a) The procedures described in this subpart are used to determine the road-load target coefficients (A, B, and C) for the simulated road-load equation in § 1066.210(d)(3).

(b) The general procedure for determining road-load force is performing coastdown tests and calculating road-load coefficients. This procedure is described in SAE J1263 and SAE J2263 (incorporated by reference in § 1066.1010). This subpart specifies certain deviations from those procedures for certain applications.

(c) Use good engineering judgment for all aspects of road-load determination. For example, minimize the effects of grade by performing coastdown testing on reasonably level surfaces and determining coefficients based on average values from vehicle operation in opposite directions over the course.

■ 117. Section 1066.305 is revised to read as follows:

§ 1066.305 Procedures for specifying road-load forces for motor vehicles at or below 14,000 pounds GVWR.

(a) For motor vehicles at or below 14,000 pounds GVWR, develop representative road-load coefficients to characterize each vehicle covered by a certificate of conformity. Calculate road-load target coefficients by performing coastdown tests using the provisions of SAE J2263 (incorporated by reference in § 1066.1010). This protocol establishes a procedure for determination of vehicle road load force for speeds between 115 and 15 km/h (71.5 and 9.3 mi/h); the final result is a model of road-load force (as a function of speed) during operation on a dry, level road under reference conditions of 20 °C, 98.21 kPa, no wind, no precipitation, and the transmission in neutral. You may use other methods that are equivalent to SAE J2263, such as equivalent test procedures or analytical modeling, to characterize road load using good engineering judgment. Determine dynamometer settings to simulate the road-load profile represented by these road-load target coefficients as described in § 1066.315. Supply representative road-load forces for each vehicle at speeds above 15 km/hr (9.3 mph), and up to 115 km/hr (71.5 mph), or the highest speed from the range of applicable duty cycles.

(b) For cold temperature testing described in subpart H of this part, determine road-load target coefficients using one of the following methods:

(1) You may perform coastdown tests or use other methods to characterize road load as described in paragraph (a) of this section based on vehicle operation at a nominal ambient temperature of −7 °C (20 °F).

(2) You may multiply each of the road-load target coefficients determined using the procedures described in paragraph (a) of this section by 1.1 to approximate a 10 percent decrease in coastdown time for the test vehicle.

Subpart E—Preparing Vehicles and Running an Exhaust Emission Test

■ 118. Section 1066.410 is amended by revising paragraph (b) introductory text to read as follows:

§ 1066.410 Dynamometer test procedure.

* * * * *

(b) Place the vehicle onto the dynamometer without starting the engine (for any test cycles) or drive the vehicle onto the dynamometer (for hot-start and hot-running cycles only) and position a fan that directs cooling air to the vehicle during dynamometer operation as described in this paragraph (b). This generally requires squarely positioning the fan in front of the vehicle and directing the airflow to the vehicle's radiator. Use good engineering judgment to design and configure fans to cool the test vehicle in a way that properly simulates in-use operation, consistent with the specifications of § 1066.105. Except for the following special cases, use a road-speed modulated fan meeting the requirements of § 1066.105(c)(2) that is placed within 90 cm of the front of the vehicle and ensure that the engine compartment cover (*i.e.,* hood) is closed:

* * * * *

■ 119. Section 1066.420 is amended by revising paragraph (b) to read as follows:

§ 1066.420 Test preparation.

* * * * *

(b) For vehicles above 14,000 pounds GVWR with compression-ignition engines, verify the amount of nonmethane hydrocarbon contamination as described in 40 CFR 1065.520(f).

* * * * *

Subpart F—Electric Vehicles and Hybrid Electric Vehicles

■ 120. Section 1066.501 is amended by revising paragraphs (a)(2)(ii) and (iii) to read as follows:

§ 1066.501 Overview.

* * * * *

(a) * * *

(2) * * *

(ii) We may approve the use of the alternate End-of-Test criterion in Section 3.9.1 of SAE J1711 for charge-depleting tests and the Net Energy Change correction in Appendix C of SAE J1711 for charge-sustaining tests if the specified criterion and correction are insufficient or inappropriate.

(iii) For charge-sustaining tests Appendix C of SAE J1711 may be used to correct final fuel economy values, CO_2 emissions, and carbon-related exhaust emissions, but may not be used to correct measured values for criteria pollutant emissions.

