

## APPENDIX D

### PROPOSED PHASE 2 GREENHOUSE GAS REGULATIONS

#### Summary and Rationale for each Regulatory Provision

This appendix summarizes the requirements and provides the rationale for each proposed amendment or additions to regulations and test procedures. The proposed amendments and additions to regulations and test procedures themselves are included in Appendices A through C as follows:

- Appendix A contains the proposed amendments to title 13, California Code of Regulations (CCR), sections 1956.8, 1961.2, 1965, 2036, 2037, 2065, 2112, and 2141 and to title 17, CCR, sections 95300, 95301, 95302, 95303, 95304, 95305, 95306, 95307, 95311, 95662, and 95663.
- Appendix B-1 contains proposed amendments to CALIFORNIA GREENHOUSE GAS EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2014 AND SUBSEQUENT MODEL HEAVY-DUTY VEHICLES.
- Appendix B-2 contains proposed amendments to CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY DIESEL ENGINES AND VEHICLES.
- Appendix B-3 contains proposed amendments to CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY OTTO-CYCLE ENGINES AND VEHICLES.
- Appendix B-4 contains proposed amendments to CALIFORNIA 2015 AND SUBSEQUENT MODEL CRITERIA POLLUTANT EXHAUST EMISSION STANDARDS AND TEST PROCEDURES AND 2017 AND SUBSEQUENT MODEL GREENHOUSE GAS EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES.
- Appendix C contains PROPOSED CALIFORNIA ENVIRONMENTAL PERFORMANCE LABEL SPECIFICATIONS FOR 2021 AND SUBSEQUENT MODEL YEAR MEDIUM-DUTY VEHICLES, EXCEPT MEDIUM-DUTY PASSENGER VEHICLES.

#### Proposed Amendments to the Proposed Regulation Order

##### Title 13

##### **Section 1956.8. Exhaust Emission Standards and Test Procedures – 1985 and Subsequent Model Heavy-Duty Engines and Vehicles**

Subsection (a)(7)(A), table title: CO<sub>2</sub> Emission Standards for 2014 and Subsequent Model Heavy-Duty Diesel Engines

The addition of the footnote letter “D” to the title of the table is necessary because this referenced footnote was inadvertently omitted in a previous rulemaking. This change corrects the oversight and properly adds the reference to footnote D.

#### Subsection (a)(7)(A), table content

This modification adds the Phase 2 CO<sub>2</sub> emission standards for new 2021 and subsequent model heavy-duty (HD) diesel engines, HD natural gas-fueled and liquefied petroleum gas-fueled engines derived from diesel-cycle engines, and HD methanol-fueled diesel engines. The addition of this subsection is necessary in order to establish California Phase 2 GHG emission standards for heavy-duty engines and to harmonize with the federal Phase 2 GHG regulations.

#### Subsection (b) Test Procedures

The existing subsection (b) is modified to update the referenced date to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles.” This referenced document is being modified as part of this rulemaking. As such, the “last amended” date has been updated with a blank placeholder that will be updated to reflect the date the document is formally amended. The addition of this subsection is necessary to ensure the latest version of the test procedures is referenced.

#### Subsection (c)(4)(A)

This modification limits the existing Phase 1 CO<sub>2</sub> emission standard through the 2020 model year for all new heavy-duty Otto-cycle engines and continues this standard for 2021 model heavy-duty Otto-cycle engines that are not heavy heavy-duty engines. The CO<sub>2</sub> emission standard for Phase 1 Otto-cycle engines and Phase 2 Otto-cycle engines that are not heavy heavy-duty engines are identical. The addition of this change is necessary in order to establish California Phase 2 GHG emission standards for Otto-cycle engines and to harmonize with the federal Phase 2 GHG regulation.

#### Subsection (c)(4)(A)1

This modification adds the Phase 2 CO<sub>2</sub> emission standards for new 2021 and subsequent model heavy HD vocational and tractor Otto-cycle engines. The addition of this subsection is necessary in order to establish California Phase 2 GHG emission standards for heavy HD Otto-cycle engines and to harmonize with the federal Phase 2 GHG regulations.

#### Subsection (d)

The existing subsection (d) is modified to update the referenced date to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles.” This referenced document is being modified as part of this rulemaking. As such, the “last amended” date has been updated with a blank placeholder that will be updated to reflect the date the document is formally amended. The addition of this subsection is necessary to ensure the latest version of the test procedures is referenced.

#### Subsection (H)(6)(A)

This modification adds the Phase 2 CO<sub>2</sub> emission standards for new 2021 and subsequent model heavy-duty (HD) diesel and Otto-cycle engines used in medium-duty vehicle. The addition of this subsection is necessary in order to establish California Phase 2 GHG emission standards for heavy-duty engines using in medium-duty vehicles and to harmonize with the federal Phase 2 GHG regulations.

Subsection (i)

These changes update the definitions of heavy heavy-duty engine, light heavy-duty engine, and medium heavy-duty engine. These changes are necessary to harmonize these definitions to be consistent with the federal Phase 2 GHG regulations.

#### **§ 1961.2. Exhaust Emission Standards and Test Procedures - 2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles**

Subsection (d)

This section describes the test procedures applicable to passenger cars, light-duty trucks, and medium-duty vehicles to determine compliance with the exhaust emission standards of this section. This referenced document is being modified as part of this rulemaking. As such, the “last amended” date has been updated with a blank placeholder that will be updated to reflect the date the document is formally amended. The addition of this subsection is necessary to ensure the latest version of the test procedures is referenced.

#### **Section 1965. Emission Control, Smog Index, and Environmental Performance Labels – 1979 and Subsequent Model-Year Motor Vehicles**

The section contains the emission control label, smog index, and environmental performance label requirements as part of vehicle and engine certification. The first modification adds the heavy-duty vehicle GHG test procedures, the California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles, to the list of test procedures describing applicable emission control labels required for certification. The addition is necessary to ensure that a vehicle manufacturer provides emission control labels on its production vehicles and for enforcement of these labels. The second modification adds a new set of specifications called the “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles.” Another change is also made to include the date of adoption for the referenced label specifications. These modifications are necessary in order to establish California environmental performance labels for these vehicles to aid consumers in making environmental choices when purchasing vehicles.

#### **Section 2036. Defects Warranty Requirements for 1979 through 1989 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles; 1979 and Subsequent Model Motorcycles and Heavy-Duty Vehicles; and Motor Vehicle Engines Used in Such Vehicles**

Subsection (c)(4.1)

These modifications affect the GHG defects warranty for diesel-powered heavy-duty vehicle (HDV) below 19,500 pounds gross vehicle weight rating (GVWR) except medium-duty vehicles. The first modification clarifies the lower range of the weight applicability that was already implied by the definition of HDV (over 8,500 pounds GVWR), except medium-duty vehicles (from 8,500 to 14,000 pounds GVWR). The second modification consists of rewording the warranty requirements for motor vehicle engines used in these vehicles (reworded as the last sentence of this subsection) and is necessary to clarify the warranty requirements applicable to these engines. The third modification corrects the warranty applicability to exclude tires and is necessary for harmonization of warranty requirements with the federal Phase 2 GHG regulations. The fourth modification updates the referenced date for 40 Code of Federal Regulations (CFR) 1037.120 to the federal Phase 2 GHG Final Rule adoption date of October 25, 2016 and is necessary to harmonize these requirements with the federal Phase 2 GHG regulations. The last modification adds the warranty period of 2 years or 24,000 miles for tires used in these vehicles and is necessary to harmonize these requirements with the federal Phase 2 GHG regulations.

#### Subsection (c)(4.2)

These modifications affect the GHG defects warranty for diesel-powered HDVs at or above 19,500 pounds GVWR. The first modification consists of rewording the warranty requirements for motor vehicle engines used in these vehicles (reworded as the last sentence of this subsection) and is necessary to clarify the warranty requirements applicable to these engines. The second modification corrects the warranty applicability to exclude tires and is necessary for harmonization of warranty requirements with the federal Phase 2 GHG regulations. The third modification updates the referenced date for 40 CFR 1037.120 to the federal Phase 2 GHG Final Rule adoption date of October 25, 2016. The last modification adds the warranty period of 2 years or 24,000 miles for tires used in these vehicles and is necessary to harmonize these requirements with the federal Phase 2 GHG regulations.

#### Subsection (8.1)

These modifications affect the GHG defects warranty for Otto-cycle HDVs except medium-duty vehicles. The first modification consists of rewording the warranty requirements for motor vehicle engines used in these vehicles (reworded as the last sentence of this subsection) and is necessary to clarify the warranty requirements applicable to these engines. The second modification corrects the warranty applicability to exclude tires and is necessary for harmonization of warranty requirements with the federal Phase 2 GHG regulations. The third modification updates the referenced date for 40 CFR 1037.120 to the federal Phase 2 GHG Final Rule adoption date of October 25, 2016. The last modification adds the warranty period of 2 years or 24,000 miles for tires used in these vehicles and is necessary to harmonize these requirements with the federal Phase 2 GHG regulations.

#### Subsection (9)

This change adds the defects warranty for trailers and tires used on trailers. This change is necessary in order to establish warranty requirements for trailers and for harmonization with the federal Phase 2 GHG regulations.

**2037. Defects Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and Motor Vehicle Engines Used in Such Vehicles**

Subsection (a)

The modification updates the referenced date for 40 CFR 1037.120 to the federal Phase 2 GHG Final Rule adoption date of October 25, 2016. This change is necessary to harmonize these requirements with the federal Phase 2 GHG regulations.

Subsection (b)(4)

This change clarifies the requirements in subsection (a) for medium-duty vehicles certified to the GHG emission standards of section 95663, title 17 by specifically identifying the defects warranty period of five years or 50,000 miles for medium-duty vehicles, and 2 years or 24,000 miles for tires. This change is necessary to harmonize these requirements with the federal GHG regulations.

**2065. Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles**

The existing section is modified to refer the incorporation of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles” to section 1956.8, title 13, CCR, which contains the adoption and amended dates. This modification is necessary so that whenever these set of test procedures are amended, it only needs to be updated in section 1956.8 and to ensure the latest version of the test procedures is referenced.

**2112. Definitions**

Subsection (l)(19.1)

These modifications affect the useful life requirements of light heavy-duty diesel engines by limiting the applicability of the Phase 1 GHG emission standard useful life period to 2020 model year engines and adding the Phase 2 GHG emission standard useful life period to 2021 and subsequent model engines. The Phase 2 useful life of the GHG emission standards is fifteen years or 150,000 miles, as compared to the Phase 1 period of ten years or 110,000 miles. These changes are necessary to harmonize these requirements with the federal Phase 2 GHG regulations. In addition, a change was made to correct the omission of section 1956.8(h)(6), which is the GHG emission standards for diesel engines from 8,500 to 14,000 pounds GVWR in incomplete medium-duty vehicles. This addition is necessary to align with the useful life requirements in the Phase 1 GHG amendments. Lastly, the modification corrects an inadvertent error which applies the Phase 1 standards to 2004 model years. The Phase 1 GHG emission standards referenced in sections 1956.8(a)(7) and

1956.8(h)(6), title 13, CCR begin in the 2014 model year. This modification is necessary to correct this error and align these requirements with the GHG emission standards.

Subsection (l)(21.1)

The modification corrects an inadvertent error which applies the Phase 1 standards to 2004 model year heavy heavy-duty diesel engines. The Phase 1 GHG emission standards referenced in section 1956.8 (a)(7), title 13, CCR begin in the 2014 model year. This modification is necessary to correct this error and align these requirements with the GHG emission standards.

Subsection (l)(22.1)

These modifications affect the useful life requirements of all heavy-duty Otto-cycle engines by limiting the applicability of the Phase 1 GHG emission standard useful life period to 2020 model year engines and adding the Phase 2 GHG emission standard useful life period to 2021 and subsequent model year engines. The Phase 2 useful life of the GHG emission standards is fifteen years or 150,000 miles, as compared to the Phase 1 period of ten years or 110,000 miles. These changes are necessary to harmonize these requirements with the federal Phase 2 GHG regulations. In addition, a change was made to correct the omission of section 1956.8(c)(4), which is the GHG emission standards for Otto-cycle engines over 14,000 GVWR. This addition is necessary to align with the useful life requirements in the Phase 1 GHG amendments. Lastly, a modification corrects an inadvertent error that applies the Phase 1 standards to 2004 and subsequent model years. The Phase 1 GHG emission standards referenced in sections 1956.8(c)(4) and 1956.8 (h)(6), title 13, CCR begin in the 2014 model year. This modification is necessary to correct this error and align these requirements with the GHG emission standards.

Subsection (l)(25)

These modifications affect the useful life requirements of medium-duty vehicles and HDVs at or below 19,500 pounds GVWR, by limiting the applicability of the Phase 1 GHG emission standard useful life period to 2020 model year vehicles and adding the Phase 2 GHG emission standard useful life period to 2021 and subsequent model vehicles. The Phase 2 useful life of the GHG emission standards is fifteen years or 150,000 miles, as compared to the Phase 1 period of ten years or 110,000 miles to. These changes are necessary to harmonize these requirements with the federal Phase 2 GHG regulations. These modifications also clarify the lower GVWR range of these vehicles as well as the GHG pollutants regulated, and are necessary to explicitly define these parameters to provide clarification.

Subsection (l)(26)

These modifications affect the useful life requirements for HDVs above 19,500 and at or below 33,000 pounds GVWR, by limiting the applicability of the Phase 1 GHG emission standard useful life period to 2020 model year vehicles and adding the Phase 2 GHG emission standard useful life period to 2021 and subsequent model vehicles. Although the same useful life periods of these GHG pollutants remain the same at ten years or 185,000

miles, whichever first occurs, the Phase 2 definition of the vehicles in this category changed to vocational vehicles above 19,500 pounds GVWR only if they use light or medium heavy-duty diesel engines or using any Otto-cycle engines, and to tractors from 26,001 to 33,000 pounds GVWR. These changes are necessary to harmonize these requirements with the federal Phase 2 GHG regulations. These modifications also clarify the GHG pollutants regulated, and are necessary to explicitly define these parameters to provide clarification.

Subsection (l)(27)

These modifications affect the useful life requirements of the heaviest category of HDVs by limiting the applicability of the Phase 1 GHG emission standard useful life period to 2020 model year vehicles and adding the Phase 2 GHG emission standard useful life period to 2021 and subsequent model vehicles. Although the same useful life periods of these GHG pollutants remain the same at ten years or 435,000 miles, whichever first occurs, the Phase 2 definition of the vehicles in this category changed to vocational vehicles above 19,500 pounds GVWR only if they use heavy heavy-duty diesel engines, and to tractors over 33,000 pounds GVWR. These changes are necessary to harmonize these requirements with the federal Phase 2 GHG regulations. These modifications also clarify the GHG pollutants regulated, and are necessary to explicitly define these parameters to provide clarification.

Subsection (l)(28)

This change adds the new useful life requirements of trailer GHG emission standards. This change is necessary to establish trailer useful life requirements and to harmonize these requirements with the federal Phase 2 GHG regulations.

