



June 12, 2007

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

VIA Electronic Mail: www.arb.ca.gov/lispub/comm/bclist.php

RE: Proposed Amendments to Phase 3 California Reformulated Gasoline Regulations (Agenda Item # 07-6-3 of the June 14, 2007, Meeting of the Board)

Dear Board Member:

The Alliance of Automobile Manufacturers (Alliance) appreciates the opportunity to comment on the recently proposed amendments to ARB's regulation governing Phase 3 California Reformulated Gasoline. The Alliance is a trade association of nine car and light truck manufacturers, including BMW Group, DaimlerChrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota and Volkswagen. For more information, visit the Alliance website at www.autoalliance.org.

Process

Along with many other stakeholders, we have engaged with ARB staff on this regulatory proposal since they first mentioned their intent to amend the regulation in late 2004. We especially appreciated the staff's creation of technical work groups to consider, address and negotiate the numerous technical issues that emerged during the development process. This allowed stakeholder experts to use their time productively, rather than attend general public meetings that mainly provide issue highlights and summaries.

In general, the process was transparent and professional, as it has been in the past. Since our founding in 1999, the Alliance has worked continuously with Stationary Source Division staff on gasoline and other fuel quality issues. In all our public and private dealings with the staff, we found the staff open, responsive and fair, and they did a good job of identifying and addressing numerous technical issues in this initiative.

Regulatory Goal

Early in this regulatory process, ARB stated its goal as being to update the Predictive Model, including making it respond to permeation emissions, to preserve the emission benefits of California gasoline. In other words, ARB planned to correct the model for its failure to address the impacts of ethanol. This goal disappointed us because it meant ARB did not plan to *increase* the benefits of California gasoline. In 1999, when Phase 3 gasoline was proposed, ARB similarly worked to simply maintain the emissions status quo while introducing ethanol and removing MtBE, despite legislative and gubernatorial directives to also consider *reducing* emissions. At the time, the Alliance proposed a group of specifications that would achieve that higher goal, also noting that the new regulation as proposed would actually increase emissions through permeation, commingling and relaxation of the T50 and T90 average limits. Then, as

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now, ARB looked to sulfur to help the fuel “break even” on emissions, promising to revisit the regulation later for possible further improvements.

Unfortunately, eight years later, ARB is still just breaking even, with most of the benefits again going to increase refiner flexibility. The Alliance stopped asking ARB to sunset the two volatility relaxations in part due to ARB inactivity, although we remain firm in our position. And we do support allowing up to 10% ethanol in the fuel, for a variety of public policy reasons.¹ We recognize the new Predictive Model is likely to help drive sulfur lower than it is today, but ARB has a lot of emissions ground to make up. As long as reducing conventional emissions remains an important goal, we struggle to understand why the refining industry is not asked to do more than simply offset previous emission increases. Meanwhile, other industries are asked to make up the difference, especially as the pollution goal post keeps being moved back. Furthermore, this goal of simply breaking even instead of reaching for improvement is causing California to lose leadership on the issue of gasoline quality, and that’s unfortunate.

Proposed Regulatory Amendment: Sulfur

Regarding specification changes, ARB has proposed only to lower the sulfur cap from 30 ppm to 20 ppm. Frankly, we were very surprised at this decision, because we were expecting ARB to instead propose capping sulfur at 10 ppm (considered “ultra-low” sulfur). This is the best time for California to adopt ultra-low sulfur gasoline (ULSG): Europe is doing it, Japan is doing it, and even California refiners are doing it, today. In fact, the refiners have been doing it for several years. According to the Alliance’s North American Summer Fuel Survey, with samples taken from retail locations in San Francisco and Los Angeles, the average sulfur levels from the two cities combined was less than 10 ppm in 2003, 2005 and 2006. Reducing the cap to 20 ppm isn’t even a stretch; since 2004, 100% of the survey’s samples have been below 20 ppm. The average sulfur levels have hovered around 10 ppm since 2000, with some years slightly above that level and some years below it. We suspect the federal implementation of the national Tier 2 sulfur regulation is making lower sulfur easier for California refiners to produce because more low sulfur gasoline product is now available from outside the state. In any case, keeping the sulfur cap where it is now, at 30 ppm, as requested by the oil industry, just makes no sense at all.

Capping sulfur at 10 ppm would be important not just from an emissions perspective but also to enable improved fuel economy. We all know lower sulfur means consistently lower tailpipe emissions and enables new diesel technology, but some may be unaware that ULSG would enable lean burn gasoline engines. These engines, which are significantly more fuel efficient than conventional spark ignited engines, have been on the market for several years in Europe and Japan, where ULSG is required. However, due to higher engine-out NOx emissions, lean burn gasoline engines require the same type of advanced NOx controls as diesel engines to meet California’s stringent emission standards. These control technologies are highly sensitive to sulfur, which is the main reason why the country now has ultra-low sulfur diesel fuel. Gasoline sulfur would need to be reduced across the U.S. to fully enable this technology, but California could and should be leading the way and telling Washington to remove this key barrier to a promising new technology.

¹ While the Alliance also supports the development of E85 and its use in flexible fuel vehicles, we do not support the use of gasoline-ethanol blends containing more than 10% ethanol in conventional vehicles, which are not designed, certified or warranted for such fuels.

