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Arnold Schwarzenegger
Governor

TO: Rob Oglesby, Legislative Director
/s/
FROM: W. Thomas Jennings, Chief Counsel
DATE: August 21, 2006
SUBJECT: EFFECT OF HEALTH AND SAFETY CODE SECTION 43013.1(b)(1) ON
FUTURE AIR RESOURCES RULEMAKINGS ON STANDARDS FOR
CALIFORNIA GASOLINE

In a August 16, 2006 letter, State Senator Denise Moreno Ducheny has asked that you provide the official position of the Air Resources Board (ARB or Board) interpreting Health and Safety Code section 43013.1(b)(1), which was enacted by Senate Bill (SB) 989 in 1999 (Stats. 1999 ch. 812). Under this provision, the California Phase 3 reformulated gasoline (CaRFG3) regulations adopted to implement the phase-out of methyl tertiary-butyl ether (MTBE) must “maintain or improve upon emissions and air quality benefits achieved” by ARB’s then-applicable gasoline standards. Senator Ducheny requests ARB’s position on the applicability of section 43013.1(b)(1) to CaRFG3 updates, as well as its applicability to any future regulations that might be developed relating to fuel formulation.

Summary

Because of the express restriction to regulations for CaRFG3 adopted pursuant to the Governor’s March 1999 Executive Order D-5-99, the section 43013.1(b)(1) requirement that the CaRFG2 emission benefits be maintained does not apply in perpetuity to all future amendments to ARB’s California gasoline regulations. However, the Board’s December 1999 finding that the initially adopted CaRFG3 regulations met the requirements of section 43013.1(b)(1) was conditioned on directions that ARB’s Executive Officer obtain more information on the comparative emissions impacts of CaRFG3 and CaRFG2 and report back to the Board with recommendations. If the Executive Officer determines based on additional information that the initial CaRFG3 regulations do not maintain the CaRFG2 emission benefits, section 43013.1(b)(1) obligates the Board to revisit the regulation and make such changes as it finds necessary to assure that there is a duly-adopted version of the CaRFG3 standards adopted pursuant to Executive Order D-5-99 that complies with the statute. Once the Board has determined that the CaRFG3 standards in place satisfy section 43013.1(b)(1) without the need for additional verification, then subsequent amendments to the CaRFG

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regulations to address other relevant considerations can be made without meeting the section 43013.1(b)(1) condition.

Background

ARB's California Phase 2 Gasoline (CaRFG2) requirements became applicable in 1996. In order to meet the federal and California requirements for the minimum oxygen content of gasoline, refiners primarily used the oxygenate MTBE. In 1998, over 90 percent of California gasoline was blended with MTBE.

Pursuant to the "MTBE Public Health and Environmental Protection Act of 1997" (Stats. 1997, ch. 816; SB 521, Mountjoy), the University of California prepared a report on the "Health and Environmental Assessment of MTBE" and presented it to the Governor in November 1998.

In response to this report and subsequent written comments and hearing testimony, on March 25, 1999, Governor Davis issued Executive Order D-5-99. In it he made the finding that, "on balance, there is significant risk to the environment from using MTBE in gasoline in California," primarily because of the environmental threat of MTBE contamination of groundwater and drinking water resulting from leaking underground gasoline storage tanks. The Governor's Executive Order included a direction to the California Energy Commission (CEC), in consultation with ARB, to develop a timetable for the removal of MTBE from California gasoline not later than December 31, 2002. It also directed ARB to adopt, by December 1999, CaRFG3 regulations that would provide additional flexibility in lowering and removing oxygen, maintain current emissions and air quality benefits, and allow compliance with California's State Implementation Plan adopted pursuant to the federal Clean Air Act.

On October 10, 1999, the Governor signed Senator Sher's SB 989, which enacted new section 43013.1 of the Health and Safety Code. Section 43013.1(a) directed the CEC to develop a timetable for the removal of MTBE by the earliest possible date. Section 43013.1(b), which remains in effect today without change, provided:

- (b) The [ARB] shall ensure that regulations for California Phase 3 Gasoline (CaRFG3) adopted pursuant to Executive Order D-5-99 meet all of the following conditions:
 - (1) Maintain or improve upon emissions and air quality benefits achieved by California Phase 2 Reformulated Gasoline in California as of January 1, 1999, including emission reductions for all pollutants including precursors, identified in the State Implementation Plan for

ozone, and emission reductions in potency-weighted air toxics compounds.

(2) Provide additional flexibility to reduce or remove oxygen from motor vehicle fuel in compliance with the regulations adopted pursuant to subdivision (a).

(3) Are subject to a multimedia evaluation pursuant to Section 43830.8.