## **2141. General Provisions**

This section describes the general provisions of the procedures for reporting failures of emission-related components by engine and vehicle manufacturers. The addition of subsection (e) allows Air Resources Board's (ARB's) right of entry into any maintenance, service, or repair facility to audit warranty claim records and to inspect certified vehicles and engines. This addition is necessary to ensure compliance with the reporting provisions by auditing manufacturers at their repair facilities.

## **Title 17**

### **95300. Purpose**

Existing section 95300 is modified to replace the phrase "53-foot or longer" with the term "long". The change is needed to reflect the terminology change of "53-foot or longer box-type trailer" to "long box-type trailer". The term "long-box type trailer" is a new definition. The rationale for the addition of this definition is discussed in "Section 95302. Definitions".

### **95301. Applicability**

Existing section 95301 is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions. Subsection (b)(6)”.

Existing subsection (b)(6) is modified to replace the phrase “less than 53 feet” with the term “less than or equal to 50 feet”. The change is necessary to reflect the fact that box-type trailers less than or equal to 50 feet in length are not subject to this sub-article.

New subsection (b)(9) is added to identify box-type trailers that are less than 53-feet in length and manufactured prior to January 1, 2020 as exempt trailers. The change is necessary to ensure that fleet owners with existing trailers that were subject to this regulation before this rulemaking are not required to retrofit their trailers.

### **95302. Definitions**

Existing section 95302 is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in Section (a)(35.1).

Subsection (a)(21.1)

New section (a)(21.1) is added to provide a definition for “Federal Phase 2 Regulation.” The new definition is needed because the term “Federal Phase 2 Regulation” was used as a descriptor for regulatory citations identified in subsections 95303 and 95304.

Subsection (a)(35.1)

New section (a)(35.1) is added to provide a definition of “long box-type trailer.” The new proposed definition provides consistent terminology between the Phase 2 regulations and the Tractor-Trailer GHG regulation.

Subsection (a)(43.2)

New section (a)(43.2) is added to provide a definition of a “Phase 2 Certified trailer.” The addition of this definition is needed because Section 95303(b) was modified to identify a “Phase 2 certified trailer” as a compliant trailer.

### **95303. Requirements and Compliance Deadlines**

#### **Subsection (a)(1); Subsection (a)(2); Subsection (a)(3)**

Existing subsection (a)(1), subsection (a)(2), and subsection (a)(3) are modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the



terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in Section 95302. Definitions

Subsection (b)(1)

Existing subsection (b)(1) is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer” dry van trailer” to “long” dry van trailer. The rationale for the addition of this definition is discussed in Section 95302. Definitions

Subsection (b)(1)(B).

Existing subsection 95303 (b)(1)(B) is modified to indicate that a “Phase 2 Certified Trailer” is a compliant dry-van trailer. The change is needed to allow trailer fleet owners to comply with the Tractor-Trailer GHG regulation by using Phase 2 certified dry-van trailers.

Subsection (b)(1)(C)

New subsection 95303 (b)(1)(C) is added to include the requirements of the old subsection (b)(1)(B). The change is needed to maintain the existing requirements for compliant low rolling resistance tire technologies and aerodynamic technologies.

Subsection (b)(1)(C)(1)

Existing subsection 95303 (b)(1)(C)(1) is modified to identify the maximum rolling resistance of a compliant tire tested in accordance with the procedures identified in Phase 2. The change is needed to enable a Phase 2 certified low-rolling resistance tire to be Tractor-Trailer GHG regulation compliant tire.

Subsection (b)(1)(C)(2)(c)

New subsection 95303 (b)(1)(C)(2)(c) is added to identify the minimum aerodynamic performance requirements of a compliant aerodynamic technology tested in accordance with the procedures identified in Phase 2. The change is needed to enable a Phase 2 certified aerodynamic technology to be a Tractor-Trailer GHG regulation compliant aerodynamic technology.

Subsection (b)(1)(C)(2)(d)

New subsection 95303 (b)(1)(C)(2)(d) is added to identify the approval criteria for a modified compliant aerodynamic technology that has been tested in accordance with the procedures identified in Phase 2. The change is needed to enable a modified Phase 2 certified aerodynamic technology to be a Tractor-Trailer GHG regulation compliant aerodynamic technology.

#### Subsection (b)(2)(B)

Existing section 95303 (b)(2)(B) is modified to indicate that a “Phase 2 Certified Trailer” is a compliant refrigerated-van trailer. The change is needed to allow trailer fleet owners to comply with the Tractor-Trailer GHG regulation by using Phase 2 certified refrigerated-van trailers.

#### Subsection (b)(2)(C)

New subsection 95303 (b)(2)(C) is added to include the requirements of the old section (b)(2)(B). The change is needed to maintain the existing requirements for compliant low rolling resistance tire technologies and aerodynamic technologies.

#### Subsection (b)(2)(C)(1)

Existing subsection 95303 (b)(1)(C)(1) is modified to identify the maximum rolling resistance of a compliant tire tested in accordance with the procedures identified in Phase 2. The change is needed to enable a Phase 2 certified low-rolling resistance tire to be Tractor-Trailer GHG regulation compliant tire.

#### Subsection (b)(2)(C)(2)(c)

New subsection 95303 (b)(1)(C)(2)(c) is added to identify the minimum aerodynamic performance requirements of a compliant aerodynamic technology tested in accordance with the procedures identified in Phase 2. The change is needed to enable a Phase 2 certified aerodynamic technology to be a Tractor-Trailer GHG regulation compliant aerodynamic technology.

#### Subsection (b)(2)(C)(2)(d)

New subsection 95303 (b)(1)(C)(2)(d) is added to identify the approval criteria for a modified compliant aerodynamic technology that has been tested in accordance with the procedures identified in Phase 2. The change is needed to enable a modified Phase 2 certified aerodynamic technology to be a Tractor-Trailer GHG regulation compliant aerodynamic technology.

#### Subsections 95303 (b)(3); and Subsection (b)(3)(A); Subsection (b)(3)(B); and Subsection (b)(3)(C)

Existing subsections 95303 (b)(3) and subsection (b)(3)(A) are modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in Section 95302. Definitions

#### Subsection (b)(3)(B)

Existing subsection 95303 (b)(3)(B) is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer dry-van trailer” to “long dry-van trailer”. The term “long dry-van trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

#### Subsection (b)(3)(C)

Existing subsection 95303 (b)(3)(C) is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer refrigerated-van trailer” to “long refrigerated-van trailer”. The term “long refrigerated-van trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

Subsections 95303 (b)(3)(D), (b)(3)(E), and (b)(3)(F), and 95303 (c) through 95303 (i) are modified to replace the term “53-foot or longer” with the term “long.” The change is needed to reflect the terminology change of “53-foot or longer” to “long” for box-type trailers, dry-van trailers, and refrigerated-van trailers. The term “long box-type trailer,” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

### **95304. Good Operating Condition Requirements**

New subsection 95304 (b)(3) is added to define the good operating condition of an aerodynamic technology that obtained preliminary approval in accordance with the provisions of Phase 2. It specifies that aerodynamic technology installed on a box-type trailer must be installed in its original, preliminarily-approved configuration.

#### Subsection (c)

New subsection 95304 (c) is added to require Phase 2 certified trailers to have a permanent and legible label. The change is needed to ensure Phase 2 certified trailers can be identified in the field, and that the emission control identifiers on the label can be read by ARB enforcement personnel.

### **95305. Exemptions**

Existing section 95305 is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

#### Subsection (b)

Existing subsection 95305(b)(2) exempts trailers while they are being pulled by an exempt local hauler; this section is modified to also exempt trailers from the requirements to be a Phase 2 certified trailer and use Phase 2 aerodynamic technologies while they are being pulled by an exempt local hauler. The changes are necessary because Phase 2 compliant trailers and Phase 2 aerodynamic technologies were added to the trailer requirements.

#### Subsection 5 (c)(1)

Existing subsection 95305 (c)(1) lists registration and other requirements for short and local haul tractors and trailers to be exempt; it is modified to also exempt trailers from the requirements to be a Phase 2 certified trailer and use Phase 2 aerodynamic technologies if they meet the registration and other requirements. The changes are necessary because Phase 2 compliant trailers and Phase 2 aerodynamic technologies were added to the trailer requirements.

#### Subsection (i)(1)

Existing subsection 95305 (i)(1) is modified to reflect changes in references to subsection 95303 that were made to include Phase 2 aerodynamic technologies in the requirements. The changes are necessary to make the Trailer Aerodynamic Equipment Compliance (TAEC) Delay applicable to trailers that cannot install Phase 2 aerodynamic technologies.

#### Subsection (i)(4)

Existing subsection 95305 (i)(4) is modified to reflect changes in references to subsection 95303 that were made to include Phase 2 aerodynamic technologies in the requirements. The changes are necessary to allow the Executive Officer to consider the applicability of Phase 2 aerodynamic technologies when issuing a Trailer Aerodynamic Equipment Compliance (TAEC) delay.

### **95306. Short-Haul Tractor, Local-Haul Tractor, Local-Haul Trailer, and Storage Trailer Registration Requirements**

Existing section 95306 is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

### **95307. Optional Trailer Fleet Compliance Schedules**

Existing section 95307 is modified to replace the phrase “53-foot or longer” with the term “long”. The change is needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

### **95311. Recordkeeping**

Existing section 95311 is modified to replace the phrases “53-foot or longer” and “53 foot long” with the terms “long” and “a long”, respectively. The changes are needed to reflect the terminology change of “53-foot or longer box-type trailer” to “long box-type trailer”. The term “long-box type trailer” is a new definition. The rationale for the addition of this definition is discussed in “Section 95302. Definitions.”

### **95662. Definitions**

Existing definitions are updated and new definitions are added for consistency with the federal Phase 2 GHG regulations for terms used in sub-article 12. These modifications are necessary for harmonization with the Federal Phase regulations, and include clarifying language on vehicle weight classes (terminology differs between federal and California rules), adding trailer, heavy heavy-duty engine, heavy-haul tractor, and light heavy-duty engine, and medium heavy-duty engine, and medium-duty passenger vehicle definitions to this section, modifying the definition of model year, defining Phase 1 and Phase 2, and modifying the definition of vehicle.

### **95663. Greenhouse Gas Exhaust Emission Standards and Test Procedures for New 2014 and Subsequent Model Heavy-Duty Vehicles**

Subsection (a) title

The title is updated to more accurately represent the vehicles regulated under this subsection and is necessary to provide clarity to the subsection title.

Subsection (a)(1)(A)

The existing subsection is modified to name the existing CO<sub>2</sub> standards as Phase 1 standards and to limit their applicability to 2014 through 2020 model year diesel and Otto-cycle vocational vehicles. These modifications are necessary to separate these existing standards from the proposed Phase 2 emission standards and for harmonization with the federal Phase 2 GHG regulations.

Subsection (a)(1)(B)

The new subsection designates the proposed Phase 2 CO<sub>2</sub> and air conditioning leakage standards for diesel and Otto-cycle vocational vehicles applicable to 2021 through 2023 model years, 2024 through 2026 model years, and 2027 and subsequent model years. Optional custom chassis CO<sub>2</sub> standards for 2021 and subsequent model vehicles are also proposed. The tables show that the proposed Phase 2 standards differ based on engine cycle, vehicle size, and intended vehicle duty cycle. Moreover, the subsection provides the requirements for the optional average, banking, and trading (ABT) program and defines the useful life requirements for the emission standards. These modifications are necessary to establish Phase 2 vocational vehicle CO<sub>2</sub> standards in California and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (a)(2)(A)

The existing subsection is modified to name the existing CO<sub>2</sub> standards as Phase 1 standards and to limit their applicability to 2014 through 2020 model year diesel and Otto-cycle tractors. These modifications are necessary to separate these existing standards from the proposed Phase 2 emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (a)(2)(B)

The new subsection describes the proposed Phase 2 CO<sub>2</sub> and air conditioning leakage standards for diesel and Otto-cycle tractors applicable to 2021 and subsequent model years. The table shows that the proposed Phase 2 standards differ based on vehicle size and sub-category. Moreover, the subsection provides the requirements for the optional ABT program and defines the useful life requirements for the emission standards. These modifications are necessary to establish Phase 2 tractor CO<sub>2</sub> standards in California and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (b)(1) title

The title is clarified to exclude medium-duty passenger vehicle, which are subject to the light-duty vehicle GHG regulations. This exclusion was inadvertently left out during the Phase 1 regulations and is needed to clarify the applicability and for consistency with the federal Phase 1 and Phase 2 regulations.

#### Subsection (b)(1)(A)

The existing subsection is changed to add the proposed Phase 2 CO<sub>2</sub> target values for a manufacturer's diesel medium-duty vehicle fleet average. Also modified are the useful life requirements for GHG emission standards of Phase 2 medium-duty vehicles, from the existing 11 years or 120,000 miles, whichever occurs first, to the new 15 years or 150,000 miles, whichever occurs first. These modifications are necessary to establish California Phase 2 CO<sub>2</sub> target values for a manufacturer's diesel medium-duty vehicle fleet average and Phase 2 useful life requirements, and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (b)(1)(B)

The existing subsection is changed to add the proposed Phase 2 CO<sub>2</sub> target values for a manufacturer's Otto-cycle medium-duty vehicle fleet average. Also modified are the useful life requirements for GHG emission standards of Phase 2 medium-duty vehicles, from the existing 11 years or 120,000 miles, whichever occurs first, to the new 15 years or 150,000 miles, whichever occurs first. These modifications are necessary to establish California Phase 2 CO<sub>2</sub> target values for a manufacturer's Otto-cycle medium-duty vehicle fleet average and Phase 2 useful life requirements, and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (b)(1)(C)

The existing subsection describes the air conditioning leakage rate applicable to medium-duty vehicles. Modifications are made to add the Phase 2 air conditioning leakage rate applicable to 2021 and later model Phase 2 vehicles. These modifications are necessary to establish California air conditioning leakage rate and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (c)(1)

The new subsection provides GHG emission standards for new 2020 and subsequent model trailers. The subsection describes trailers excluded from the requirements, the definitions of different trailer types, and the applicable CO<sub>2</sub> standards for different trailer types. Moreover, the subsection provides the requirements for the optional ABT program and defines the useful life requirements for the emission standards. These modifications are necessary to establish California CO<sub>2</sub> emission standards for trailers and for harmonization with the federal Phase 2 GHG regulations.

#### Subsection (d)

The existing subsection is modified to update the reference to the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles” and to add a new set of test procedures applicable for medium-duty vehicles, “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.” Previously, the GHG test procedures applicable to medium-duty vehicles were described in the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles.” However, in the federal Phase 2 regulations, the medium-duty vehicle GHG test procedures were moved to the light duty vehicle test procedures in 40 CFR Part 86, Subpart S, which are incorporated by reference in the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.” Consequently, these light-duty test procedures are added to be incorporated by reference. Additionally, both these test procedures are being updated in this rulemaking. As such, the “last amended” date has been updated with a blank placeholder that will be updated to reflect the date the documents are formally amended. These modifications are necessary to establish California GHG emission standards and test procedures for HDVS, including medium duty vehicles, and for harmonization with federal Phase 2 GHG regulations.