* * * * *

Subpart G—Calculations

■ 121. Section 1066.605 is amended by revising paragraphs (c)(5) and (c)(6) to read as follows:

§ 1066.605 Mass-based and molar-based exhaust emission calculations.

* * * * *

(c) * * *

(5) Correct all gaseous concentrations for dilution air background as described in § 1066.610.

(6) Correct NO_X emission values for intake-air humidity as described in § 1066.615.

* * * * *

■ 122. Section 1066.615 is revised to read as follows:

§ 1066.615 NO_X intake-air humidity correction.

You may correct NO_X emissions for intake-air humidity as described in this section if the standard-setting part allows it. See § 1066.605(c) for the proper sequence for applying the NO_X intake-air humidity correction.

(a) For vehicles at or below 14,000 pounds GVWR, apply a correction for vehicles with reciprocating engines operating over specific test cycles as follows:

(1) Calculate a humidity correction using a time-weighted mean value for ambient humidity over the test interval. Calculate absolute ambient humidity, *H,* using the following equation:

$$H = \frac{1000 \cdot M_{\mathrm{H2O}} \cdot p_{\mathrm{d}} \cdot RH\%}{M_{\mathrm{air}} \cdot \left(p_{\mathrm{atmos}} - p_{\mathrm{d}} \cdot RH\%\right)} \qquad \text{Eq. 1066.615-1}$$

Where:

M_{H2O} = molar mass of H_2O.

p_{d} = saturated vapor pressure at the ambient dry bulb temperature.

RH = relative humidity of ambient air

M_{air} = molar mass of air.

p_{atmos} = atmospheric pressure.

Example:

M_{H2O} = 18.01528 g/mol

p_{d} = 2.93 kPa

RH = 37.5%

M_{air} = 28.96559 g/mol

p_{atmos} = 96.71 kPa

$$H = \frac{1000 \cdot 18.01528 \cdot 2.93 \cdot 37.5 \cdot 0.01}{28.96559 \cdot \left(96.71 - 2.93 \cdot 37.5 \cdot 0.01\right)} = 7.14741 \text{ g } H_2O \text{ vapor/kg dry air}$$

(2) Use the following equation to correct measured concentrations to a reference condition of 10.71 grams H_2O vapor per kilogram of dry air for the FTP, US06, LA–92, SC03, and HFET test cycles:

$$x_{\mathrm{NOxcor}} = x_{\mathrm{NOx}} \cdot \frac{H_{\mathrm{s}}}{1 - 0.0329 \cdot \left(H - 10.71\right)} \qquad \text{Eq. 1066.615-2}$$

Where:

χ_{NOx} = measured NO_X emission concentration in the sample, after dry-to-wet and background corrections.

H_{s} = humidity scale. Set = 1 for FTP, US06, LA–92, and HFET test cycles. Set = 0.8825 for the SC03 test cycle.

H = ambient humidity, as determined in paragraph (a)(1) of this section.

Example:

H = 7.14741 g H_2O vapor/kg dry air time weighted over the FTP test cycle

χ_{NOx} = 1.21 ppm

$$x_{\mathrm{NOxcor}} = 1.21 \cdot \frac{1}{1 - 0.0329 \cdot \left(7.14741 - 10.71\right)} = 1.08305 \text{ ppm}$$

(b) For vehicles above 14,000 pounds GVWR, apply correction factors as described in 40 CFR 1065.670.

■ 123. Section 1066.635 is amended by adding paragraph (c)(6) to read as follows:

§ 1066.635 NMOG determination.

* * * * *

(c) * * *

(6) For PHEVs, you may determine NMOG based on testing over one full UDDS using Eq. 1066.635–3.

* * * * *

Subpart H—Cold Temperature Test Procedures

■ 124. Section 1066.701 is amended by revising paragraph (a) to read as follows:

§ 1066.701 Applicability and general provisions.

(a) The procedures of this part 1066 may be used for testing at any ambient temperature. Section 1066.710 describes the provisions that apply for testing vehicles at a nominal temperature of −7 °C (20 °F); these procedures apply for motor vehicles as described in 40 CFR part 86, subpart S, and 40 CFR part 600. For other vehicles, see the standard-setting part to determine if your vehicle is required to meet emission standards outside the normal (20 to 30) °C ((68 to 86) °F) temperature range.