At a December 9, 1999 hearing, the Board adopted Resolution 99-39, in which it approved the CaRFG3 amendments to the CaRFG regulations. The amendments, which became operative September 2, 2000, included a prohibition on the use of MTBE in gasoline starting December 31, 2002; CaRFG3 flat, averaging, and cap limits for the eight properties regulated by the CaRFG2 program; and a new CaRFG3 Predictive Model. In the Resolution, the Board used a staff-developed methodology for determining whether the approved CaRFG3 regulations preserve the benefits of the CaRFG2 program in accordance with section 43013.1(b)(1). The Board found that under that methodology, the CaRFG3 amendments were expected to preserve the 1998 emission benefits of the CaRFG2 regulations, by reducing emissions of hydrocarbons, oxides of nitrogen (NOx) and potency-weighted toxics by 0.1 percent, 1.2 percent, and 1.8 percent respectively.

Resolution 99-39 included the following direction to the Executive Officer:

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer, upon implementation of the CaRFG3 regulations in 2003, to evaluate whether the regulations actually maintain or improve upon emissions and air quality benefits achieved by CaRFG2 as of January 1, 1999 – including emissions reductions for all pollutants, including precursors, identified in the California SIP for ozone, and emissions reductions in potency-weighted toxics – and to report to the Board by 2004 on the results of the evaluation along with any appropriate recommendations. (Resolution 99-39 at p. 14)

In addition, the Resolution directed the Executive Officer “to provide the Board in October 2000 an update on potential increases in hydrocarbon emissions from materials permeability associated with the use of ethanol in gasoline, and to the report to the Board on the results of permeability testing by December 2001.” (Resolution 99-39 at pp. 13-14) Ethanol was the oxygenate expected to be used in replace of MTBE. Due to a lack of data, the Board’s emissions analysis did not account for potential increases in evaporative hydrocarbons associated with the fuel system permeation effects of ethanol in gasoline. ARB subsequently contracted for a major test

program on this issue, but the final report was not completed until September 2004. ("Fuel Permeation From Automotive Systems," Final Report, CRC Project No. E-65, September 2004, prepared for ARB and the Coordinating Research Council, Inc., <http://www.arb.ca.gov/fuels/gasoline/premodel/e65.pdf>.) In tests using ten vehicle fuel systems, there was an average permeation emissions increase of 65 percent with a change from the MTBE gasoline to ethanol gasoline, and of 45 percent with a change from the non-oxygenated gasoline to ethanol gasoline. (Final Report, Abstract, p. 1)

In 2002, as directed by the Governor in Executive Order D-52-2002, the Board delayed implementation of the CaRFG3 requirements one year to December 31, 2003. The Governor determined in that Executive Order – issued March 14, 2002 – that mandating the elimination of MTBE on January 1, 2003, would substantially increase gasoline prices, harm California's economy, and impose an unjustified burden on motorists. The MTBE ban and the other elements of the CaRFG3 requirements were ultimately implemented starting December 31, 2003.

Analysis

The condition imposed by section 43013.1(b) applies to "regulations for California Phase 3 Gasoline (CaRFG3) adopted pursuant to Executive Order D-5-99." The Legislature could have provided, but did not, that the condition applies to all of ARB's future standards for gasoline. Accordingly, we conclude that section 43013.1(b)(1) does not apply in perpetuity to all amendments to ARB's California gasoline regulations in the future (it also does not apply to any ARB fuels regulations pertaining to fuels other than gasoline).

On the other hand, the section 43013.1(b)(1) condition obviously did apply to the CaRFG3 regulations approved by the Board in December 1999 and ultimately implemented in 2004. Resolution 99-39 demonstrates that in adopting the CaRFG3 regulations, the Board recognized that the subsequent generation of additional data, and the actual experience of implementing the CaRFG3 requirements, would shed additional light on whether the regulations actually met the condition in section 43013.1(b)(1). The Board expressly directed the Executive Officer to come back after implementation with findings and appropriate recommendations on this issue. In the case of the potential permeation effects of ethanol in CaRFG3, the Board expressly directed the Executive Officer to report on the results of permeability testing. In a real sense, the Board's finding that the CaRFG3 regulations approved in December 1999 met the requirements of section 43013.1(b)(1) was conditioned on the subsequent evaluations the Board directed the Executive Officer to conduct. Under these circumstances, to the extent the Executive Officer determines based on additional information that the originally adopted CaRFG3 standards did not meet the requirement of section 43013.1(b)(1), that provision obligates the Board to revisit the regulation and

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make such changes as it finds necessary to assure that there is a duly-adopted version of the CaRFG3 standards adopted pursuant to Executive Order D-5-99 that complies with the statute.

Once the Board has determined that the CaRFG3 standards in place satisfy section 43013.1(b)(1) without the need for additional verification, then subsequent amendments to the CaRFG regulations to address other relevant considerations can be made without meeting the section 43013.1(b)(1) condition.