### **Proposed Amendments to the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles”**

#### **List of Documents to be used in Conjunction with this Document**

The two existing test procedures listed are being updated in this rulemaking. As such, the “last amended” date has been updated with a blank placeholder that will be updated to reflect the date the documents are formally amended. These modifications are necessary to establish California GHG emission standards and test procedures for heavy duty vehicles, including medium duty vehicles, and for harmonization with federal Phase 2 GHG regulations. Additionally, two more sets of test procedures are added to this section. These documents are referenced in these test procedures for medium-duty vehicle testing and for hybrid conversion systems. It is necessary to include them since they are used in conjunction with these test procedures for the certification of medium-duty vehicles and hybrid conversion systems.

#### Introductory paragraphs

These introductory paragraphs list the CFR sections incorporated by references as well as the applicability of these test procedures. Two additional CFR parts are included, Part 86, which pertains to medium-duty vehicle standards and test procedures, and Part 1068, which pertains to enforcement and selective enforcement audit. The addition of these parts is necessary to ensure the proper test procedures apply to medium-duty vehicles and for enforcement of HDV standards. Also, the word “exhaust” was deleted from the text since the emission standards, not only control GHG emissions from the vehicle exhaust but also from the vehicles air conditioner refrigerant. This modification is necessary to ensure the comprehensiveness of GHG emission control.

#### **Part 86, 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**

This new 40 CFR Part 86, Subpart S was added for HDVs from 8,500 to 140,000 pounds GVWR (medium-duty vehicles) for GHG standards and test procedures. Previously, the GHG test procedures applicable to medium-duty vehicles were described in 40 CFR Part 1037, which are incorporated by reference. However, in the federal Phase 2 regulations, the medium-duty vehicle GHG standards and test procedures were removed from Part 1037 and moved to the light duty vehicle test procedures in 40 CFR Part 86, Subpart S. Consequently, this CFR part is added specifically for medium-duty vehicles and is necessary to establish California GHG emission standards and test procedures for heavy duty vehicles, including medium duty vehicles, and for harmonization with federal Phase 2 GHG regulations.

#### Section 86.1819-14 Greenhouse gas emission standards for heavy-duty vehicles

##### A. Federal Provisions

These modifications to this section add the applicable test procedures for medium-duty vehicles and additional provisions for medium-duty vehicles certified to the advanced technology credit provisions. The first modification adds the California test procedures, California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, which incorporates by reference the entire Part 86, Subpart S, applicable for medium-duty vehicle testing. This modification is necessary to apply for proper testing protocol for medium-duty GHG testing. The second modification limits the use of the



advanced technology credit multiplier only to those vehicles which are not required in another ARB regulation and is necessary to avoid the double benefit of complying with a regulation while use of the advanced technology credit multiplier. The third modification applies to plug-in hybrid electric vehicles (PHEVs), where the federal Phase 2 regulation allows a 3.5 multiplier for this technology for 2027 and earlier Phase 2 vehicles. This modification requires additional conditions to be met in order to use the credit multiplier: no increase in oxides of nitrogen (NOx) emissions and minimum all-electric range (AER) requirements. This modification is necessary to safeguard against the potential increases of NOx emissions from PHEVs and to align with ARB's existing HDV incentive programs pertaining to AER.

## B. California Provisions

### Subparagraph 1

This new subparagraph describes the additional medium-duty vehicle air conditioner requirements needed to comply with the vehicle air conditioner leakage rate, including cover letter, air conditioning system schematics, and Society of Automotive Engineers (SAE) J2727 spreadsheets to calculate refrigerant loss. This information is necessary for ARB certification staff to verify the certification information submitted by manufacturers of the vehicle's air conditioner leakage rate.

This subparagraph includes requirement to submit a spreadsheet for each group of sufficiently similar A/C system configurations (for example, those with same refrigerant capacity but different hose lengths, or those that differ only in fitting specifications). Because of the enormous diversity of heavy-duty vehicle designs and hence of A/C system configurations, it would typically not be possible for a manufacturer to use "engineering judgment" for selecting one configuration to represent all vehicles they produce. Hence, most manufacturers would need to submit a set of spreadsheets to adequately demonstrate compliance.

### Subparagraph 2

This new subparagraph allows the certification of low-global warming potential (GWP) air conditioner refrigerants in medium-duty vehicles to earn California emission credits and to be exempted from the additional air conditioner requirements in subparagraph 1 of this section. It also prevents manufacturers from obtaining both this low-GWP credit and the off-cycle technologies emission credit. This addition of this subparagraph is necessary to incentive the use of low-GWP refrigerants in California and its introduction into the medium-duty vehicle sector.

### Subparagraph 3

This new subparagraph specifies the procedure for calculating ABT credits for California for medium-duty vehicles. For PHEVs under the advanced technology credit, additional California requirements for reporting are specified, including the demonstration of compliance requirements, reporting requirements for volume of vehicles produced and delivered for sales in California, emission credits balance, and requirements for advanced-

technology credit multipliers. For low-GWP refrigerants, a formula is provided to calculate allowable credits, where its initial introduction would allow maximum credit and decreases over time once a threshold has been reached. This modification is necessary to provide guidelines and structure to how California emission credits may be generated.

## **Part 1037. Control of Emissions from New Heavy-Duty Motor Vehicles**

### Section 1037.1

#### A. Federal Provisions

This section describes the general applicability of 40 CFR Part 1037 to heavy-duty GHG emission vehicles. In particular, subsection (b) references the federal procedures for aftermarket alternative fuel conversion systems. This modification changes the reference to the California set of test procedure applicable to these conversions, California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for 2004 and Subsequent Model Year On-Road Motor Vehicles and Engines, and is necessary to ensure the appropriate California reference is provided for certification of aftermarket alternative fuel conversion systems.

#### B. California Provisions

##### Subparagraph 1.

This section describes the applicability of these test procedures. The modification updates the term “Greenhouse Gas Emission Requirements for New 2014 and Subsequent Model Heavy-Duty Vehicles” to the new federal Phase 2 GHG regulation references to “Phase 1” and “Phase 2” emission standards and is necessary to provide consistency with the federal Phase 2 GHG regulations.

##### Subparagraph 2.

This modification clarifies that Part 1037 refers to 40 CFR and is necessary to add clarity to the reference.

### Section 1037.2

This new section describes who is responsible for compliance with 40 CFR Part 1037 and is necessary to provide clarity to the regulated parties and for harmonization with the federal Phase 2 GHG regulations.

### Section 1037.5

This section provides the vehicles that are excluded from 40 CFR Part 1037 and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, this modification clarifies that medium-duty vehicles are subject to the emission standards of section 86.1819-14, as modified by these procedures, and the California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and

2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles. The modification is necessary to specify the California-modified emission standards in section 86.1819-14 and the California test procedures for medium-duty vehicles.

#### Section 1037.10

This section describes how 40 CFR Part 1037 is organized and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.15

This section describes how other parts of the CFR, such as Parts 1065, 1066, and 1068 interact with 40 CFR Part 1037 and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.30

This section describes where reports are submitted and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.101

This section provides an overview of the emission standards for HDVs and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, changes are made in subsection (b) to the existing Phase 1 certification provision where federal certification is deemed to comply with the California requirements. The changes are necessary to limit this “deemed to comply provision” to the Phase 1 program, up to the 2020 model year.

#### Section 1037.102

This section references the criteria emission standards that are also applicable to vehicles certified to the GHG standards and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.103

This new section describes the evaporative and refueling emission standards that are also applicable to vehicles certified to the GHG standards. The changes refer to the California procedures applicable to evaporative and refueling emissions rather than federal ones. These modifications are necessary to specify California requirements and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.104

This section refers to 40 CFR Part 86, Subpart S, for the standards applicable to medium-duty vehicles. The modifications change the title and update the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.105

This section provides the CO<sub>2</sub> emission standards for vocational vehicles. The modifications change the title and update the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations. In addition, a modification was made to subsection (h)(1) by adding footnote 2 to the "Table 5 of section 1037.105-Phase 2 Custom Chassis Standards" to require additional provisions for vehicles certified to the "Other bus" standard, such as transit buses. The custom chassis standards identified in this subsection are less stringent emission standards for certain category of vehicles compared to the primary standards applicable to vocational vehicles. These additional provisions are identified in sections 1037.241 and 1037.701, which require the manufacturer to show that the transit bus can comply with the primary emission standard. These modifications are necessary to prevent California transit buses from being certified to less stringent standards since they operate in urban settings.

#### Section 1037.106

This section provides the emission standards for tractors above 26,000 pounds GVWR. The modifications change the title and update the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.107

This new section provides the emission standards for trailers. This modification is necessary to establish California emission standards for trailers and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.115

This section provides the other requirements applicable to HDVs, such as adjustable parameters, prohibited control, and air conditioning leakage requirements. The modification updates the amended date to the federal Phase 2 Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

##### B. California Provision

##### Subparagraph 1.

This new subparagraph describes the additional HDV air conditioner requirements needed to comply with the vehicle air conditioner leakage rate, including cover letter, air conditioning system schematic, and SAE spreadsheet to calculate refrigerant loss. This information is necessary for ARB certification staff to verify the certification information submitted by manufacturers of the vehicle's air conditioner leakage rate.

#### Subparagraph 2.

This new subparagraph allows the certification of low-GWP air conditioner refrigerants in HDVs to earn California emission credits and to be exempted from the additional air conditioner requirements in subparagraph 1 of this section. It also prevents manufacturers from obtaining both this low-GWP credit and the off-cycle technologies emission credit. The addition of this subparagraph is necessary to incentive the use of low-GWP refrigerants in California and its introduction into the HDV sector.

#### Section 1037.120

This section provides the emission-related HDV warranty requirements that the vehicle manufacturer must provide to the ultimate purchaser and the components that would be covered in the warranty. The modification updates the amended date to the federal Phase 2 Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the federal Phase 2 GHG regulations inadvertently left out the warranty requirements for heavy HDVs and the United States Environmental Protection Agency has indicated that it would modify this in the next set of technical amendments. This modification is necessary to ensure that the warranty requirements for heavy HDVs are specified at this time.

#### Section 1037.125

This section specifies the requirements that the vehicle manufacturer must provide to the ultimate purchaser regarding maintenance instructions and allowable maintenance. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.130

This new section provides the assembly instructions for a secondary vehicle manufacturer to ensure that the final vehicle assembly will be in its certified configuration. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.135

This section provides the vehicle labeling requirements, including where to affix it and what it must contain. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the federal Phase 2 GHG regulations in subparagraph (c)(6) allow manufacturers the option to omit emission control identifiers on the

label for Phase 2 vocational vehicles and tractors. The modifications to subparagraph (c)(6) specify the minimum emission control identifiers on the vehicle label for Phase 2 tractors and vocational vehicles. These modifications are necessary for ARB enforcement to ensure that emission control devices are not illegally removed from vehicles, when field enforcement staff inspect Phase 2 vehicles.

#### Section 1037.140

This section specifies how vehicles are classified based on a vehicle's roof height, a trailer's length, GVWR, type of engine, and intended duty cycle as well how to define vehicle service class. The modification updates the amended date to the federal Phase 2 Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.150

This section describes interim provisions for Phase 1 and Phase 2 vehicles, such as limited carryover data from Phase 1 to Phase 2, transitional allowance for trailers, transition of emission credits from Phase 1 to Phase 2, and credit multipliers for advanced technology. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the second modification limits the use of the advanced technology credit multiplier only to those vehicles which are not required in another ARB regulation and is necessary to avoid the double benefit of complying with a regulation while use of the advanced technology credit multiplier. The third modification applies to PHEVs, where the federal Phase 2 regulation allows a 3.5 multiplier for this technology for 2027 and earlier Phase 2 vehicles. This modification requires additional conditions to be met in order to use the credit multiplier: no increase in NOx emissions and minimum AER requirements. This modification is necessary to safeguard against the potential increases of NOx emissions from PHEVs and to align with ARB's existing HDV incentive programs pertaining to AER.

#### Section 1037.201

This section describes the general requirements for obtaining a certificate of conformity (or Executive Order), and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.205

This section describes the information that must be included in a vehicle certification application and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, subparagraph (r) is modified to clarify that manufacturers must only produce for sale vehicles that are built as described in the certification application. Any vehicle configuration that is built for sale must be one of the vehicle configurations described in the application. The intent of this modification is not to change, alter, or add any certification requirements. For example, the "built as described" language is not intended to

hold manufacturers to predictions of sales volume or which will be their highest volume configuration. Instead, the intent is to clarify that each certified vehicle that a manufacturer produces for sale in California must be represented in all material aspects by the range of GHG values for each vehicle configuration and must be within the high and low FELs identified in the certification application. Also, a California provision is added to require vehicle manufacturers to submit the names of engine families that will be used in the vehicles for that application. This information is necessary for certification staff to ensure that only engines that have been certified for sale in California will be used in the vehicles applying for certification.

#### Section 1037.210

This section describes the process to provide preliminary approval before submitting an application for certification and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.211

This new section provides the procedure for preliminary approval for manufacturers of aerodynamic devices. This modification is necessary to allow aerodynamic device manufacturers to seek ARB's preliminary approval and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.220

This section describes the process to amend maintenance instructions and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.225

This section contains the procedures for amending an application for certification once it has been submitted for certification and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.230

This section contains instructions for how to select vehicle families, sub-families, and configurations and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.231

This new section describes how to divide a manufacturer's product line into powertrain families. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.232

This new section describes how to divide a manufacturer's product line into axle and transmission families. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.235

This new section describes the emission testing a manufacturer must perform to show compliance to the GHG emission standards. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.241

This section describes the certification compliance determination and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. In addition, a modification was added in B. California Provision to require urban buses certified to the Other bus custom chassis CO<sub>2</sub> emissions standard in 40 CFR 1037.105(h)(1) to demonstrate compliance with the primary vocational vehicle emission standard in 40 CFR 1037.105(b). This modification is necessary to ensure that urban buses will not emit more CO<sub>2</sub> emissions than other vocational vehicles.

#### Section 1037.243

This new section describes how to demonstrate compliance with the evaporative emission standards that are also applicable to vehicles certified to the GHG standards. The changes refer to the California procedures applicable to evaporative and refueling emissions rather than federal ones. These modifications are necessary to specify California requirements and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.250

This section contains the reporting and recordkeeping requirements for certification and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. The modification made to subparagraph (a) requires vehicle manufacturers to submit engine family information when vehicle identification numbers are submitted in end of model year reports. Linking a vehicle identification number and its engine family information provides the ability for emission inventory and enforcement staff to characterize the emissions of the real world fleet down to specific engine families and to design more targeted enforcement strategies based on emission trends and distribution of high emitting vehicles. This modification is necessary to allow ARB to more effectively develop the heavy-duty vehicle emission inventory and enforcement strategies.

