APPENDIX C

DESCRIPTIONS OF PROPOSED AMENDMENTS – TEST PROCEDURES

DESCRIPTIONS OF PROPOSED AMENDMENTS – Test Procedures

A. "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles" (hereinafter "Evap TPs")

1. Introductory paragraph. The original Evap TPs adopted by reference Title 40, Code of Federal Regulations (CFR), Part 86, Subparts A and B (as adopted or amended as of July 1, 1989), and, Subpart S (as adopted or amended on May 4, 1999). The United States Environmental Protection Agency (U.S. EPA) recently adopted a direct final rule that modified the federal evaporative and refueling emissions test procedures applicable to on-road light-duty vehicles, light-duty trucks, and heavy-duty vehicles up to 14,000 pounds Gross Vehicle Weight Rating. The corresponding California test procedures do not currently reflect the updated federal procedures.

In order to harmonize California's test procedures with the modified U.S. EPA test procedures, the language of the introductory paragraph is amended to identify the corresponding dates of those CFR sections affected by U.S. EPA's recent rulemaking action that will be incorporated into this rulemaking (i.e., December 8, 2005).

General Standards; increase in emissions; unsafe conditions; waivers

2. Part I.D.1.1. The citation to §86.1810-01 is amended from July 1, 1989 to December 8, 2005. The reference to §86.1810-04 is deleted as redundant because that section does not exist in the current version of the CFR. Subsection I.D.1.1(j)(4) is added without any changes from the federal version because this addition does not affect the California procedures. This subsection provides an allowance for the U.S. EPA to accept California certification test data for demonstrations of compliance with the appropriate federal certification standards. Subsections (o) and (p) are added with language explaining that these CFR sections pertain to exhaust emission procedures. Lastly, minor grammatical corrections are made in the text that references the Exhaust Emission Test Procedures in subsection I.D.1.1(a) through (g).

DURABILITY DEMONSTRATION

3. Part II.A.5. The title of the citation is amended to include the word "waivers" to more accurately reflect the content of the CFR section. Subsection 5.1 is added to amend the citation to § 86.1829-01 from the version adopted or amended as of July 1, 1989 to the version amended December 8, 2005. This proposed amendment primarily provides manufacturers the option to provide a statement of compliance in lieu of an actual test demonstration of compliance with the two-day diurnal plus hot soak emission standards for certification purposes (i.e., a "waiver" from the two-day diurnal and hot soak emissions test). In addition, subsection 5.2 is added to clarify that any related actions by the U.S. EPA, as allowed under this subsection, are also

available to the Air Resources Board's (ARB's) Executive Officer. Subsection 5.3 is added to clearly state the applicability of the optional provision.

EVAPORATIVE EMISSION TEST PROCEDURES FOR LIGHT- AND MEDIUM-DUTY VEHICLES

Vehicle Preconditioning

4. Part III.D.3.4. The December 8, 2005 amendments to the federal procedures included a specific allowance for manufacturers to propose an alternative method to precondition evaporative canisters (40 CFR 86.132-96(n)). The amendment was enacted to address difficulties encountered under the current canister preconditioning process due to the inherent inaccessibility of the canisters themselves. Currently, a canister may be removed from a vehicle when suitable access is not available to complete preconditioning steps. In those cases, the amendments now allow manufacturers to develop an alternative method for preconditioning the canister. The amendments also allow U.S. EPA to use a manufacturer's alternative method for certification and in-use compliance purposes. The proposed amendments to the current vehicle preconditioning procedures incorporate the above amendments to the federal procedures, even though a general allowance for alternative test methods already exists in the Evap TPs, Part III.G. However, the amendments make clear that the manufacturer's alternative canister preconditioning method must be approved by the Executive Officer, and that the Executive Officer may conduct certification and in-use compliance tests with either the manufacturer's alternative method or the methods already specified in the Evap TPs.

Dynamometer Procedure

5. Part III.D.4. The citation to 40 CFR §86.135-90 is amended from the version adopted or amended as of July 1, 1989 to the version amended December 8, 2005. In particular, the amendments allow four-wheel and all-wheel drive vehicles to be tested in either a four- or a two-wheel drive mode of operation. Four- and all-wheel drive vehicles may be tested in a two-wheel drive mode by either disengaging one set of drive wheels or shifting into a two-wheel drive mode if the vehicle is so equipped.