* * * * *

■ 125. Section 1066.710 is amended by revising paragraph (c) to read as follows:

§ 1066.710 Cold temperature testing procedures for measuring CO and NMHC emissions and determining fuel economy.

* * * * *

(c) *Heater and defroster.* During the test, operate the vehicle's interior climate control system with the heat on and set to primarily defrost the front window. Turn air conditioning off. You may not use any supplemental auxiliary heat during this testing. You may set the heater to any temperature and fan setting during vehicle preconditioning.

(1) *Manual control.* Unless you rely on automatic control as specified in paragraph (c)(2) of this section, take the following steps to control heater settings:

(i) Set the climate control system as follows before the first acceleration (t=20 s), or before starting the vehicle if the climate control system allows it:

(A) *Temperature.* Set controls to maximum heat. For automatic control systems running in manual mode, set the heater control to 72 °F or higher.

(B) *Fan speed.* Set the fan speed to full off or the lowest available speed if a full off position is not available.

(C) *Airflow direction.* Direct airflow to the front window (window defrost mode).

(D) *Air source.* If independently controllable, set the system to draw in outside air.

(ii) At the second idle of the test cycle, which occurs 125 seconds after the start of the test, set the fan speed to maximum. Complete by 130 seconds after the start of the test. Leave temperature and air source settings unchanged.

(iii) At the sixth idle of the test interval, which occurs at the deceleration to zero miles per hour 505

seconds after the start of the test, set the fan speed to the lowest setting that maintains air flow. Complete these changes by 510 seconds after the start of the test. You may use different vent and fan speed settings for the remainder of the test. Leave the temperature and air source settings unchanged.

(2) *Automatic control.* For vehicles with automatic control systems running in automatic mode, set the temperature to 72 °F and the air flow control to the front window defrost mode for the whole test.

(3) *Multiple-zone systems.* For vehicles that have separate driver and passenger controls or separate front and rear controls, you must set all temperature and fan controls as described in paragraphs (c)(1) and (2) of this section, except that rear controls need not be set to defrost the front window.

(4) *Alternative test procedures.* We may approve the use of other settings under 40 CFR 86.1840 if a vehicle's climate control system is not compatible with the provisions of this section.

* * * * *

Subpart I—Exhaust Emission Test Procedures for Motor Vehicles

■ 126. Section 1066.801 is amended by revising paragraph (c)(2) and Figure 1 in paragraph (e) to read as follows:

§ 1066.801 Applicability and general provisions.

