STATEMENT FOR THE RECORD

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Thank you, Mr. Chairman and Members of the Committee, for the invitation to provide a statement for the record for today's hearing. I am pleased to have this opportunity to share with the Committee the environmental benefits of the reformulated gasoline or RFG program, and to address issues raised by S. 1576, introduced by Senator Feinstein (D-CA).

S. 1576 would potentially exempt California gasoline in the federal RFG areas from the federal RFG requirements, including the 2.0% oxygen Clean Air Act (CAA) requirement. The bill states that California fuel requirements would apply in lieu of the federal requirements under section 211(k) of the CAA "if [state] rules will achieve equivalent or greater emission reductions than would result from the application of the requirements" under the federal RFG program with regard to the aggregate mass of emissions of toxics and ozone-forming compounds.

An understanding of the history of the federal RFG program is important in order to put our views on S. 1576 in perspective. As you know, the Clean Air Act Amendments

of 1990 included a number of requirements to lower the emissions from motor vehicles, including several fuels programs. The Clean Air Act achieved a delicate balance of vehicle and fuel emissions control programs only after extensive deliberations. The RFG requirements also emerged from the melding of several Congressional goals, including air quality improvements, enhanced energy security by extending the gasoline supply through the use of oxygenates, and encouraging the use of renewable energy sources.

In 1991, EPA established a broad-based advisory committee to reach a consensus on the many issues involved in developing proposed rules for the reformulated gasoline program. This committee successfully reached a historic "Agreement in Principle" or "Reg-Neg" agreement on August 16, 1991. Representatives of federal and state governments, various affected industries, and environmental groups signed on to key aspects of the programs. This agreement has resulted in a cost-effective, highly successful program. One needs to be very cautious about initiating changes to the RFG program that could upset the balance of previous agreements that have led to the significant emissions reductions we are seeing today. Before any changes are made to the Clean Air Act, it is critical to assess the implications and consequences for the RFG and other air quality control programs.

The federal reformulated gasoline program introduced cleaner gasoline in January 1995 primarily to help reduce ozone levels. Unhealthful ozone levels are still of significant concern in this country, with over 60 areas still in nonattainment of the current ozone standard, and more expected to exceed the newly established, 8-hour ozone

standard. RFG is a cost-effective way to reduce ozone precursors such as volatile organic compounds (VOCs) and oxides of nitrogen (NOx), when compared to other air quality measures. Phase II RFG, beginning in the year 2000, will reduce VOCs at an estimated average cost of $450 to $600 per ton and NOx at $3,500 to $4,000 per ton in 1997 dollars. The federal RFG program is required in ten metropolitan areas which have the most serious ozone pollution levels. Three of these metropolitan areas are in California. Although not required to participate, areas in the Northeast, in Kentucky, Texas and Arizona that exceed the air quality standards for ozone elected to join, or "opt-in" to the RFG program as a cost-effective measure to help combat their pollution problems. At this time, approximately 30% of this country's gasoline consumption is reformulated gasoline.

The RFG program reduces ground level ozone and toxic pollutants from vehicle tailpipe and evaporative emissions. The RFG program requires that gasoline contain 2.0 percent minimum oxygen content by weight. The first phase of the RFG program, from 1995 through 1999, is reducing emissions of ozone-forming volatile organic compounds and toxics by 15%, and beginning in 1998, NOx by 1.5%. This is equivalent to taking more than 7 million vehicles off the road. In the year 2000, the second phase of the RFG program will achieve even greater benefits: a 27% reduction in VOCs, 22% reduction in toxics, and 7% reduction in oxides of nitrogen emissions that also contribute to the formation of urban smog.

We are often asked what "real world" evidence we have that the program is working. We have analyzed data on the gasoline actually produced by refiners since the program began in 1995, and found that the RFG, on average, exceeded the requirements. Most notably, toxics reductions were about twice that required, with about a 30% reduction versus a 15% requirement.

Ambient monitoring data from the first year of the RFG program also shows strong signs that RFG is working. Benzene levels in gasoline, which are controlled by RFG and are considered to be a strong indicator of motor vehicle emissions impact on air quality, showed the most dramatic declines with a median reduction of 38%. RFG areas also showed significant decreases in other vehicle-related VOC concentrations. EPA will continue to analyze ambient VOC and toxics data further and evaluate evidence of the environmental impacts of RFG.

In light of the VOC, NOx, and air toxics reductions provided by RFG, the Governor of Missouri has recently requested to opt-in St. Louis to the federal RFG program by June 1, 1999. The Governor has also indicated that he plans to request that RFG be supplied to Kansas City in the year 2000.

S. 1576 raises the question of equivalency between California and federal RFG and that raises complex scientific and /legal issues. In order to make a determination on the equivalency of the fuels, EPA would need to assess input from a wide variety of interested parties through a notice and comment rulemaking process.

