

APPENDIX E

Miscellaneous “Cleanup” Amendments to the CaRFG3 Regulations

MISCELLANEOUS “CLEAN-UP” AMENDMENTS TO THE CALIFORNIA REFORMULATED GASOLINE REGULATIONS

The following list covers the proposed amendments to title 13 of the California Code of Regulations that do not involving a one year postponement of the prohibition of methyl tertiary butyl ether (MTBE) and the Phase 3 California reformulated gasoline (CaRFG) compliance dates for one year.

1. Section 2261(a)(1)(B) (Applicability of Phase 2 CaRFG standards)

An amendment would make clear that the standards that became applicable March 1, 1996 are the Phase 2 CaRFG standards.

2. Section 2261(b)(3)(B)4. (Early compliance with the Phase 3 CaRFG3 standards)

An amendment would make clear how the prohibitions regarding MTBE apply to a batch of gasoline that a gasoline producer or importer designates as subject to the Phase 3 CaRFG standards before the mandatory Phase 3 CaRFG implementation date. Reflecting the staff’s current interpretation of the regulations, such a batch is subject to the prohibitions in section 2262.6(a)(1) and 2262.6(c) regarding California gasoline produced with the use of MTBE or with the use of an oxygenate other than MTBE or ethanol, but is not subject to the section 2262.6(a)(2) limits on the concentration of MTBE in California gasoline.

It is expected that any gasoline sold or supplied pursuant to the Phase 3 CaRFG early opt-in provisions would be designated pursuant to section 2273(d)(1) as not containing 0.6 percent by volume or more MTBE when it is delivered to the retail gasoline outlet.

3. Section 2262, footnote 2 (Phase 3 CaRFG flat limit for RVP)

Language would be added to make clear how the Phase 3 CaRFG flat limits for Reid vapor pressure (RVP) apply. The 6.90 pounds per square inch (psi) flat limit applies only when a producer or importer is using the evaporative emissions model element of the CaRFG Phase 3 Predictive Model, in which case all predictions for evaporative emissions increases or decreases made using the evaporative emissions models are made relative to 6.90 psi, and the gasoline may not exceed the maximum RVP cap limit of 7.2 psi. Where the evaporative emissions model element of the CaRFG Phase 3 Predictive Model is not used, the RVP of gasoline sold or supplied from the production or import facility may not exceed 7.0 psi. This is consistent with Table 1 of the California Procedures for Evaluating Alternative Specifications for Phase 3 Reformulated Gasoline Using the California Predictive Model, which is incorporated by reference in section 2265(a)(2).

4. Section 2262.4(b)(2)(D) and (E) (RVP control periods)

A correction to a drafting error in the original Phase 3 CaRFG amendments would reverse the RVP regulatory control periods for production and import facilities in the North Coast Air Basin and the North Central Coast Air Basin. This makes the end of the producer and importer control periods in the two air basins consistent with the end of the control periods that apply throughout the gasoline distribution system (section 2262.4(a)(2)(D) and (E)).

5. Section 2262.5(d) (Adding oxygenate to California gasoline)

A new subsection (2) would be added allowing a person to add a nonprohibited oxygenate to California gasoline that is subject to a minimum oxygen cap limit but does not meet that cap limit, where the person obtains prior approval from the Executive Officer. This is similar to the preexisting provisions in section 2266.5(h)(3), which allow a person to add nonoxygenate blendstock to California gasoline under similar circumstances to bring the gasoline into compliance with one or more cap limits.

6. Section 2262.6(c) (Use of oxygenates other than ethanol or MTBE)

A correction changes “ether” to “oxygenate,” since the clear intent from the context is to refer to any oxygenate, alcohols as well as ethers.

7. Section 2266.5(a)(2)(C) (Determining CARBOB compliance by using handblending)

(a) **Background.** Shipping gasoline containing ethanol through a pipeline presents challenges due to the affinity of ethanol for water. Because of this, section 2266.5 allows producers and importers to supply a gasoline blendstock – called California Reformulated Blendstock for Oxygenate Blending or CARBOB – which when blended with ethanol will result in a complying gasoline. The CARBOB provisions specify the manner in which the properties of the final blend containing ethanol will be determined and the notification and reporting requirements applicable to the refiners.