* * * * *

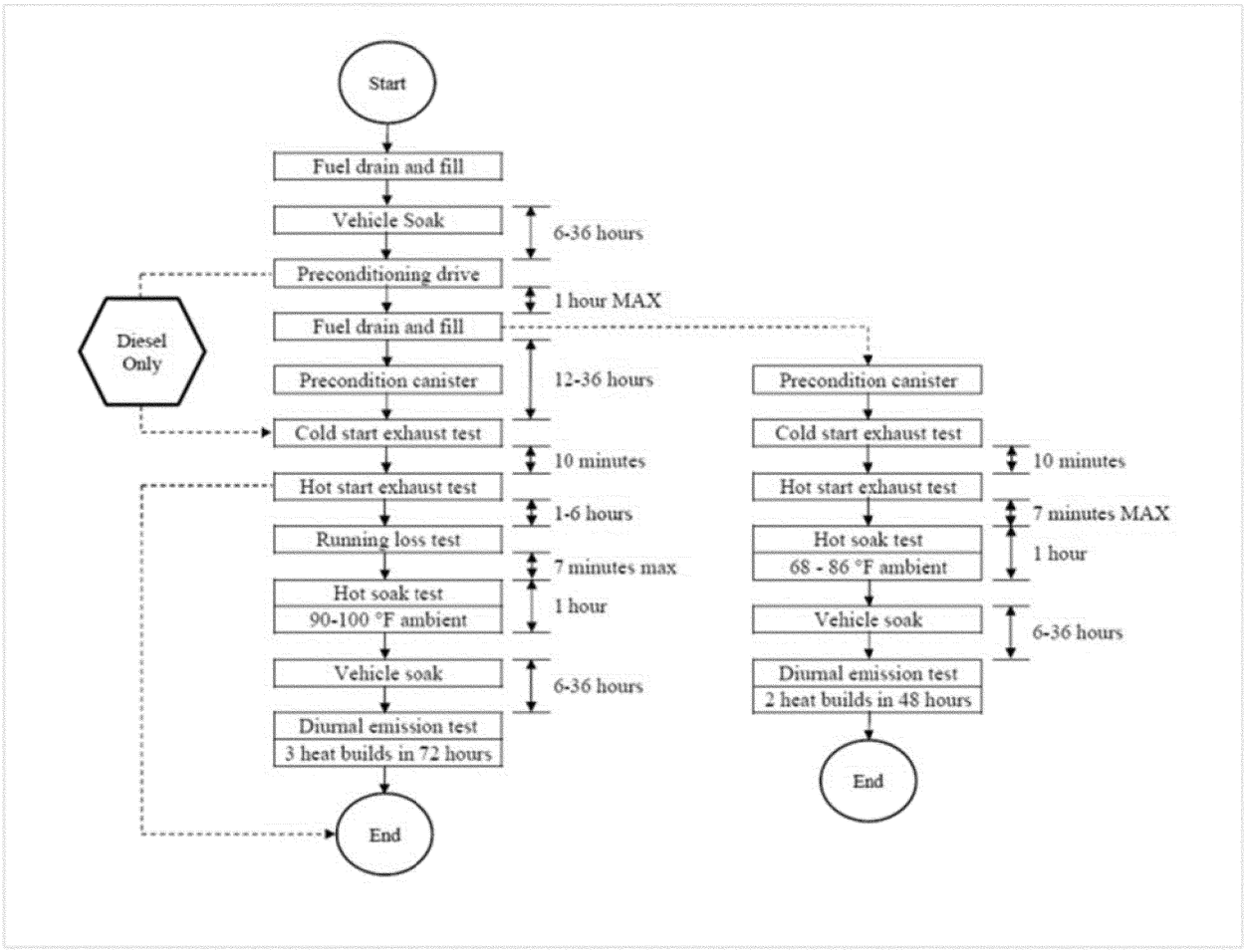
(c) * * *

(2) The Supplemental Federal Test Procedure (SFTP) measures the emission effects from aggressive driving and operation with the vehicle's air conditioner. The SFTP is based on a composite of three different test elements. In addition to the FTP, vehicles generally operate over the US06 and SC03 driving schedules as specified in paragraphs (g) and (h) of Appendix I of 40 CFR part 86, respectively. In the case of heavy-duty vehicles above 10,000 pounds GVWR and at or below 14,000 pounds GVWR, SFTP testing involves additional driving over the Hot LA–92 driving schedule as specified in paragraph (c) of 40 CFR part 86, Appendix I, instead of the US06 driving schedule. Note that the US06 driving schedule represents about 8.0 miles of relatively aggressive driving; the SC03 driving schedule represents about 3.6 miles of urban driving with the air conditioner operating; and the hot portion of the LA–92 driving schedule represents about 9.8 miles of relatively aggressive driving for commercial trucks. See § § 1066.815 and 1066.820.

* * * * *

(e) * * *

Figure 1 of §1066.801 —FTP test sequence



■ 127. Section 1066.815 is amended by revising paragraphs (d)(2)(ii) and (iii) to read as follows:

§ 1066.815 Exhaust emission test procedures for FTP testing.

* * * * *

(d) * * *

(2) * * *

(ii) Repeat the steps in paragraph (d)(1)(ii) of this section. Operate the vehicle over the first 505 seconds of the UDDS. For tests that do not include bag 4 operation, turn off the engine and simultaneously stop all hot-start sampling and recording, including background sampling, and any integrating devices at the end of the deceleration scheduled to occur 505 seconds into the hot-start UDDS.

(iii) To include bag 4 measurement, operate the vehicles over the remainder of the UDDS and conclude the testing as described in paragraphs (d)(1)(iii) and (iv) of this section.

* * * * *

■ 128. Section 1066.831 is amended as follows:

■ a. By revising paragraph (b)(3)(ii)(D).

■ b. By adding paragraph (b)(3)(ii)(G).

■ c. By revising paragraphs (e)(2)(i) and (iii).

§ 1066.831 Exhaust emission test procedures for aggressive driving.

* * * * *

(b) * * *

(3) * * *

(ii) * * *

(D) US06 driving schedule or, for heavy-duty vehicles at or below 10,000 pounds GVWR with a power-to-weight ratio at or below 0.024 hp/lbm, just the highway portion of the US06 driving schedule.