#### Section 1037.255



This section describes the decisions that ARB may make regarding certification and issuing a certificate of conformity (or Executive Order). These modifications change the title from EPA to ARB and update the version with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for California certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.301

This new section provides an overview of performing audits and selective enforcement testing of any Greenhouse gas Emission Model (GEM) inputs used in certification. The addition of the section is necessary for ARB enforcement of GHG emission standards and certification, and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.305

This new section describes the selective enforcement audit procedures for tractors regarding aerodynamic testing of drag area. The addition of the section is necessary for ARB enforcement of GHG tractor emission standards and certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.310

This new section describes the selective enforcement audit procedures for trailers. The addition of the section is necessary for ARB enforcement of GHG trailer emission standards and certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.315

This new section describes the selective enforcement audit procedures for vehicles certified based on powertrain testing. The addition of the section is necessary for ARB enforcement of GHG emission standards and certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.320

This new section describes the selective enforcement audit procedures for axles and transmissions in vehicles. The addition of the section is necessary for ARB enforcement of GHG emission standards and certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.401

This section specifies that in-use testing of any vehicles subjects to the standards may be performed by U.S. EPA (or ARB) to verify in-use emission performance. The modification updates the amended date with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.501

This section describes the general testing and GEM provisions for certification. The modification updates the referenced date with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.510

This section specifies how to perform GHG exhaust emission testing for vehicles where such testing is required. The modification updates the amended date with the federal Phase 2 Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.515

This new section describes compliance modeling procedures for trailers. The addition of the section is necessary for ARB certification of GHG trailer emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.520

This section shows how to use GEM to model CO<sub>2</sub> emissions to show compliance with the HDV GHG emission standards. These modifications update the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.525

This section describes how to determine the aerodynamic drag area of tractors using either coast down testing or an alternate procedure. These modifications update the section number, the title, and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.526

This new section describes the methodology for determining GEM aerodynamic drag area inputs for box van trailers. The addition of the section is necessary for ARB certification of GHG trailer emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.527

This new section describes the methodology for determining GEM aerodynamic drag area inputs for vocational vehicles. The addition of the section is necessary for ARB certification of GHG vocational vehicle emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.528

This new section describes the coast down procedures for calculating drag area for tractors, trailers, and vocational vehicles. These procedures are the primary procedures for tractors but may be used as alternate procedures for trailers. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.530

This new section describes the wind-tunnel procedures for calculating drag area. These procedures are the primary procedures for trailers but may be used as alternate procedures for tractors. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.532

This new section describes how to use commercially available computational fluid dynamics software to calculate drag area. These procedures are considered alternate procedures for tractors and trailers. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.534

This new section describes how to use constant-speed aerodynamic drag testing to calculate drag area. These procedures are considered an alternate method for tractors. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.540

This section describes optional procedures for quantifying the reduction in GHG emissions as a result of running power take-off devices on a hybrid-electric vehicle. These modifications update the section number, the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.550

This new section describes how to determine engine fuel maps using a measurement procedure that involves testing an engine coupled with a powertrain to simulate vehicle operation. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. The modification adds exhaust emissions as additional parameters to be measured pursuant to the provisions of this section, in addition to fuel-consumption rates, and specifies the applicable duty cycles pursuant to "California Certification and Installation Procedures for Medium and Heavy-Duty Vehicle Hybrid Conversion Systems" for hybrid and conventional vehicle configurations. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.551

This new section describes how to measure fuel consumption over specific duty cycles with an engine coupled to a transmission. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.555

This section describes the procedure for simulating a chassis test with a pre-transmission or post-transmission hybrid system for Phase 1 vehicle testing. These modifications update the section number, the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.560

This new section describes the procedure for mapping axle efficiency through a determination of axle power loss. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.565

This new section describes the procedure for mapping transmission efficiency through a determination of transmission power loss. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.601

This section contains general compliance provisions for vehicle manufacturers as well as owners and operators. These modifications update the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations. In addition, changes are made to subparagraphs (a)(1) and (a)(5) to delete references to federal law and to replace them with the applicable California provisions. These changes are necessary to establish California authority for compliance provisions.

#### Section 1037.605

This new section allows vehicle manufacturers to certify certain specialty vehicles using engines certified to less stringent GHG emission standards. The section limits the number of specialty vehicles per model year certified nationally to this provision to 1,000 hybrid vehicles and to 200 of all-terrain motor vehicles with portal axles, amphibious vehicles, and vehicles with a maximum speed at or below 45 miles per hour. This addition is necessary for harmonization with the federal Phase 2 GHG Final Rule. CARB staff considered setting lower California-specific sales limits for exempted amphibious, speed-limited, and certain all-terrain vehicles to prevent a potential disproportionate shares of these vehicles being sold in California, but concluded such sales limits are unnecessary because existing CARB regulations are already more protective in terms of restricting the use of higher-emitting off-road engines

in on-road vehicles. Specifically, title 13 CCR section 1956.8 (f)(1) does allow limited sales exemptions for vehicles installed with non-compliant engines for up to a total of 100 heavy-duty vehicles per year for all manufacturers combined, on a first-come, first-served basis. In order to qualify for an exemption, the vehicle manufacturer needs to submit in writing to the Executive Officer the justification(s) for such an exemption request. The exemption request must show that, due to circumstances beyond the control of the vehicle manufacturer, California certified on-road engines are unavailable for use in the vehicle. The request must further show that redesign or discontinuation of the vehicle would result in extreme cost penalties and disruption of business. If approved, the vehicle manufacturer can produce the requested vehicles per year only if other vehicle manufacturers have not already claimed the 100 allowed annual sales exemptions.

#### Section 1037.610

This section describes provisions for CO<sub>2</sub> emission reductions due to the use of vehicle technologies that were not in common use with HDVs before model year 2010 that are not reflected in GEM. These modifications update the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the federal Phase 2 Final Rule added new subparagraphs (f) through (g), which describe the criteria for calculating the emission improvement factor associated with the vehicle technologies. The modification adds these subparagraphs into the test procedures but makes no changes to them. This modification is necessary for harmonization with the federal Phase 2 GHG Final Rule.

#### Section 1037.615

This section describes the requirements for advanced technologies for Phase 1 and Phase 2 vehicles. These modifications update the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.620

This new section describes certain circumstances in which multiple manufacturers share responsibilities for vehicles they produce together, such as tire manufacturers. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. The modifications made to subparagraphs (d)(1) and (f) delete the citations made to the United States Code and are necessary since these citations are not applicable for California authority.

#### Section 1037.621

This new section describes provisions that allow certificate holders to sell and ship vehicles that are missing certain emission-related components if those components will be installed by a secondary manufacturer. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.622

This section specifies how manufacturers may introduce partially complete vehicles into commerce. These modifications update the section number, the title, and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.630

This section specifies how a vehicle manufacturer may reclassify certain tractors as vocational tractors. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.631

This section provides an exemption from the GHG standards for certain vocational vehicles intended to be used extensively in off-road environments. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.635

This new section describes provisions for the certification of glider kits and glider vehicles. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.640

This section specifies provisions that apply for vehicle speed limiters that are modeled in the GEM simulation tool. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.645

This section describes the provisions to apply a higher in-use family emission limit for certain in-use vehicles. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.650

This section, which described the requirements of tire manufacturers who choose to provide test data or emission warranties to the vehicles manufacturers, was deleted in the federal Phase 2 GHG Final Rule. The contents of the section were moved to section 1037.620. This

modification deletes the section from these test procedures. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.655

This section specifies vehicle modifications that may occur after a vehicle reaches the end of its regulatory useful life. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. In addition, the modification to subparagraph (a) deletes the federal statutory reference and inserts the California authority to prevent tampering and modifications. This modification is necessary to align with existing California statute.

#### Section 1037.660

This section specifies requirements that apply for certified automatic engine shutdown systems (idle reduction technologies) that are modeled in the GEM simulation tool. These modifications update the title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.665

This new section describes provisions for production and in-use tractor testing by manufacturers of large production volumes to verify the GEM simulation tool. Test results from this testing are not be used for enforcement purposes. The addition of the section is necessary for verification of GEM used for vehicle certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.670

This new section describes provisions for the certification of glider kits and glider vehicles. The addition of the section is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.701

This section specifies the general provisions of the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### B. California Provisions

##### Subparagraph 1.

This new subparagraph requires the retirement of any emission credits used by California urban buses to certify to the custom chassis Other bus CO<sub>2</sub> emission standard. This

modification is necessary to ensure that California urban buses do not generate emission credits when certified to the less stringent Other bus standard.

#### Subparagraph 2.

This new subparagraph allows vehicles with low-GWP air conditioner refrigerants in HDVs to earn California emission credit, to be used within its vehicle averaging set. This modification is necessary to incentive the use of low-GWP refrigerants in California and its introduction into the HDV sector.

#### Subparagraph 3.

This new subparagraph specifies additional requirements for PHEV to use the advanced technology credit multiplier, including the demonstration of compliance requirements and reporting of PHEV credits and credits balance for California vehicles. The amendments are necessary to provide specific procedures for the proper accounting of PHEV emission credits and credits balance for California vehicles.

### Section 1037.705

This section contains the provisions for calculating emission credits for each GHG pollutant in the ABT program. Subparagraph 1. of B. California Provisions describes the methodology to calculate California low-GWP emission credits should a manufacturer choose to certify such a vehicle, where its initial introduction would allow maximum credit and decreases over time once a threshold has been reached. This modification is necessary to provide guidelines and structure to how California emission credits for low-GWP vehicles may be generated.

### Section 1037.710

The section specifies how to average emission credits for an averaging set in the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### Section 1037.715

The section specifies how to trade excess emission credits for an averaging set in the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### Section 1037.720

The section specifies how to trade excess emission credits between manufacturers in the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### Section 1037.725



The section describes the information to include in the application for certification if the manufacturer participates in the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph 1. of B. California Provisions requires manufacturers to submit vehicle or subfamily information on emission credits, emission deficits, and retired emission credits for low-GWP vehicles and for PHEVs. This modification is necessary to account accurately for California emission credits and deficits due to these vehicles.

#### Section 1037.730

The section describes the requirements to submit end-of-year and final reports if the manufacturer participates in the ABT program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph 1. of B. California Provisions requires manufacturers to submit projected and actual volumes of California vehicles certified to the low-GWP and PHEV provisions and allows manufacturers to use federal credit to offset California emission deficit by voluntarily retiring such credits. This modification is necessary to ensure accurate accounting of California emission credits and deficits for these vehicles.

#### Section 1037.735

The section describes the recordkeeping provisions for manufacturers. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.740

The section specifies the restrictions for using emission credits, such as defining the averaging sets, credits from advanced technology, and credit life. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.745

The section contains the provisions for remedying end-of-year CO<sub>2</sub> credit deficits. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.750

The section specifies the consequence of not complying with the provisions of ABT. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for ARB certification of GHG emission standards and for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph (c) deletes the reference to the United States Code and is necessary because that United States Code section does not apply to California authority to certify HDVs.

#### Section 1037.755

This section applies to the Department of Transportation and is noted as “not applicable,” and is necessary to note that this section does not apply to California certification.

#### Section 1037.801

The section describes the definitions that apply to 40 CFR Part 1037. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations. The modification to A. Federal Provisions deletes the amended definition of “vehicle service class” because this definition was deleted from this section in the federal Phase 2 GHG Final Rule and was placed within section 1037.140. The modification is necessary for harmonization with the federal Phase 2 GHG regulations. One of the modifications to B. California Provisions adds the definition of “GHG urban bus,” which is identical to the federal Phase 2 GHG regulatory definition of “urban bus.” This change is necessary to distinguish this definition of urban bus that is slightly different than the “regular” urban bus definition used in other ARB regulations. Another modification clarifies the definition of medium-duty vehicle and is necessary for consistency with the Low Emission Program. Other modifications to B. California Provisions correct the definitions of certification and manufacturer, and are necessary for harmonization with the federal Phase 2 GHG regulation.

#### Section 1037.805

The section explains the symbols, acronyms, and abbreviations that are used in this Part. The modifications update the section title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.810

The section describes the material that is incorporated by reference in Part 1037. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.815

The section references existing provisions to apply for submitted information to be considered confidential. The modification updates the amended date to the federal Phase 2 GHG Final

Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.820

The section contains the requirements for requesting a hearing. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1037.825

The section describes the reporting and recordkeeping responsibilities of the manufacturer. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Appendix IV to Part 1037

This new appendix contains the heavy-duty grade profiles for Phase 2 steady-state test cycles and its addition is necessary for testing vehicles to determine compliance with the GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Appendix V to Part 1037

This new appendix contains the power take-off utility factors and its addition is necessary for testing vehicles to determine compliance with the GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### **Part 1066 Vehicle Testing Procedures**

#### Section 1066.1

The section describes the applicability of this part to model years 2014 and later HDVs for emission testing to show compliance with emission standards. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.2

The section describes the information and statements required in the application for certification that pertain to vehicle testing. The modifications update the section to the latest amended date of April 28, 2014 and change the reference from EPA to ARB. The modifications are necessary for California vehicle testing for certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.5

The section provides an overview of this part and its relation to the standard-setting parts (part 1037 for GHG emission standards) for testing various categories of vehicles. The

modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.10

The section generally describes other procedures that the manufacturer and the regulatory agency may use for testing. The modification updates the section to the latest amended date of February 19, 2015. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.15

The section outlines the procedures to test vehicles that are subject to vehicle emission standards. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.20

The section discusses the units of measure used throughout the test procedures. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.25

The section describes the recordkeeping provisions required of vehicle manufacturers. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.101

The section provides an overview of test equipment, test fuels, and analytical gases for HDV testing. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.105

The new section describes the ambient controls of the testing facility as well as the specification for vehicle cooling fans. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.110

The new section specifies equipment related to emission testing, other than measurement instruments, such as dynamometers. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.120

The new section describes emission measurement instruments during vehicle testing. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.125

The new section specifies criteria that the test system must meet for updating and recording data. It also specifies criteria for controlling the systems related to driver demand, the dynamometer, sampling equipment, and measurement instruments. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.130

The new section describes measurement instrument calibrations and verifications. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.135

The new section describes linearity verification unique to vehicle testing. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.140

The new section describes how to calibrate flow meters for diluted exhaust constant-volume sampling systems. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.145

The new section describes the test fuel, engine fluids, analytical gasses, and other calibration standards. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.150

The new section describes the analyzer interference and quench verification limits. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.201

The section states that this subpart addresses chassis dynamometers and related equipment. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.210

The section describes the specifications of the chassis dynamometer, such as accuracy and precisions, test cycle simulation ability, and component requirements. The modification updates the section to the latest amended date of October 22, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.215

The section describes the overall process for verifying the performance of chassis dynamometers. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.220

The section describes the linearity verification for chassis dynamometer systems. The modifications update the section title and to the latest amended date of April 28, 2014. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.225

The section describes the verification procedure for roll runout and roll diameter of the chassis dynamometer upon initial installation and after major maintenance. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.230

The section describes how to verify the accuracy of the dynamometer's timing device upon initial installation and after major maintenance. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.235

The section describes how to verify the accuracy of the dynamometer speed determination upon initial installation and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.240

The section states to verify torque-measurement systems by performing the verifications described in §§1066.270 and 1066.275. The modifications update the section title and latest amended date of April 28, 2014. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.245

The section describes how to verify the dynamometer's response time upon initial installation and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.250