Running Loss Test

6. Part III.D.8.3. The current Evap TPs allow manufacturers to use an alternative running loss procedure for certification if that alternative method provides an equivalent demonstration of compliance to the procedure specified in the Evap TPs, Part III.D.8. In addition, the Executive Officer is allowed to conduct certification confirmatory tests and in-use compliance tests with either one of the two running loss procedures specified in the Evap TPs (i.e., by means of either an enclosure with atmospheric sampling equipment [Sealed Housing for Emissions Determination or SHED] or with point source sampling equipment). However, the current Evap TPs do not explicitly state that the Executive Officer

may conduct confirmatory and in-use compliance tests using the manufacturer's alternative certification running loss procedure. The recent changes to the federal running loss procedures included an allowance for manufacturers to propose and receive approval for alternative procedures under the condition that the U.S. EPA may perform confirmatory and in-use compliance tests with either the two methods currently specified or the alternative method (40 CFR 86.134-96(g)(3), December 8, 2005). The proposed amendments to this section would incorporate this allowance in order to make the running loss test procedures fully consistent with the federal provisions. Specifically, the amendments clarify that the Executive Officer must approve a manufacturer's proposed alternative certification running loss test procedure, and that the Executive Officer may conduct certification confirmatory tests and in-use compliance tests with either the manufacturer's alternative method or one of the other running loss procedures that are already specified in the Evap TPs.

Alternative Test Procedure

7. Part III.G. The language is modified to clarify the level of stringency that manufacturers must demonstrate in order to use an alternative test procedure. The current requirement is that the demonstration yield test results that are more stringent than those derived from the specified procedures. A more reasonable requirement is that the demonstration yield test results that are equivalent to, or more, stringent than the results derived from specified test procedures.

B. "California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles" (hereinafter "Refueling TPs")

General Standards, increase in emissions; unsafe conditions; waivers

1. Part I.E.1. The citation to 40 CFR §86.1810-01 is amended from the version adopted or amended as of July 1, 1989 to the version amended, December 8, 2005. In addition, the numbering format of this subsection is revised to accommodate the December 8, 2005 amendments in §86.1810-01 that occurred when the provisions related to certification refueling (inherently low emissions) tests and refueling spitback tests were re-submitted into the CFR. Specifically, the existing reference in I.E.1.2 to adopt without changes subsections (k) through (n) of 40 CFR §86.1810-01 (July 12, 2001) is revised to adopt only subsection (k) of 40 CFR § 86.1810-01 (December 8, 2005) without changes.

The existing language in I.E.1.3 that references subsection (o) and (p) of 40 CFR §86.1810-01 (July 12, 2001) is deleted and replaced with subsection (l) of 40 CFR § 86.1810-01 (December 8, 2005) with amendments to indicate certification to the applicable California standards. The existing language in I.E.1.4 that addresses a manufacturer's fuel spillage test requirements is deleted and replaced with the reference to the re-submitted subsection (m) of 40 CFR

§ 86.1810-01 (December 8, 2005) with the appropriate modifications to indicate compliance with California standards. Section I.E.1.5 is added with a reference that adopts subsection (n) of 40 CFR § 86.1810-01 (December 8, 2005) without change. Section I.E.1.6 is added to contain the existing reference to subsections (o) and (p) of 40 CFR §86.1810-01 (July 12, 2001) that was deleted from I.E.1.3. Finally, I.E.1.7 is added to contain the existing manufacturer's fuel spillage test requirement that was deleted from I.E.1.4.

Emission Standards

2. Part I.F.1. The reference to 40 CFR §86.1815 is deleted and replaced by 40 CFR 86.1816. The CFR ORVR-refueling emission standards designated in §86.1811-04(e); §86.1812-01(e); §86.1813-01(e); and, §86.1816-05(e) are not applicable to California (ref.: Refueling TPs, Part I.F.2).

Durability Demonstration procedures for refueling emissions.

3. Part I.G.1. A minor grammatical correction is made to the "No change" reference to 40 CFR §86.1825-01 (October 6, 2000) that adds a missing right-hand bracket.