* * * * *

(G) The Hot LA–92 driving schedule.

* * * * *

(e) * * *

(2) * * *

(i) For heavy-duty vehicles above 10,000 pounds GVWR, operate the vehicle over the Hot LA–92 driving schedule.

* * * * *

(iii) Non-MDPV heavy-duty vehicles shall be tested at their adjusted loaded vehicle weight as described in 40 CFR 86.1816.

* * * * *

■ 129. Section 1066.835 is amended by revising paragraph (e)(2) to read as follows:

§ 1066.835 Exhaust emission test procedure for SC03 emissions.

* * * * *

(e) * * *

(2) *Vehicle frontal air flow.* Verify that the fan configuration meets the requirements of § 1066.105(c)(5).

* * * * *

■ 130. Section 1066.845 is amended by revising paragraphs (b) and (e)(2) and adding paragraph (e)(3) to read as follows:

§ 1066.845 AC17 air conditioning efficiency test procedure.

* * * * *

(b) *Test cell.* Operate the vehicle in a test cell meeting the specifications described in § 1066.835(e). You may add airflow up to a maximum of 4 miles per hour during engine idling and when the engine is off if that is needed to meet ambient temperature or humidity requirements.

* * * * *

(e) * * *

(2) For manual systems, select A/C mode, set the temperature to full cold and ''maximum'', set airflow to ''recirculate'' (if so equipped), and select the highest fan setting. During the first idle period of the SC03 driving schedule (between 186 and 204 seconds), reduce the fan speed setting to nominally 50% of maximum fan speed, set airflow to ''fresh air'' (if so equipped), and adjust the temperature setting to target a temperature of 55 °F (13 °C) at the dashboard air outlet. Maintain these settings for the remainder of the test. You may rely on prior temperature measurements to determine the temperature setting; however, if the system is unable to meet the 55 °F (13 °C) target, you may instead set airflow to ''fresh air'' and temperature to full cold. If the vehicle is equipped with technology that defaults to recirculated air at ambient temperatures above 75 °F (22 °C), that technology should remain enabled throughout the test; this may mean not setting the airflow to ''recirculate'' at the start and not setting the airflow to ''fresh air'' during the first idle period of the SC03 driving schedule. Except as specified in paragraph (e)(3) of this section, use good engineering judgment to apply the settings described in this paragraph (e)(2) equally throughout the vehicle if there are separate controls for different zones (such as rear air conditioning).

(3) If the air conditioning system is designed with parameters that switch back to a default setting at key-off, perform testing in that default condition. If the air conditioning system includes any optional equipment or user controls not addressed in this paragraph (e), the manufacturer should ask us for preliminary approval to determine the appropriate settings for testing.

* * * * *

Subpart J—Evaporative Emission Test Procedures

■ 131. Section 1066.985 is amended by revising paragraph (d)(9) to read as follows:

§ 1066.985 Fuel storage system leak test procedure.

* * * * *

(d) * * *

(9) Repeat the test described in this paragraph (d) for each access point described in the application for certification. Use each test result (without averaging) to determine whether the vehicle passes the leak standard.

* * * * *

Subpart K—Definitions and Other Reference Material

■ 132. Section 1066.1001 is amended by adding a definition for ''Hot LA–92'' in alphabetical order to read as follows:

§ 1066.1001 Definitions.

* * * * *

Hot LA–92 means the first 1435 seconds of the LA–92 driving schedule.

* * * * *

■ 133. Section 1066.1005 is amended by revising paragraph (h) to read as follows:

§ 1066.1005 Symbols, abbreviations, acronyms, and units of measure.

* * * * *

(h) *Prefixes.* This part uses the following prefixes to define a quantity:

Symbol	Quantity	Value
n	nano	10^{-9}
μ	micro	10^{-6}
m	milli	10^{-3}
c	centi	10^{-2}
k	kilo	10^{3}
M	mega	10^{6}

■ 134. Section 1066.1010 is amended by revising paragraph (b)(1) to read as follows:

§ 1066.1010 Incorporation by reference.

* * * * *

(b) * * *

(1) SAE J1263, Road Load Measurement and Dynamometer Simulation Using Coastdown Techniques, revised March 2010, IBR approved for §§ 1066.301(b) and 1066.310(b).

* * * * *

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