The section describes how to verify the dynamometer's base inertia upon initial installation and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.255

The section describes how to verify and correct the dynamometer's parasitic loss upon initial installation, within 7 days of testing, and after major maintenance. The modification updates the section to the latest amended date of February 19, 2015. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.260

The section describes how to verify the accuracy of the dynamometer's friction compensation upon initial installation, within 7 days of testing, and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.265

The section describes how to verify the dynamometer's ability to achieve targeted acceleration and deceleration rates upon initial installation and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.270

The section describes how to use force measurements to verify the dynamometer's settings based on coast down procedures upon initial installation, within 7 days of testing, and after major maintenance. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.275

The new section describes how to verify that the dynamometer is ready for emission testing. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.290

The section specifies the use of good engineering judgement to provide a driver's aid. The modifications update the section number, section title, and the latest amended date of April 28, 2014. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.301

The section describes the overview of road-load determination procedures. The modifications update the section title and the latest amended date of October 25, 2016. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.305

The new section describes the procedures for specifying road-load forces for motor vehicles at or below 14,000 pounds GVWR. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.310

The section specifies the coast down procedures vehicles above 14,000 pounds GVWR. The modifications update the section title and the latest amended date of October 25, 2016. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.315

The new section describes how to determine dynamometer road-load settings for chassis testing. The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.401

The section provides an overview of the vehicle preparation and conducting an emission test. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.405

The section states to take steps to prepare the vehicle for testing, as described in the standard-setting part. The modifications update the section to the latest amended date of April 28, 2014 and the section numbering. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.410



The section describes how to run the test cycle on the dynamometer. The modification updates the section to the latest amended date of October 25, 2016. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.415

The new section describes how to test a conventionally configured vehicle (vehicles with transmission shifters, foot pedal accelerators, etc.) The addition of this section is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.420

The section describes the test preparation of the ambient controls, fans, and emission measurement systems. The modifications update the section to the latest amended date of February 19, 2015 as well as the section title. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1066.425 and 1066.430

Section 1066.425 has been modified to not only contain the contents of the previous section 1066.425 but also section 1066.430. This section now describes how to perform the emission tests, such as the test cycles, driving tolerances, procedures during the test, and procedures after the test. The modifications update the section number, section title, and the last amended date of the section, October 25, 2016. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.501

The section describes the procedures to test electric vehicles and hybrid electric vehicles, including PHEVs. The modification updates the section to the latest amended date of February 19, 2015. The modification is necessary for harmonization with the federal Phase 2 GHG regulations. The modification in B. California Provisions specifies the test procedures for PHEV certification in California, including provisions for a hybrid technology emission test plan to show that PHEVs do not increase NO<sub>x</sub> emissions. This modification is necessary to ensure that PHEVs do not emit increased levels of NO<sub>x</sub> emissions compared to a similar conventional vehicle and to determine the all-electric range of the PHEV.

#### Section 1066.601

The section describes the overview of calculations to determine emissions rates. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.605

The new section describes how to determine mass-based and molar-based exhaust emission calculations. The addition of this section is necessary for California vehicle testing to

demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.610

The section describes the calculations for dilution air background correction. The modification updates the section to the latest amended date of April 28, 2014. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.615

The new section describes calculations for NO<sub>x</sub> intake-air humidity corrections. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.620

The new section directs calculations for removed water. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.625

The new section describes the calculations for calibrating various flow meters based on mass flow rates. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.630

The new section describes the equations for calculating flow rates from various flow meters. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.635

The new section describes calculations for NO<sub>x</sub> intake-air humidity corrections. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.695

The new section describes calculations for non-methane organic gases. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.801

The new section describes the general provisions of the test procedures for light-duty vehicles, light-duty trucks, and HDVs at or below 14,000 pounds GVWR that are subject to

chassis testing for exhaust emissions. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.805

The new section specifies how to determine road-load power, test weight, and inertial weight class determination. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.810

The new section describes the vehicle preparations for an emission test. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.815

The new section describes the exhaust emission test procedures for the Federal Test Procedure testing. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.816

The new section describes the vehicle preconditioning procedures for the Federal Test Procedure testing. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.820

The new section describes the composite calculations for the Federal Test Procedures exhaust emissions. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.830

The new section describes the overview of the Supplemental Federal Test Procedure and is not applicable for GHG emission testing. It is merely noted here for completeness of the various sections in this part.

#### Section 1066.831

The new section describes exhaust emission test procedures for aggressive driving and is not applicable for GHG emission testing. It is merely noted here for completeness of the various sections in this part.

#### Section 1066.835

The new section describes exhaust emission test procedures for SC03 emissions and is not applicable for GHG emission testing. It is merely noted here for completeness of the various sections in this part.

#### Section 1066.840

The new section describes the test procedures for the highway fuel economy test. The modification is necessary for California vehicle testing to demonstrate compliance with emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.845

The new section describes exhaust emission test procedures for the air conditioning efficiency test and is not applicable for GHG emission testing. It is merely noted here for completeness of the various sections in this part.

#### Section 1066.1001

The section defines the terms used in this part. The modifications update the section to the latest amended date of February 19, 2015, as well as the section number. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.1005

The section explains the symbols, acronyms, and abbreviations that are used in this part. The modifications update the section to the latest amended date of October 25, 2016, as well as the section number. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1066.1010

The section describes the material that is incorporated by reference in this part. The modifications update the section to the latest amended date of October 25, 2016, as well as the section number. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

### **Part 1068 General Compliance Provisions for Highway, Stationary, and Non-road Programs**

#### Section 1068.1

This new section describes the applicability of this Part, and its addition is necessary to establish the applicability of this Part in the California Phase 2 GHG regulations. The modification to subparagraph (a)(2) adds heavy-duty vehicles, including trailers and engines used in such vehicles, that are certified to the California Phase 2 GHG regulations to the applicability of this Part and is necessary to ensure that this Part for general compliance in enforcement applies to California-certified heavy-duty vehicles, including trailers, and engines.

#### Section 1068.20

The new section explains when ARB may enter a facility for inspection. The modification to subparagraph (a) authorizes ARB to enter into testing, manufacturing processes, and storage facilities for inspection as for records inspection, as authorized by the California Health and Safety Code. The modification to subparagraph (c) requires reasonable assistance to the enforcement staff as necessary at the facility. The modification to subparagraph (d) describes compatibility with existing local law. These modifications are necessary to specify ARB's authority to inspect facilities for compliance with heavy-duty regulations. In addition, subparagraph (b), which describes what enforcement staff may perform at the facility, is deleted because it limits the inspection ability unnecessarily, and is necessary for consistency with other ARB regulations.

#### Section 1068.30

The new section provides the definitions used in this Part, and its addition is necessary to establish definition of terms used in this Part. In the Federal Provisions, the definition of "date of manufacture" is modified to eliminate the federal definition that describes the requirements for a secondary engine manufacturer and is necessary because these requirements conflict with other ARB regulations. The definition of "engine" is deleted because these test procedures already incorporate a definition of "basic engine" in 40 CFR 86.004-2 (which is in turn incorporates the definition of engine in 86.082-2). This modification is necessary to ensure that there is only one definition of engine. In the California Provisions, the added definitions refer to ARB and its authority when references are made to EPA and its authority. These modifications are necessary to ensure that the federal enforcement provisions also apply to California.

#### Section 1068.35

This new section describes the symbols, acronyms, and abbreviations that apply in this Part, and its addition is necessary to define the symbols, acronyms, and abbreviations used in this Part. In the California Provisions, the acronym, "ARB," is added, and its addition is necessary to establish that "ARB" is the "Air Resources Board" when the acronym is used.

#### Section 1068.45

The new section explains the general labeling requirements for vehicles, such as permanent label requirements and date formats, and its addition is necessary to describe general labeling requirements, for consistency among manufacturers, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.401

The new section explains what a selective enforcement audit is, and its addition is necessary to describe to the certificate holder that it may be required to conduct emission tests on production vehicles in a selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.405

The new section describes a test order to a certificate holder to conduct a selective enforcement audit, and its addition is necessary to explain what the test order contains such that the certificate holder understands what it is required to perform and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.410

The new section describes how the certificate holder is to select and prepare vehicles for testing in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately obtaining vehicles to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.415

The new section describes how the certificate holder is to test vehicles in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately testing vehicles to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.420

The new section explains how to determine if a vehicle family has failed the selective enforcement audit and its addition is necessary to establish pass and fail criteria for the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.425

The new section describes what happens if one of the production vehicles exceeds the emission standards, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for that vehicle, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.430

The new section explains what happens if a family fails a selective enforcement audit, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for the entire family, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.435

This new section explains whether vehicles may still be sold from a family with a suspended Executive Order, and its addition is necessary to describe the conditions under which the vehicles may be sold, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.440

This new section explains how a certificate holder can request to reinstate the suspended certificate, and its addition is necessary to allow a process to reinstate the suspended certification, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.445

The new section describes when ARB may revoke the Executive Order and how the certificate holder can sell vehicles again, and its addition is necessary to provide a means for the certificate holder to sell vehicles again, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.450

This new section describes the records that are required to be sent to ARB and its addition is necessary to establish required records that must be provided to ARB for enforcement and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.455

This new section describes the records that must be kept by the certificate holder, and its addition is necessary to establish record keeping requirements for selective enforcement audit, and for harmonization with the federal Phase 2 GHG rulemaking.

### **Proposed Amendments to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles”**

#### Introductory paragraphs

These introductory paragraphs list the CFR sections incorporated by reference as well as the applicability of these test procedures. Part 1068, which pertains to enforcement and selective enforcement audit is added. The addition of this part is necessary to ensure the proper test procedures apply for enforcement of heavy-duty diesel engine standards.

### **Part 86, 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**

#### Section 86.1

This section describes the documents incorporated by reference and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### **Subpart A Title**

The title is updated to reflect the latest title in the federal Phase 2 GHG regulations. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 1.A.3

Section 86.016-1 describes the general applicability of Subpart A, Part 86. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 1.B.1

This subsection describes the California provision regarding how to classify engines that operate on different fuels. The modification aligns the federal Phase 2 GHG regulation requirement for heavy heavy-duty Otto-cycle engines used in vehicles, which normally exceed 33,000 pounds GVWR, to be classified with diesel heavy heavy-duty engines, as is described in 40 CFR section 1036.140. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 1.B.4

This subsection describes the regulations that do not pertain to these test procedures. The modification deletes “selective enforcement audit” because in this rulemaking, the selective enforcement audit procedures in 40 CFR Part 1068 are proposed to be added into these test procedures. This modification is necessary to allow California enforcement of the exhaust emission standards according to the selective enforcement audit provisions.

#### Subsection 2.A

Section 86.004-2 defines the terms used in this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 2.B

Subsection 2.B. contains the California definitions applicable to these test procedures. The addition of “ARB” provides the definition of this acronym when used in these test procedures and is necessary to provide clarity of the terms that are used.

#### Subsection 4

Section 86.084-4 describes how the sections are numbered in Part 86. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 6

Section 86.078-6 describes the process to request a hearing on certification. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the modification to the paragraph



states California's authority for a manufacturer to require a hearing and is necessary to properly note the California authority to allow such an action.

#### Subsection 11.A.2

Section 86.007-11 contains the applicable emission standards and requirements for 2007 and later model year heavy-duty engines and vehicles. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 11.A.2.2

Subparagraph (a)(1)(ii)(B) describes the hydrocarbon standard for engines fueled with natural gas or liquefied petroleum gas. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane, a new term called a non-methane non-ethane hydrocarbon standard. The modification removes the non-methane non-ethane hydrocarbon standard from the list of federal provisions proposed to be incorporated, and maintains the current California non-methane hydrocarbon standard. This modification is necessary to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Subsection 11.A.2.6

Section 86.007-11, when it was updated in the federal Phase 2 GHG rulemaking, includes two additional subparagraphs, (i) and (j). Subparagraph (i) is reserved and subparagraph (j) contains a provision on engines installed in new glider vehicles. The modification adds these two subsections to the test procedures and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 14.A.1

Section 86.094-14 contains the certification procedures for small-volume manufacturers. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. Other modifications to this section are made to align the existing modifications to this section with the latest update to the section as a result of the federal Phase 2 GHG regulation and are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 25.A.1

Section 86.004-25 contains the maintenance provisions for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph (b)(7)(iii) updates the CCR, title 17 reference from section 60040 to section 60055.1 and is necessary because the

new reference is more appropriate in reference to provide manufacturers a hearing. The last modification, to add subparagraphs (c) through (i), was inadvertently left out of previous amendments, and its addition is necessary to correct this omission.

#### Subsection 25.A.2

This section, 86.007-25 was deleted in the federal Phase 2 GHG regulation and its contents were transferred to 86.004-25. Thus, this section is also deleted, and its deletion is necessary for harmonization with the federal Phase 2 GHG regulation.

#### Subsection 28.A.1

Section 86.004-28 contains the compliance provisions for engine emission standards. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 30.A.2

Section 86.007-30 contains the certification requirements for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 35.A.1

Section 86.095-35 contains the labeling provisions for 1995 and subsequent model year heavy-duty engines. Section 86.001-35 was deleted in the federal Phase 2 GHG regulation. Thus, this section is also deleted, and the labeling provisions of 86.095-35 apply. Its deletion is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The other modification to add "(iii)" to subparagraph (a)(3)(I) modifies an incorrect reference and is necessary to correct the reference.

#### Subsection 35.A.2

Section 86.007-35 contains the labeling provisions for 2007 and subsequent model year heavy-duty engines and was deleted in the federal Phase 2 GHG regulation. Thus, this section is also deleted and the labeling provisions of 86.095-35 apply. Its deletion is necessary for harmonization with the federal Phase 2 GHG regulation.

#### Subsection 37

Section 86.085-37 describes provisions relating to production vehicles and engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

## **Subpart N - Exhaust Test Procedures for Heavy-Duty Engines**

### Section 86.1301

Section 86.1301 provides the overview and applicability of the exhaust steady-state and transient test procedures for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### Section 86.1362

Section 86.1362 describes the steady-state testing with a ramped-modal cycle. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### Section 86.1370

Section 86.1370 describes the Not-To-Exceed test procedures and how they are conducted. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The other modifications update the section lettering to be consistent with the latest amended section and are necessary for harmonization with the federal Phase 2 GHG regulations.

## **Subpart T: Manufacturer-Run In-Use Testing Program for Heavy-Duty Diesel Engines**

### Section 86.1910

This section describes how to prepare and test vehicles for the manufacturer-run in-use testing program. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### Section 86.1912

This section describes the passing criteria to determine if a vehicle has passed or failed the test. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### Section 86.1920

This section describes the in-use test information that must be reported to ARB. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

## **Part 1036 - Control of Emissions from New and In-Use Heavy-Duty Highway Engines**

#### Section 1036.1

This section describes the applicability of this part 1036. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph (a) clarifies the existing requirement that heavy-duty engine certification is allowed only for those engines that will be installed in 2019 and earlier model year incomplete heavy-duty vehicles from 8,501 to 10,000 pounds GVWR and in incomplete heavy-duty vehicles from 10,001 to 14,000 pounds GVWR. The modification to delete subparagraph (c) removes the reference to aftermarket fuel conversions, which these procedures do not address, and is necessary to include only the scope of engines affected by these test procedures.