4. Citation of Subpart B, 40 CFR §§86.101 through 86.145 and Appendix I. The existing references to 40 CFR §86.152-98 and §86.153-98 are amended to specifically indicate the December 8, 2005 amended versions of those sections. In particular, §86.152-98 provisions are applicable to both integrated and non-integrated ORVR systems. However, §86.153-98, as amended December 8, 2005, allows for the vent hose of a non-integrated system to remain connected to the refueling emission canister when the 95%-fueling portion of the canister precondition operation is conducted.

C. "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" (hereinafter "Exhaust TPs")

Vehicle Labeling

1. Part I.C.3.1; §86.1807-01. The citation to 40 CFR §86.1807-01 is revised from the October 6, 2000 version to the version amended December 8, 2005. The latest version provides updated specifications that offer manufacturers greater flexibility in label content and design. Existing text in subsection 3.1.8 regarding approvals and formats of specific tune-up settings is now redundant because requirements to provide such information on labels has been removed from the recent amendments to §86.1807-01 and this text will therefore be deleted.

2. Part I.C.3.2; The citation to §86.1807-01 is amended to indicate that amendments to the December 8, 2005 version of 40 CFR §86.1807-01, are still applicable to §86.1807-07.

3. Part I.D.1; §86.1810-01. The citation to 40 CFR §86.1810-01 is amended to the December 8, 2005 version of this CFR section. This version of this section has added language that allows the U.S. EPA to accept California certification test data to demonstrate compliance with federal evaporative standards for non-Tier 2 vehicles. Also, the latest version includes provisions that were previously inadvertently omitted regarding test waivers for both fuel dispensing spitback and inherently low refueling emissions.

Durability data and emission data testing requirements; waivers

4. Part I.G.3.1; §86.1829-01. The citation to 40 CFR §86.1829-01 is amended to the December 8, 2005 version of this CFR section. This version of this section has added language that allows manufacturers the option to waive the evaporative certification demonstration of compliance with the supplemental two-day diurnal plus hot soak standard.

In-Use Compliance Requirements and Procedures

5. Parts I.I.1.1; and, I.I.1.2; §§86.1845-01; -04. The citations to 40 CFR §86.1845-01 and 40 CFR §86.1845-04, are revised to the December 8, 2005 versions of these CFR sections. These revisions clarified the evaporative emission standards for which IUVP-compliance must be demonstrated with respect to fuel type. In particular, gasoline- and ethanol-fueled vehicles must show compliance with only the 2 day + hot soak standard. Gaseous-fueled vehicles must demonstrate compliance with only the 3 day diurnal + hot soak standard.

Calibration methods and frequency.

6. Part II.A.100.4; The citation to 40 CFR §86.117-96 is revised to indicate the December 8, 2005 revised version of this CFR section. The amendment recognizes the recently modified CFR language that mainly harmonizes the federal sealed housing for evaporative determination (SHED) calibration specifications with the current California versions.

California Vehicle Preconditioning Requirements.

7. Part II.A.100.5.3; The citation to 40 CFR §86.134-96 is revised to indicate the December 8, 2005 revised version of this CFR section. The amendment allows for alignment with the proposed changes to the Evap Procedures that clarify ARB's allowances to conduct confirmatory and in-use verification tests with a manufacturer's alternative running loss method (see Evap TPs, Item 6 above).

8. Part II.A.100.5.3; Text is added to indicate that this CFR section is still adopted without any changes except that the four-wheel drive dynamometer provisions, as specified in the Federal Register (Volume 70, Page 72917, and published December 8, 2005) are applicable.

Calculations; exhaust emissions.

9. Part II.A.100.5.4; The citations to 40 CFR §86.159-00 and §86.160-00 are amended to the December 8, 2005 versions of these CFR sections. These versions provide provisions for four-wheel drive dynamometers in the Exhaust TPs with respect to US06 (aggressive driving test cycle) and SC03 (air conditioning test cycle) emissions. As with the amendments proposed to Part II.A.100.5.3 (see Item 8 above), the amendments allow four-wheel and all-wheel drive vehicles to be tested in either a four- or a two-wheel drive mode of operation. Four- and all-wheel drive vehicles may be tested in a two-wheel drive mode by either disengaging one set of drive wheels or shifting into a two-wheel drive mode if the vehicle is so equipped.