As I mentioned before, there are three federal RFG areas in California. Under the Clean Air Act, California has unique authority to establish state requirements that control fuel and fuel additives for the purpose of motor vehicle emission control. The CAA allows California to specify an oxygenate or the level of oxygen content (e.g., no oxygen) where federal RFG is not required. In the federal RFG areas (Sacramento, Los Angeles, and San Diego), however, the gasoline must still contain a minimum of 2.0% oxygen. (Note that this does not preclude refiners supplying these areas with RFG that meets the stricter CA standards). The Agency provided California an exemption from a number of federal Phase I RFG enforcement requirements. The enforcement exemptions have gone a long way to ensure that California refiners meeting California RFG requirements are not faced with overlapping and/or duplicate enforcement requirements. This was based on a comparison of California's RFG program with the federal Phase 1 program.

Oxygenates help to reduce emissions of ozone precursors, air toxics, carbon monoxide, and particulate matter by diluting or displacing gasoline components such as olefins, aromatics, and sulfur and by altering distillation properties such as T50 and T90. Oxygenates also increase octane without the need to invest in refinery capital improvements, and can extend the gasoline supply through displacement of some gasoline components.

For many refiners, if oxygenates were not used to produce RFG, levels of aromatics or olefins may have to be increased to provide octane. Both aromatics and olefins contribute to NOx and toxics formation, so refiners would have greater difficulty

in meeting the RFG performance standards. Some level of oxygenate has historically been used by many refiners for octane purposes. Because the use of oxygenates by a refiner is often influenced by the volume of RFG produced, the amount of premium gasoline produced, refinery capability to produce other high octane blendstocks, and the price of purchased oxygenates, it would be important to ask individual refiners how they would meet RFG standards without the use of oxygenates.

It should be noted that California refiners producing California RFG for markets outside of federal RFG areas (e.g., San Francisco) are still using high levels of oxygenates (around 1.5% by weight or 8.25% by volume MTBE) to meet summer California RFG standards (i.e., standards that do not include an oxygen requirement). We have no reason to believe that the use of oxygenates would decline substantially if the requirement were eliminated. This was recently confirmed by a Department of Energy (DOE) analysis. As noted in DOE's statement, "if no oxygenates were required, two-thirds or more of the MTBE volume now used by east coast refiners in Phase II RFG would still be utilized." Again, one needs to be cautious about changing the program's requirements where the benefit of doing so is not clear.

EPA, like many others, is concerned about drinking water contamination in California by the oxygenate, methyl tertiary-butyl ether (MTBE), which is used in California RFG. MTBE has been detected in ground and surface water in various areas throughout the country which, in some incidences, are a source of drinking water. For the most part, detections in ground water and surface water have been quite low (below 20

parts per billion, the lower end of EPA's December 1997 MTBE drinking water advisory for taste and odor). For instance, the California Department of Health Services requires public drinking water systems to monitor their sources of water (e.g., wells, surface water bodies) for MTBE. As of August 1998, 0.5% of the groundwater and 2.8% of the surface water sources sampled have detected MTBE above 5 ppb, the state's proposed secondary standard for taste and odor. MTBE detections at high concentrations in groundwater, such as those experienced in Santa Monica, result primarily from leaking underground fuel storage tanks, and possibly from distribution facilities.

These leaks are unacceptable regardless of whether or not MTBE is present in the gasoline. The Agency's underground storage tank (UST) program is expected to substantially reduce future leaks of all fuels and its additives, including MTBE from underground fuel storage tanks. All USTs installed after December 1988 must meet EPA regulations for preventing leaks and spills. All USTs that were installed prior to December 1988 must be upgraded, closed, or replaced to meet these requirements by December 1998. In addition to regulations for preventing leaks, the EPA regulations have required leak detection methods to be in place for all USTs since 1993. For the upcoming 1998 deadline, EPA recently issued its enforcement strategy which reinforced that after December 1998, it will be illegal to operate UST systems that are not equipped to protect against corrosion, spills and overfills. If EPA finds them in violation, the owners/operators will be subject to monetary penalties ($11,000 per day) for each violation throughout their period of non-compliance. Thus, EPA, state agencies and the

fuels industry need to continue to work together to take appropriate measures to prevent fuel leaks from underground tanks and appropriately remediate those leaks that have already occurred. S. 1576 would not deal with concerns about fuel leaks from underground storage tanks, since oxygenates will continue to be used by refiners to meet emission standards and for octane purposes.

In conclusion, EPA strongly supports the reformulated gasoline program, given the substantial benefits of this program in reducing ozone precursors and toxics. We believe that oxygenates provide a valuable tool to refiners in meeting the emissions reduction requirements and replacing octane lost in the reformulation process (e.g., sulfur, olefin and aromatic reductions). Given the complex and far-reaching issues that S. 1576 raises that have not yet been addressed, and the potential negative impacts of revisiting Clean Air Act provisions, EPA cannot support the bill at this time.

Thank you for the opportunity to discuss this important issue.