#### Section 1036.2

This section describes the parties that are responsible for compliance with the emission standards of this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.5

This section describes the engines that are excluded from the requirements of this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.10

This section describes how the sections of this part are organized. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.15

This section describes how other parts of the CFR are applicable in conjunction with part 1036. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.30

This section describes where the certification application is to be submitted. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.100

This section provides an overview of the GHG emission standards applicable to heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.108

This section provides an overview of the emission standards for HDVs and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, changes are made to the introductory paragraph to the existing Phase 1 certification provision where federal certification is deemed to comply with the California requirements. The changes are necessary to limit this deemed to comply provision to the Phase 1 program, up to the 2020 model year.

#### Section 1036.115

This section describes other requirements besides the emission standards that are applicable to heavy-duty engines, such as engine fuel mapping. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.130

This section describes requirements for providing installation instructions for vehicle manufacturers. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.135

This section describes the GHG labeling requirements on the engine label. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.140

This section describes how to determine the primary intended service class and the engine cycle for each engine family. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.150

This section describes the GHG interim provisions that are applicable to heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

## Sections 1036.205

This section describes the information that must be included in an engine certification application and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, subparagraph (i) is modified to clarify that manufacturers must only produce for sale engines that are built as described in the certification application. Any engine configuration that is built for sale must be one of the engine configurations described in the application. The intent of this modification is not to change, alter, or add any certification requirements. Instead, the intent is to clarify that each certified engine that a manufacturer produces for sale in California must be in all material aspects as identified in the certification application. Subparagraph (i) is also modified to reference title 13, CCR, section 1956.8 for compliance. This modification is necessary to ensure that engines produced by manufacturers are built according to the certified configuration, in reference to ARB's emission standards and requirements in title 13.

## 1036.210, 1036.225, 1036.230, 1036.235, 1036.241, and 1036.250

These sections describe the information required to certify engine families to the GHG emission standards, including preliminary approval, amending an application, selecting engine families, testing requirements, how to demonstrate compliance with the standards, and reporting requirements. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

## Section 1036.255

This section describes what decisions U.S. EPA could make regarding the certificate of conformity. The modifications delete U.S. EPA and replace it with ARB as the decision maker for California Phase 2. They also update the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and are necessary for harmonization with the federal Phase 2 GHG regulations.

## Section 1036.301

This new section describes the selective enforcement audits that apply for engines, specifically related to the GEM input values provided to vehicle manufacturers. The addition of this modification is necessary for California enforcement of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

## Section 1036.401

This section specifies the in-use testing that may be performed of any engine family for enforcement purposes. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016 and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.501

This section describes how to run a valid GHG emission test. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.505

This new section describes the ramped-modal test procedures to measure CO<sub>2</sub> emissions. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.510

This new section describes the required engine data and information that must be submitted to vehicle manufacturers for vehicle certification. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.525

This section describes how to test a hybrid engine. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.530

This section describes how to calculate official emission results for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.535

This new section describes how to determine an engine's steady-state fuel map and fuel consumption at idle for model years 2021 and later vehicles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.540

This new section describes how to determine an engine's cycle-average fuel maps for model year 2021 and later vehicles with transient cycles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.601

This section describes the compliance provisions for manufacturers, owners, operators, and rebuilders of engines. The modification updates the amended date to the federal

Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. Additionally, the modification to paragraph (a)(3) provides California regulatory references for warranty-related prohibitions and is necessary to demonstrate the California authority to enforce warranty requirements.

#### Section 1036.605

This new section describes GHG exemption for specialty vehicles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.610

This section describes how to calculate off-cycle technology credits and adjustments for reducing GHG emissions. The modifications update the section title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the federal Phase 2 GHG regulations added a new subparagraph (e), which describes criteria to approve an improvement factor or credit for the technology. The modification adds this to the test procedures and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1036.615, Section 1036.620, Section 1036.625

Section 1036.615, Section 1036.620, and Section 1036.625 describe how to test engines with Rankine cycle waste heat recovery and hybrid powertrains, alternate CO<sub>2</sub> standards based on model year 2011 compression-ignition engines (Phase 1 engines), and in-use compliance with family emission limits, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.630

This new section describes the certification of engine GHG emission for powertrain testing, which is optional for vehicle testing. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1036.701, Section 1036.705, Section 1036.710, Section 1036.715, Section 1036.720, Section 1036.725, Section 1036.730, Section 1036.735, Section 1036.740, Section 1037.745, Section 1036.750

These sections describe the averaging, banking, and trading provisions for certification, including how to calculate emission credits, reporting requirements, and restrictions on the use of credits. The modification to each section updates the amended date to the



federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.755

This section applies to the Department of Transportation and is noted as “not applicable,” and is necessary to note that this section does not apply to California certification.

#### Sections 1036.801

This section describes the definitions used in this part. One modification to B. California Provisions limits the definition of the federal Phase 1 GHG program to 2020 model year since federal Phase 2 program begins in the 2021 model year. Another modification adds “or assembles” to the definition of “manufacturer.” The modification to “certificate of conformity” corrects the reference from “vehicles” to “engines” since these test procedures refer to engine standards and test procedures. These modifications are necessary to harmonize with the federal Phase 2 GHG regulations.

#### Section 1036.805, Section 1036.810, Section 1036.815, Section 1036.820, Section 1036.825

These sections describe symbols, acronyms, and abbreviations, incorporation by reference, confidential information, requesting a hearing, and reporting and recordkeeping requirements, respectively. The modification to each section updates the amended date to the latest amended date of the CFR section and is necessary to ensure the most current version of the CFR reference is used and for harmonization with the federal regulations.

#### Appendix I to Part 1036

This new appendix includes the default steady-state fuel maps for performing cycle-average engine fuel mapping. Its addition is necessary for testing vehicles to determine compliance with the GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### **Part 1065 – Engine-Testing Procedures**

#### Section 1065.2

This section describes the information that must be submitted to EPA. The modification changes the reference to EPA to ARB and is necessary to require submittal of information to California.

#### Section 1065.10

This section references other procedures that may be applicable to engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.15

Subparagraph (a)(2) describes that hydrocarbon may be expressed in several ways and subparagraph (a)(2)(iii) shows that it may be in the form of non-methane non-ethane hydrocarbon. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. The modification removes the non-methane non-ethane hydrocarbon description from the list of federal provisions proposed to be incorporated, and maintains the current California non-methane hydrocarbon description. This modification is necessary to maintain only the current non-methane hydrocarbon standard and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Sections 1065.140, 1065.170, 1065.202, 1065.220, 1065.225

Sections 1065.140, 1065.170, 1065.202, 1065.220, and 1065.225 describe dilution for gaseous and particulate matter constituents, batch sampling for gaseous and particulate matter constituents, data updating, recording, and control, fuel flow meter, and intake-air flow meter, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.247

This new section describes diesel exhaust fluid flow rate over a test interval for batch or continuous emission sampling. The addition of this modification is necessary for California testing for certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.260

Subparagraph (f) describes how to determine compliance with the non-methane non-ethane hydrocarbon standard. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard) for natural gas and liquefied petroleum gas engines. The modification deletes subparagraph (f) to remove the description of how to comply with the non-methane non-ethane hydrocarbon standard. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Subsection 1065.266

This section describes the procedures for the Fourier transform infrared analyzer. References are made to non-methane non-ethane hydrocarbon standards in subparagraph (a), (c) and (d). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane

hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

Sections 1065.267, 1065.275, 1065.303, 1065.340, 1065.341, 1065.345

Sections 1065.267, 1065.275, 1065.303, 1065.340, 1065.341, and 1065.345 describe the gas chromatograph with a flame ionization detector, nitrous oxide measurement devices, the summary of required calibration and verifications, diluted exhaust flow calibration, propane check for hydrocarbon sampler systems, and vacuum-side leak verification. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.360

This section describes the procedures for the Flame Ionization Detector optimization and verification. References are made to non-methane non-ethane hydrocarbon in subparagraph (a)(3) and (f). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard) for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

Section 1065.365

This section describes the non-methane cutter penetration fractions. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.366

This new section describes the procedures for interference verification for Fourier transform infrared analyzer. References are made to non-methane non-ethane hydrocarbon in subparagraphs (a) and (c). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane

non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

Sections 1065.370, 1065.375, 1065.390, 1065.510, 1065.546, 1065.590

Sections 1065.370, 1065.375, 1065.390, 1065.510, 1065.546, and 1065.590 describe chemiluminescent detector procedures, interference verification for nitrous oxide analyzers, particulate matter balance verifications, engine mapping, dilution ratio requirement, and particulate matter sampling preconditioning and weighing, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Sections 1065.602, 1065.610, 1065.640, 1065.642, 1065.645

Sections 1065.602, 1065.610, 1065.640, 1065.642, and 1065.645 describe calculations and data requirements for statistics, duty cycle generation, flow meter calibration, molar flow rate, and amount of water in the sample, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.650

This section describes the calculations for emissions in the exhaust. References are made to non-methane non-ethane hydrocarbon in subparagraphs (c)(6). The modification deletes these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. The modification removes the non-methane non-ethane hydrocarbon calculations from the list of federal provisions proposed to be incorporated, and maintains the current California non-methane hydrocarbon calculations. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

Section 1065.655

This section describes calculations for chemical balances of fuel, intake air, and exhaust. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.660

This section describes the calculations for total hydrocarbon, non-methane hydrocarbon, non-methane non-ethane hydrocarbon, and methane determination. References are

made to non-methane non-ethane hydrocarbon in the title and subparagraphs (a)(3), (c), and (e). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

Sections 1065.665, 1065.667, 1065.675

Sections 1065.665, 1065.667, and 1065.675 describe calculations for hydrocarbon calculations, dilution air background emission correction, and chemiluminescent quench verification, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.680

This new section describes the calculations for adjusting emission levels to account for infrequently regenerating aftertreatment devices. The addition of this modification is necessary for California testing for certification and for harmonization with the federal Phase 2 GHG regulations.

Section 1065.690

This section describes calculations for buoyancy correction for particulate matter sample media. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.735

This new section describes the diesel exhaust fluid. The addition of this modification is necessary for California testing for certification and for harmonization with the federal Phase 2 GHG regulations.

Sections 1065.750

Section 1065.750 describes analytical gases used for the test equipment. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1065.845

Section 1065.845 describes the response factor determination when testing with oxygenated fuels. The modification updates the amended date to the latest CFR section

date of June 30, 2014, and is necessary to align California test procedure requirements with the federal testing requirements.

#### Section 1065.1001

This section describes the definitions that apply to Part 1065. References are made to non-methane non-ethane hydrocarbon in the definitions of hydrocarbon and non-methane non-ethane hydrocarbon. The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles. In addition, a modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1065.1005, 1065.1010

Sections 1065.1005 and 1065.1010 describe symbols, abbreviations, acronyms, and units of measure, and incorporation by reference, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1101

This new section discusses the applicability of optional methods to measure unregulated and special pollutants. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1103

This new section discusses the general provision for semi-volatile organic compounds measurement. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1105

This new section discusses the sampling system design for measuring semi-volatile organic compounds. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1107

This new section discusses sample media and sample system preparation for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1109

This new section discusses post-test sampler disassembly and sample extraction for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1111

This new section discusses sample analysis for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

### **Part 1068 - General Compliance Provisions for Highway, Stationary, and Non-road Programs**

#### Section 1068.1

This new section describes the applicability of this Part, and its addition is necessary to establish the applicability of this Part in the California Phase 2 GHG regulations. The modification to subparagraph (a)(2) adds heavy-duty vehicles and engines that are certified to the California Phase 2 GHG regulations to the applicability of this Part and is necessary to ensure that this Part for general compliance in enforcement applies to California-certified heavy-duty vehicles and engines.

#### Section 1068.20

The new section explains when ARB may enter a facility for inspection. The modification to subparagraph (a) authorizes ARB to enter into testing, manufacturing processes, and storage facilities for inspection as for records inspection, as authorized by the California Health and Safety Code. The modification to subparagraph (c) requires reasonable assistance to the enforcement staff as necessary at the facility. The modification to subparagraph (d) describes compatibility with existing local law. These modifications are necessary to specify ARB's authority to inspect facilities for compliance with heavy-duty regulations. In addition, subparagraph (b), which describes what enforcement staff may perform at the facility, is deleted because it limits the inspection ability unnecessarily, and is necessary for consistency with other ARB regulations.

#### Section 1068.30

The new section provides the definitions used in this Part, and its addition is necessary to establish definition of terms used in this Part. In the Federal Provisions, the definition of "date of manufacture" is modified to eliminate the federal definition that describes the requirements for a secondary engine manufacturer and is necessary because these requirements conflict with other ARB regulations. The definition of "engine" is deleted because these test procedures already incorporate a definition of "basic engine" in 40 CFR 86.004-2 (which is in turn incorporates the definition of engine in 86.082-2). This modification is necessary to ensure that there is only one definition of engine. In the

California Provisions, the added definitions refer to ARB and its authority when references are made to EPA and its authority. These modifications are necessary to ensure that the federal enforcement provisions also apply to California.

#### Section 1068.35

This new section describes the symbols, acronyms, and abbreviations that apply in this Part, and its addition is necessary to define the symbols, acronyms, and abbreviations used in this Part. In the California Provisions, the acronym, "ARB," is added, and its addition is necessary to establish that "ARB" is the "Air Resources Board" when the acronym is used.

#### Section 1068.45

The new section explains the general labeling requirements for engines and vehicles, such as permanent label requirements and date formats, and its addition is necessary to describe general labeling requirements, for consistency among manufacturers, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.401

The new section explains what a selective enforcement audit is, and its addition is necessary to describe to the certificate holder that it may be required to conduct emission tests on production engines in a selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.405

The new section describes a test order to a certificate holder to conduct a selective enforcement audit, and its addition is necessary to explain what the test order contains such that the certificate holder understands what it is required to perform and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.410

The new section describes how the certificate holder is to select and prepare engines for testing in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately obtaining engines to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.415

The new section describes how the certificate holder is to test engines in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately testing engines to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.420



The new section explains how to determine if an engine family has failed the selective enforcement audit and its addition is necessary to establish pass and fail criteria for the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.425

The new section describes what happens if one of the production engines exceeds the emission standards, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for that engine, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.430

The new section explains what happens if a family fails a selective enforcement audit, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for the entire family, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.435

This new section explains whether engines may still be sold from a family with a suspended Executive Order, and its addition is necessary to describe the conditions under which the engines may be sold, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.440

This new section explains how a certificate holder can request to reinstate the suspended certificate, and its addition is necessary to allow a process to reinstate the suspended certification, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.445

The new section describes when ARB may revoke the Executive Order and how the certificate holder can sell engines again, and its addition is necessary to provide a means for the certificate holder to sell engines again, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.450

This new section describes the records that are required to be sent to ARB and its addition is necessary to establish required records that must be provided to ARB for enforcement and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.455

This new section describes the records that must be kept by the certificate holder, and its addition is necessary to establish record keeping requirements for selective enforcement audit, and for harmonization with the federal Phase 2 GHG rulemaking.