Alternative Sulfur Proposal: An Incentive Program

The state's regulatory program for fuel quality currently drives refiners to produce fuel close to the minimum regulatory requirements. Refiners that go beyond the requirements are said to "give away" quality, yet refiners have shown their capability of producing gasoline with much less than 10 ppm sulfur since 2000. We suspect that, when they upgraded their refineries for lower sulfur fuel several years ago, many probably anticipated and designed for a more stringent regulation, giving them added capability. But keeping the regulation at an easy sulfur limit does nothing to reward those refiners that have moved forward and does everything to penalize them.

If the ARB Board can't quite see its way forward to requiring ULSG across the state, we would propose it consider developing an incentive program to induce refiners to market the ULSG we know they can make. It might be something as simple as allowing these companies to use a label that declares their fuel to be "ultra-clean," in exchange for certifying their fuel will always meet the 10 ppm limit. In a state like California, this could provide just the market incentive that would make this fuel widely and predictably available. Perhaps industry itself can devise a program that would encourage refiners to market ULSG. Such a program would convert the current race to a lowest common denominator, minimally compliant fuel to a race to sell the cleanest possible fuel, to the ultimate benefit of California citizens.

Predictive Model Update

The Alliance accepts the staff's technical judgments relating to the Predictive Model update. Through our reviews of the model changes and participation in the technical work groups, we have found the new version to be reasonable and likely to reflect fairly accurately the impact of different gasoline qualities on vehicle emissions. ARB has taken a forward-looking approach, which we recommended at the start. This means the model is likely to remain valid through 2015.

We disagree with those who say the Tech 5 NOx-Sulfur response curve is too steep. This issue was discussed at several workshops, with the Alliance presenting its own analysis at the last workshop in March. Our analysis produced results similar to the ARB's analysis, which allowed us to conclude the current model's S-NOx response for Tech 5 vehicles is reasonable.²

Another potential technical issue is what WSPA calls the "quadratic-induced anomalous responses." During the workshops, WSPA specifically cited ARB's response curves for T50 and T90. WSPA claims these curves are an artifact of extrapolation. The Alliance, however, disagrees, and notes the responses are based on observations published by Toyota.³ We think these quadratic responses are consistent with actual vehicle behavior.

The Renewable Fuels Association has recommended that ARB use a "Tech 4 dual model" approach in the Predictive Model. When this proposal was first introduced last year, we were unconvinced it would improve the Predictive Model's performance or could be explained on a physical basis. RFA has now introduced a new, more extensive analysis explaining the proposal in more depth. Unfortunately, this new information has come forward too late for the Alliance to

² WSPA is incorrect in stating that certain information from the Alliance/AIAM Sulfur Study of 2001 (namely, the emission classes of the test vehicles) is unavailable. Rather, the Alliance's public presentation given at a 2001 ARB workshop and posted on ARB's website shows that the program tested 1 TLEV, 9 LEVs and 3 ULEVs.

³ SAE 972851.

fully review it before the hearing. While we do not have a solid position on it yet, we would not be concerned if ARB decides to accept the currently proposed model. On the other hand, we do have some concern the proposed change to the model might allow higher sulfur fuels to comply with the new regulation. This would be directionally incorrect and troubling.

Producibility Study

The Alliance is participating in the CEC work group advising on the study examining the producibility of gasoline under the proposed regulation. We look forward to helping the CEC complete this study but our position is neutral regarding whether the ARB should wait for the study before deciding the proposed regulation.⁴ We understand the Low Carbon Fuel Standard is next on ARB's agenda. This rulemaking also is of great interest to the Alliance, so we support allowing ARB to move forward and complete this rulemaking so it can proceed on that initiative.

Ethanol in Certification Fuel

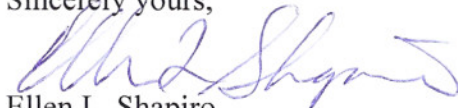
WSPA, among possibly others, is asking the ARB to require the use of ethanol in the test fuel used to certify new vehicles, so the fuel will more closely represent market quality fuel. Without taking a position on this issue today because it is outside the scope of this hearing, the Alliance notes that the request represents a much bigger challenge than many people understand or appreciate. In particular, changing the certification fuel would change not just the vehicle emission standards but also all the test protocols and regulations used to support those standards. This would impose an enormous burden on the ARB, not to mention our industry. Given the resources needed to simply examine this issue, the Board should view the proposal with great caution.

Conclusion

The Alliance urges the Board to consider reducing sulfur beyond what the staff have proposed. Leaving the sulfur cap at 30 ppm, as WSPA has recommended, would be nonsense, and even ARB's proposal to reduce the cap to 20 ppm will do little and is not a stretch for industry. We think the time is ripe for California to adopt a 10 ppm sulfur cap, and we urge the Board to do so. Should the Board decline, at the very least it should direct ARB to develop an incentive program to encourage refiners to market the high quality, low emissions fuel they are already producing but for which they are not now getting credit. Such a program could be implemented quickly and help the state retain its leadership on gasoline quality.

Thank you for your consideration.

Sincerely yours,



Ellen L. Shapiro
Director, Automotive Fuels

⁴ We understand that CEC's contractor, MathPro, plans to testify at the hearing. Hopefully, this will put this issue to rest.