Section 2266.5(a)(2)(C) specifies the method for determining whether a final blend of CARBOB complies with the standards for California gasoline by means of oxygenate blending and testing. Under this subsection, a specified amount and type of oxygenate is added to a representative sample of CARBOB, and the properties of the resulting blend are determined in accordance with the applicable test method specified in the regulations. These blends are referred to as “handblends.” It is expected that ethanol will be the oxygenate most frequently used under these provisions. For each batch of CARBOB, the producer or importer will have designated the oxygen content range for which the CARBOB is designed, which is the same as the oxygen content range that is entered into the Predictive Model. The regulation contains an equation that is to be used to determine the amount of ethanol that is to be added during a handblend, based on the designated oxygen content range.

(b) **Identification of specific volumes of ethanol to be added to CARBOB during handblending to determine compliance.** The staff is proposing simplifying amendments that would apply in most handblending situations. Due to the tax treatment of ethanol used as an oxygenate in gasoline, it is expected that ethanol will generally be added to CARBOB to create an ethanol content of either 5.7 vol.%, 7.7 vol.%, or 10.0 vol.% of the blended volume. Just as the default minimum and maximum flat limits for oxygen allow a range of 0.4 wt.% oxygen (between 1.8 wt.% and 2.2 wt.%), the CaRFG2 and CaRFG3 Predictive Models allow the use of a single oxygen content of 2.0 wt.%, 2.7 wt.%, or 3.5 wt.% if the refiner has designated oxygen ranges of 1.8-2.2, 2.5-2.9, or 3.3-3.7 wt.%. Following this approach, the proposed

amendments provide that 5.7 vol.% denatured ethanol would be added during handblending if the designated range for oxygen from denatured ethanol is 1.8 wt.% to 2.2 wt.% (or a range that is within 1.8 wt.% and 2.2 wt.% and includes 2.0 wt.%). The treatment would be similar for the other two expected ranges. This approach allows the entity conducting the handblend to directly determine the exact amount of denatured ethanol to be added for the three ranges without needing to go through the step of applying an equation.

(c) Equation for determining volume of ethanol to be added to CARBOB during handblending.

Under the proposed amendments, an equation would still be used to determine the amount of ethanol that is to be added during a handblend to determine compliance when the designated oxygen range does not fall within one of the three ranges identified above. The current equation in the regulation is:

$$\text{Vol. Denatured Ethanol} = \frac{59.86}{\left(\frac{21.88}{\text{wt.\% oxygen}}\right) - 0.0604}$$

If the designated is range is not greater than 0.4 percent, the midpoint of the range is entered into the above equation as the wt.% oxygen. If the specified range is greater than or equal to 0.4 percent, the lower limit of the range plus 0.2 percent is the oxygen value that is put into the equation. The calculated Vol.% Denatured Ethanol is the volume of ethanol that is used in the handblend.

Based on comments provided by various stakeholders the staff proposes that the equation be changed to:

$$\text{Vol. Denatured Ethanol} = \frac{620}{\left(\frac{218.8}{\text{wt.\% oxygen}}\right) - 0.40}$$

In deriving the original equation, staff assumed a value for the CARBOB density that was too low. To correct this problem, the staff revised the equation using a density that was more representative of the CARBOBs that would be produced to comply with the standards for California gasoline.

8. Section 2266.5(a)(6)(B) (Determining CARBOB compliance with the cap limits by using handblending)

This subsection pertains to the use of oxygenate handblending for determining whether downstream CARBOB complies with the cap limits for California gasoline. The proposed amendments parallel the changes described in Item 6 above, so that the same mechanism applies both at the refinery and in downstream situations.

9. Section 2270(a)(1) (References to averaging limits for sulfur and benzene)

The amendments make corrections to update the references to the averaging limits for sulfur and benzene. These references should have been updated in the original CaRFG3 rulemaking when the listing of the averaging limits in section 2262 replaced the former references in sections 2262.2(c) and 2262.3(c).