**Proposed Amendments to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles”**

Introductory paragraphs

These introductory paragraphs list the CFR sections incorporated by reference as well as the applicability of these test procedures. Part 1068, which pertains to enforcement and selective enforcement audit is added. The addition of this part is necessary to ensure the proper test procedures apply for enforcement of heavy-duty Otto-cycle engine standards.

**Part 86, 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**

Section 86.1

This section describes the documents incorporated by reference and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

**Subpart A Title**

The title is updated to reflect the latest title in the federal Phase 2 GHG regulations. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

Subsection 1.A.3

Section 86.016-1 describes the general applicability of Subpart A, Part 86. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

Subsection 1.B.1

This subsection describes the California provision regarding how to classify engines that operate on different fuels. The modification aligns the federal Phase 2 GHG regulation requirement for heavy heavy-duty Otto-cycle engines used in vehicles, which normally exceed 33,000 pounds GVWR, to be classified with diesel heavy heavy-duty engines, as is described in 40 CFR section 1036.140. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

Subsection 2.A.1

Section 86.004-2 defines the terms used in this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25,

2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 2.B

Subsection 2.B. contains the California definitions applicable to these test procedures. The addition of “ARB” provides the definition of this acronym when used in these test procedures and is necessary to provide clarity of the terms that are used.

#### Subsection 4

Section 86.084-4 describes how the sections are numbered in Part 86. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 6

Section 86.078-6 describes the process to request a hearing on certification. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the modification to the paragraph states California’s authority for a manufacturer to require a hearing and is necessary to properly note the California authority to allow such an action.

#### Subsection 10.A.4

Section 86.008-11 contains the applicable emission standards and requirements for 2007 and later model year heavy-duty engines and vehicles. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. Also, subparagraph (a)(1)(ii)(B) describes the hydrocarbon standard for engines fueled with natural gas or liquefied petroleum gas. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane, a new term called a non-methane non-ethane hydrocarbon standard. The modification removes the non-methane non-ethane hydrocarbon standard from the list of federal provisions proposed to be incorporated, and maintains the current California non-methane hydrocarbon standard. This modification is necessary to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Subsection 14.1

Section 86.094-14 contains the certification procedures for small-volume manufacturers. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. Other modifications to this section are made to align the existing modifications to this section with the latest update to the section as a

result of the federal Phase 2 GHG regulation and are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 25.1

Section 86.004-25 contains the maintenance provisions for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph (b)(6)(iii) adds the California reference for anti-tampering provision and is necessary to show California authority against engine tampering. The modification to subparagraph (b)(7)(iii) updates the CCR, title 17 reference from section 60040 to section 60055.1 and is necessary because the new reference is more appropriate in reference to provide manufacturers a hearing. The last modification, to add subparagraphs (c) through (i), was inadvertently left out of previous amendments, and its addition is necessary to correct this omission.

#### Subsection 25.A.2

This section, 86.007-25 was deleted in the federal Phase 2 GHG regulation and its contents were transferred to 86.004-25. Thus, this section is also deleted, and its deletion is necessary for harmonization with the federal Phase 2 GHG regulation.

#### Subsection 28.A.1

Section 86.004-28 contains the compliance provisions for engine emission standards. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 30.2

Section 86.007-30 contains the certification requirements for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection 35.A.1

Section 86.095-35 contains the labeling provisions for 1995 and subsequent model year heavy-duty engines. Section 86.001-35 was deleted in the federal Phase 2 GHG regulation. Thus, this section is also deleted, and the labeling provisions of 86.095-35 apply. Its deletion is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The other modification to add "(iii)" to subparagraph (a)(3)(I) modifies an incorrect reference and is necessary to correct the reference.

#### Subsection 35.A.2

Section 86.007-35 contains the labeling provisions for 2007 and subsequent model year heavy-duty engines and was deleted in the federal Phase 2 GHG regulation. Thus, this section is also deleted and the labeling provisions of 86.095-35 apply. Its deletion is necessary for harmonization with the federal Phase 2 GHG regulation.

#### Subsection 37

Section 86.085-37 describes provisions relating to production vehicles and engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### **Subpart N: Exhaust Test Procedures for Heavy-Duty Engines**

#### Section 86.1301

Section 86.1301 provides the overview and applicability of the exhaust steady-state and transient test procedures for heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

### **Part 1036: Control of Emissions from New and In-Use Heavy-Duty Highway Engines**

#### Section 1036.1

This section describes the applicability of this part 1036. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. The modification to subparagraph (a) clarifies the existing requirement that heavy-duty engine certification is allowed only for those engines that will be installed in 2019 and earlier model year incomplete heavy-duty vehicles from 8,501 to 10,000 pounds GVWR and in incomplete heavy-duty vehicles from 10,001 to 14,000 pounds GVWR. The modification to delete subparagraph (c) removes the reference to aftermarket fuel conversions, which these procedures do not address, and is necessary to include only the scope of engines affected by these test procedures.

#### Section 1036.2

This section describes the parties that are responsible for compliance with the emission standards of this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.5

This section describes the engines that are excluded from the requirements of this part. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.10

This section describes how the sections of this part are organized. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.15

This section describes how other parts of the CFR are applicable in conjunction with part 1036. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.30

This section describes where the certification application is to be submitted. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.100

This section provides an overview of the GHG emission standards applicable to heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.108

This section provides an overview of the emission standards for HDVs and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, changes are made to the introductory paragraph to the existing Phase 1 certification provision where federal certification is deemed to comply with the California requirements. The changes are necessary to limit this deemed to comply provision to the Phase 1 program, up to the 2020 model year.

#### Section 1036.115

This section describes other requirements besides the emission standards that are applicable to heavy-duty engines, such as engine fuel mapping. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.130

This section describes requirements for providing installation instructions for vehicle manufacturers. The modification updates the amended date to the federal Phase 2 GHG

Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.135

This section describes the GHG labeling requirements on the engine label. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.140

This section describes how to determine the primary intended service class and the engine cycle for each engine family. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.150

This section describes the GHG interim provisions that are applicable to heavy-duty engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1036.205

This section describes the information that must be included in an engine certification application and is updated with the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. This modification is necessary for harmonization with the federal Phase 2 GHG regulations. In addition, subparagraph (i) is modified to clarify that manufacturers must only produce for sale engines that are built as described in the certification application. Any engine configuration that is built for sale must be one of the engine configurations described in the application. The intent of this modification is not to change, alter, or add any certification requirements. Instead, the intent is to clarify that each certified engine that a manufacturer produces for sale in California must be in all material aspects as identified in the certification application. Subparagraph (i) is also modified to reference title 13, CCR, section 1956.8 for compliance. This modification is necessary to ensure that engines produced by manufacturers are built according to the certified configuration, in reference to ARB's emission standards and requirements in title 13.

#### 1036.210, 1036.225, 1036.230, 1036.235, 1036.241, and 1036.250

These sections describe the information required to certify engine families to the GHG emission standards, including preliminary approval, amending an application, selecting engine families, testing requirements, how to demonstrate compliance with the standards, and reporting requirements. The modification to each section updates the

amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.255

This section described what decisions U.S. EPA could make regarding the certificate of conformity; the modifications delete U.S. EPA and adds ARB as the decision maker for California Phase 2; and also update the amended date for the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.301

This new section describes the selective enforcement audits that apply for engines, specifically related to the GEM input values provided to vehicle manufacturers. The addition of this modification is necessary for California enforcement of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.401

This section specifies the in-use testing that may be performed of any engine family for enforcement purposes. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016 and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.501

This section describes how to run a valid GHG emission test. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.505

This new section describes the ramped-modal test procedures to measure CO<sub>2</sub> emissions. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.510

This new section describes the required engine data and information that must be submitted to vehicle manufacturers for vehicle certification. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.525

This section describes how to test a hybrid engine. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.



#### Section 1036.530

This section describes how to calculate official emission results for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.535

This new section describes how to determine an engine's steady-state fuel map and fuel consumption at idle for model years 2021 and later vehicles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.540

This new section describes how to determine an engine's cycle-average fuel maps for model year 2021 and later vehicles with transient cycles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.601

This section describes the compliance provisions for manufacturers, owners, operators, and rebuilders of engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations. Additionally, the modification to paragraph (a)(3) provides California regulatory references for warranty-related prohibitions and is necessary to demonstrate the California authority to enforce warranty requirements.

#### Section 1036.605

This new section describes GHG exemption for specialty vehicles. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.610

This section describes how to calculate off-cycle technology credits and adjustments for reducing GHG emissions. The modifications update the section title and the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016. These modifications are necessary for harmonization with the federal Phase 2 GHG regulations. In addition, the federal Phase 2 GHG regulations added a new subparagraph (e), which describes criteria to approve an improvement factor or credit for the technology. The modification adds this to the test procedures and is necessary for harmonization with the federal Phase 2 GHG regulations.

Sections 1036.615, Section 1036.620, Section 1036.625

Section 1036.615, Section 1036.620, and Section 1036.625 describe how to test engines with Rankine cycle waste heat recovery and hybrid powertrains, alternate CO2 standards based on model year 2011 compression-ignition engines (Phase 1 engines), and in-use compliance with family emission limits, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.630

This new section describes the certification of engine GHG emission for powertrain testing, which is optional for vehicle testing. The addition of this modification is necessary for California certification of the emission standards and for harmonization with the federal Phase 2 GHG regulations.

Sections 1036.701, Section 1036.705, Section 1036.710, Section 1036.715, Section 1036.720, Section 1036.725, Section 1036.730, Section 1036.735, Section 1036.740, Section 1037.745, Section 1036.750

These sections describe the averaging, banking, and trading provisions for certification, including how to calculate emission credits, reporting requirements, and restrictions on the use of credits. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1036.755

This section applies to the Department of Transportation and is noted as “not applicable,” and is necessary to note that this section does not apply to California certification.

#### Sections 1036.801

This section describes the definitions used in this part. One modification to B. California Provisions limits the definition of the federal Phase 1 GHG program to 2020 model year since federal Phase 2 program begins in the 2021 model year. Another modification adds “or assembles” to the definition of “manufacturer.” The modification to “certificate of conformity” corrects the reference from “vehicles” to “engines” since these test procedures refer to engine standards and test procedures. These modifications are necessary to harmonize with the federal Phase 2 GHG regulations.

Section 1036.805, Section 1036.810, Section 1036.815, Section 1036.820, Section 1036.825

These sections describe symbols, acronyms, and abbreviations, incorporation by reference, confidential information, requesting a hearing, and reporting and recordkeeping requirements, respectively. The modification to each section updates the amended date to the latest amended date of the CFR section and is necessary to ensure

the most current version of the CFR reference is used and for harmonization with the federal regulations.

#### Appendix I to Part 1036

This new appendix includes the default steady-state fuel maps for performing cycle-average engine fuel mapping. Its addition is necessary for testing vehicles to determine compliance with the GHG emission standards and for harmonization with the federal Phase 2 GHG regulations.

### **Part 1065 – Engine-Testing Procedures**

#### Section 1065.2

This section describes the information that must be submitted to EPA. The modification changes the reference to EPA to ARB and is necessary to require submittal of information to California.

#### Section 1065.10

This section references other procedures that may be applicable to engines. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.15

Subparagraph (a)(2) describes that hydrocarbon may be expressed in several ways and subparagraph (a)(2)(iii) shows that it may be in the form of non-methane non-ethane hydrocarbon. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. The modification removes the non-methane non-ethane hydrocarbon definition from the list of federal provisions proposed to be incorporated, and maintains the current California non-methane hydrocarbon definition. This modification is necessary to maintain only the current non-methane hydrocarbon standard and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Sections 1065.140, 1065.170, 1065.202, 1065.220, 1065.225

Sections 1065.140, 1065.170, 1065.202, 1065.220, and 1065.225 describe dilution for gaseous and particulate matter constituents, batch sampling for gaseous and particulate matter constituents, data updating, recording, and control, fuel flow meter, and intake-air flow meter, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.247

This new section describes diesel exhaust fluid flow rate over a test interval for batch or continuous emission sampling. Its addition is necessary to note that this section is “not applicable” for Otto-cycle engines.

#### Section 1065.260

Subparagraph (f) describes how to determine compliance with the non-methane non-ethane hydrocarbon standard. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. The modification deletes subparagraph (f) to remove the description of how to comply with the non-methane non-ethane hydrocarbon standard. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Subsection 1065.266

This section describes the procedures for the Fourier transform infrared analyzer. References are made to non-methane non-ethane hydrocarbon standards in subparagraph (a), (c) and (d). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Sections 1065.267, 1065.275, 1065.303, 1065.340, 1065.341, 1065.345

Sections 1065.267, 1065.275, 1065.303, 1065.340, 1065.341, and 1065.345 describe the gas chromatograph with a flame ionization detector, nitrous oxide measurement devices, the summary of required calibration and verifications, diluted exhaust flow calibration, propane check for hydrocarbon sampler systems, and vacuum-side leak verification. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.360

This section describes the procedures for the Flame Ionization Detector optimization and verification. References are made to non-methane non-ethane hydrocarbon in subparagraph (a)(3) and (f). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard) for natural gas and liquefied petroleum gas

engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Section 1065.365

This section describes the non-methane cutter penetration fractions. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.366

This new section describes the procedures for interference verification for Fourier transform infrared analyzer. References are made to non-methane non-ethane hydrocarbon in subparagraphs (a) and (c). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Sections 1065.370, 1065.375, 1065.390, 1065.510, 1065.546, 1065.590

Sections 1065.370, 1065.375, 1065.390, 1065.510, 1065.546, and 1065.590 describe chemiluminescent detector procedures, interference verification for nitrous oxide analyzers, particulate matter balance verifications, engine mapping, dilution ratio requirement, and particulate matter sampling preconditioning and weighing, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1065.602, 1065.610, 1065.640, 1065.642, 1065.645

Sections 1065.602, 1065.610, 1065.640, 1065.642, and 1065.645 describe calculations and data requirements for statistics, duty cycle generation, flow meter calibration, molar flow rate, and amount of water in the sample, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.650

This section describes the calculations for emissions in the exhaust. References are made to non-methane non-ethane hydrocarbon in subparagraphs (c)(6). The modification

deletes these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Section 1065.655

This section describes calculations for chemical balances of fuel, intake air, and exhaust. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.660

This section describes the calculations for total hydrocarbon, non-methane hydrocarbon, non-methane non-ethane hydrocarbon, and methane determination. References are made to non-methane non-ethane hydrocarbon in the title and subparagraphs (a)(3), (c), and (e). The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles.

#### Sections 1065.665, 1065.667, 1065.675

Sections 1065.665, 1065.667, and 1065.675 describe calculations for hydrocarbon calculations, dilution air background emission correction, and chemiluminescent quench verification, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.680

This new section describes the calculations for adjusting emission levels to account for infrequently regenerating aftertreatment devices. The addition of this modification is necessary for California testing for certification and for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.690

This section describes calculations for buoyancy correction for particulate matter sample media. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.735

This new section describes diesel exhaust fluid. Its addition is necessary to note that this section is “not applicable” for Otto-cycle engines.

#### Sections 1065.750

Section 1065.750 describes analytical gases used for the test equipment. The modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.845

Section 1065.845 describes the response factor determination when testing with oxygenated fuels. The modification updates the amended date to the latest CFR section date of June 30, 2014, and is necessary to align California test procedure requirements with the federal testing requirements.

#### Section 1065.1001

This section describes the definitions that apply to Part 1065. References are made to non-methane non-ethane hydrocarbon in the definitions of hydrocarbon and non-methane non-ethane hydrocarbon. The modifications delete these references. In the federal Phase 2 GHG regulations, the hydrocarbon standard, which was previously a non-methane hydrocarbon standard, was changed to also exclude ethane (a new term called a non-methane non-ethane hydrocarbon standard), for natural gas and liquefied petroleum gas engines. This modification is necessary to maintain only the current California non-methane hydrocarbon standard and to not adopt the federal non-methane non-ethane hydrocarbon standard, and to avoid decreasing the stringency of the existing hydrocarbon standard applicable to these alternative fueled vehicles. In addition, a modification updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Sections 1065.1005, 1065.1010

Sections 1065.1005 and 1065.1010 describe symbols, abbreviations, acronyms, and units of measure, and incorporation by reference, respectively. The modification to each section updates the amended date to the federal Phase 2 GHG Final Rule promulgation date, October 25, 2016, and is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1101

This new section discusses the applicability of optional methods to measure unregulated and special pollutants. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1103

This new section discusses the general provision for semi-volatile organic compounds measurement. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1105

This new section discusses the sampling system design for measuring semi-volatile organic compounds. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1107

This new section discusses sample media and sample system preparation for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1109

This new section discusses post-test sampler disassembly and sample extraction for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Section 1065.1111

This new section discusses sample analysis for semi-volatile organic compounds testing. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

### **Part 1068 General Compliance Provisions for Highway, Stationary, and Non-road Programs**

#### Section 1068.1

This new section describes the applicability of this Part, and its addition is necessary to establish the applicability of this Part in the California Phase 2 GHG regulations. The modification to subparagraph (a)(2) adds heavy-duty vehicles and engines that are certified to the California Phase 2 GHG regulations to the applicability of this Part and is necessary to ensure that this Part for general compliance in enforcement applies to California-certified heavy-duty vehicles and engines.

#### Section 1068.20

The new section explains when ARB may enter a facility for inspection. The modification to subparagraph (a) authorizes ARB to enter into testing, manufacturing processes, and storage facilities for inspection as for records inspection, as authorized by the California Health and Safety Code. The modification to subparagraph (c) requires reasonable



assistance to the enforcement staff as necessary at the facility. The modification to subparagraph (d) describes compatibility with existing local law. These modifications are necessary to specify ARB's authority to inspect facilities for compliance with heavy-duty regulations. In addition, subparagraph (b), which describes what enforcement staff may perform at the facility, is deleted because it limits the inspection ability unnecessarily, and is necessary for consistency with other ARB regulations.

#### Section 1068.30

The new section provides the definitions used in this Part, and its addition is necessary to establish definition of terms used in this Part. In the Federal Provisions, the definition of "date of manufacture" is modified to eliminate the federal definition that describes the requirements for a secondary engine manufacturer and is necessary because these requirements conflict with other ARB regulations. The definition of "engine" is deleted because these test procedures already incorporate a definition of "basic engine" in 40 CFR 86.004-2 (which is in turn incorporates the definition of engine in 86.082-2). This modification is necessary to ensure that there is only one definition of engine. In the California Provisions, the added definitions refer to ARB and its authority when references are made to EPA and its authority. These modifications are necessary to ensure that the federal enforcement provisions also apply to California.

#### Section 1068.35

This new section describes the symbols, acronyms, and abbreviations that apply in this Part, and its addition is necessary to define the symbols, acronyms, and abbreviations used in this Part. In the California Provisions, the acronym, "ARB," is added, and its addition is necessary to establish that "ARB" is the "Air Resources Board" when the acronym is used.

#### Section 1068.45

This new section explains the general labeling requirements for engines and vehicles, such as permanent label requirements and date formats, and its addition is necessary to describe general labeling requirements, for consistency among manufacturers, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.401

This new section explains what a selective enforcement audit is, and its addition is necessary to describe to the certificate holder that it may be required to conduct emission tests on production engines in a selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.405

This new section describes a test order to a certificate holder to conduct a selective enforcement audit, and its addition is necessary to explain what the test order contains

such that the certificate holder understands what it is required to perform and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.410

This new section describes how the certificate holder is to select and prepare engines for testing in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately obtaining engines to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.415

This new section describes how the certificate holder is to test engines in a selective enforcement audit, and its addition is necessary to provide instructions for appropriately testing engines to comply with the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.420

This new section explains how to determine if an engine family has failed the selective enforcement audit and its addition is necessary to establish pass and fail criteria for the selective enforcement audit and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.425

This new section describes what happens if one of the production engines exceeds the emission standards, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for that engine, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.430

This new section explains what happens if a family fails a selective enforcement audit, and its addition is necessary to describe the consequence of a failure, such as suspension of the Executive Order for the entire family, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.435

This new section explains whether engines may still be sold from a family with a suspended Executive Order, and its addition is necessary to describe the conditions under which the engines may be sold, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.440

This new section explains how a certificate holder can request to reinstate the suspended certificate, and its addition is necessary to allow a process to reinstate the suspended certification, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.445

This new section describes when ARB may revoke the Executive Order and how the certificate holder can sell engines again, and its addition is necessary to provide a means for the certificate holder to sell engines again, and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.450

This new section describes the records that are required to be sent to ARB and its addition is necessary to establish required records that must be provided to ARB for enforcement and for harmonization with the federal Phase 2 GHG rulemaking.

#### Section 1068.455

This new section describes the records that must be kept by the certificate holder, and its addition is necessary to establish record keeping requirements for selective enforcement audit, and for harmonization with the federal Phase 2 GHG rulemaking.

### **Proposed Amendments to the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles”**

#### **Part I: General Provisions for Certification and In-Use Verification of Emissions**

##### Subsection A.1.1.

The section explains the general applicability of this part to include light-duty vehicles, light-duty vehicles, and medium-duty vehicles. The modification updates the section to the latest amended date of October 25, 2016 of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

##### Subsection A.1.1.7

This section describes the requirements for complete and incomplete heavy-duty vehicles from 8,501 to 14,000 pounds GVWR; vehicles in this weight category are also called medium-duty vehicles. In particular, the modification requires 2020 and 2021 model year heavy-duty vehicles less than or equal to 10,000 pounds GVWR to be chassis-certified for certification testing, rather than having the option to engine certified. This modification is necessary to be consistent with section 1961.2, title 13, CCR, which states that 2020 and subsequent model heavy-duty vehicles less than or equal to 10,000 pounds must be chassis-certified.

##### Subsection A.3.1

The section explains the section numbering in this part. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection B.1.1

The section describes the definitions used in this part. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection B.2.

In this section of California definitions, a new definition is added to describe the proposed California Phase 2 GHG regulations that would apply to 2020 and subsequent model year medium- and heavy-duty vehicles, HD GHG Phase 2 regulations. This modification is necessary to establish a definition and name for the California Phase 2 GHG program. Also, the definition of “Subconfiguration” is updated to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection C.1.2

The section describes the useful life requirements for emission standards. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection C.3.2.1

A new set of specifications, the “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles, is proposed to apply to medium-duty vehicles (medium duty vehicles are a subset of heavy-duty vehicles, and weigh between 8,501 to 14,000 pounds GVWR.) The new set of specifications is incorporated by reference in section 1965, title 13, CCR. This new set of specifications is necessary in order to establish California environmental performance labels for these medium-duty vehicles to aid consumers in making environmental choices when purchasing vehicles.

#### Subsection E.

This section describes the California exhaust emission standards applicable to complete and incomplete medium-duty vehicles from 8,501 to 14,000 pounds GVWR. In particular, the modification requires 2020 and 2021 model year heavy-duty vehicles less than and equal to 10,000 pounds GVWR to be chassis-certified for certification testing, rather than having the option to be engine-certified. Complete medium-duty vehicles over 10,000 pounds GVWR continue to have the option to either chassis-certify or engine-certify to show compliance with the emission standards. These modifications are necessary to be consistent with these

identical requirements in section 1961.2, title 13, CCR, which states that 2020 and subsequent model medium-duty vehicles less than or equal to 10,000 pounds must be chassis-certified.

#### Subsection E.2.6

This section describes the emission standard phase-in requirements for vehicle manufacturers. These modifications to this section add the GHG emission standards for medium-duty vehicles other than medium-duty passenger vehicles, referenced in section 1956.8 title 13, CCR and sections 95660 through 95664, title 17, CCR. In the federal Phase 2 GHG regulations, the emission standards and test procedures for medium-duty vehicles were moved from 40 CFR Part 1037 for heavy-duty vehicles to 40 CFR Part 86 for light- and medium-duty vehicles. These test procedures contain the 40 CFR 86 sections that pertain to light- and medium-duty vehicles. These modifications are necessary to ensure that medium-duty vehicles are subject to GHG emission standards.

#### Subsections F.1.1, F.1.4.2.

These sections describe the requirements and procedures for durability demonstration. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations. The additional change to F.1.4.2 adds the HD GHG Phase 2 regulations and is necessary to ensure that durability requirements are applicable the HD GHG Phase 2 regulations.

#### Subsection G.12.1

The section describes the small volume of manufacturers' certification procedures. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsection H.4.1

The section explains the information requirements for the certification application. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsections I.1.1, I.2.1

The sections describe manufacturer in-use verification and confirmation testing requirements for in-use compliance. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

#### Subsections J.1., J.16., J.17., J.18., J.19., J.20., J.21

The sections describe the procedural requirements to comply with CO<sub>2</sub> emission standards and emission credit programs. The modifications update the sections to the latest amended

date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations. Additionally, in sections J.16 and J.20, the HD GHG Phase 2 regulations are specifically added, and the addition is necessary to ensure that these procedural requirements apply to the GHG program. Also, in section J.21, the word "light" was inadvertently left out of the title, and its addition is necessary to clarify the applicability to "light pickup trucks," identical to what is in the CFR.

## **Part II: California Exhaust and Particulate Emission Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles**

### Section 86.143-96

The section describes the emission calculations for evaporative emissions. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

### Sections 1066.105, 1066.110, 1066.135, 1066.140

The sections describe the equipment, measurement instruments, fuel, and analytical gas specifications for vehicle testing. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

### Sections 1066.210, 1066.235, 1066.245, 1066.250, 1066.260, 1066.265, 1066.270, 1066.275

The sections describe the vehicle dynamometer specifications, including speed verification procedure, response time verification, and parasitic friction compensation evaluation. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

### Sections 1066.301, 1066.305, 1066.310

The sections describe the coast down procedures on the vehicle dynamometer. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

### Sections 1066.410, 1066.415, 1066.425

The sections describe procedures for preparing vehicles and running an exhaust test. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

### Sections 1066.605, 1066.615, 1066.625, 1066.630, 1066.635, 1066.695

The sections describe calculations for emission testing. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

Sections 1066.710

The section describes the cold-temperature test procedures for vehicle testing. The modification updates the section to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modification is necessary for harmonization with the federal Phase 2 GHG regulations.

Sections 1066.801, 1066.805, 1066.815, 1066.820, 1066.835

The sections describe the exhaust emission test procedures for motor vehicles. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

Section 1066.1005, 1066.1010

The sections describe the definitions and other reference material used in this part. The modifications update the sections to the latest amended date of October 25, 2016, of the federal Phase 2 Final Rule. The modifications are necessary for harmonization with the federal Phase 2 GHG regulations.

### **Proposed Amendments to the “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles”**

The new set of specifications provides environmental performance label specifications for new medium-duty vehicles with 8,501 to 14,000 pounds gross vehicle weight rating, except medium-duty passenger vehicles, applicable to 2021 and subsequent model years. This new requirement of environmental performance label information is being proposed to aid consumers when considering a vehicle purchase hence, may affect their purchasing choices and select cleaner vehicles.

#### **Section 1. Prohibition**

This new section specifies the prohibition that manufacturers cannot sell a new complete medium-duty vehicles, specifically pick-up trucks and vans, manufactured on or after January 1, 2021 without an environmental performance label. It is necessary to add this section to prohibit the sale of these vehicles without a label displaying vehicle tailpipe emissions information to consumers.

#### **Section 2. Environmental Performance Label Requirements**

This new section contains the requirements for complying with the environmental performance label provision. It is necessary to add this section to provide specific label requirements to be used by all affected vehicle manufacturers.

### **Section 3. Environmental Performance Label Placement**

This new section specifies the allowable label placement for these vehicles. It is necessary to add this section to provide the requirements with some flexibility on label placement.

### **Section 4. Greenhouse Gas Rating (tailpipe only)**

This new section contains the information on how to determine the vehicle's measured emissions and its appropriate Greenhouse Gas Rating. It is necessary to add this section in order to display the appropriate Greenhouse Gas Rating in the environmental performance label.

### **Section 5. Smog Rating (tailpipe only)**

This new section contains the information on how to determine the appropriate Smog Rating based on the vehicle's certified emissions standard. It is necessary to add this section in order to display the appropriate Smog Rating in the environmental performance label.

### **Section 6. Zero Emission Vehicles**

This new section contains the instruction on how to determine the Greenhouse Gas and Smog Ratings for vehicles that use electricity or hydrogen as their only fuel sources. It is necessary to add this section in order to tell manufacturers that these vehicles are exempt from testing as their tailpipe emission is zero and would automatically display "A" for their Greenhouse Gas and Smog Ratings in the environmental performance label.

### **Section 7. Flexible-Fuel and Dual-Fuel Vehicles**

This new section contains the instruction on how to determine the Greenhouse Gas and Smog Ratings for flexible-fuel and dual-fuel vehicles. It is necessary to add this section in order to specify the proper exhaust emission testing protocol for these types of vehicles.

### **Section 8. Greenhouse Gas Ratings Updates**

This new section specifies that these ratings are intended to be applicable through the full-implementation of the California Phase 2 Greenhouse Gas Standards through model year 2027. It is necessary to add this section to clarify the applicability of these ratings and to provide sufficient time for manufacturers in building cleaner vehicles.

### **Section 9. Environmental Performance Label Format Requirements**

This new section contains the instruction and information that must be included in the environmental performance label. It is necessary to add this section to specify the proper label



format requirements for consistency of all manufacturers. The requirements include a one label size, color, and design and the contents of the label.

**Section 10. Severability**

This new section specifies that these environmental label specifications are severable, and that even if one section were to be voided, the remainder of these specifications would remain in full force and effect. It is necessary to add this section to ensure that a legal challenge to some of the specifications would not void all of the requirements.

**Section 11. Attachment - Sample Label**

This new section provides a sample of the label appearance as well as content of the label. It is necessary to add this section for clarity.