

REFORMULATED GASOLINE

HEARING
BEFORE THE
SUBCOMMITTEE ON
HEALTH AND ENVIRONMENT
OF THE
COMMITTEE ON COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED SIXTH CONGRESS
FIRST SESSION

ON

H.R. 11

MAY 6, 1999

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REFORMULATED GASOLINE

THURSDAY, MAY 6, 1999

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
SUBCOMMITTEE ON HEALTH AND ENVIRONMENT,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room 2322, Rayburn House Office Building, Hon. Michael Bilirakis (chairman) presiding.

Members present: Representatives Bilirakis, Bilbray, Ganske, Shadegg, Bryant, Bliley (ex officio), Brown, Waxman, Pallone, Green, DeGette, Capps, Hall, and Eshoo.

Staff present: Bob Meyers, majority counsel; Anthony Habib, legislative clerk; and Alison Berkes, minority counsel.

Mr. BILIRAKIS. The hearing will come to order. Before the Chair goes into its opening statement, I recognize the full chairman, Mr. Bliley, for his opening statement.

Chairman BLILEY. Thank you, Mr. Chairman. Today's hearing concerns H.R. 11, legislation introduced by our colleague Brian Bilbray to allow the application of California State regulations in areas within that State which are subject to the Federal reformulated gasoline program. Congressman Bilbray has worked long and hard to advance this legislation. He has gained the bipartisan support of nearly the entire California delegation, and Senator Feinstein has introduced his legislation in the other body. Therefore, I am glad that we were able to schedule today's hearing, and I look forward to receiving the testimony of our witnesses.

While it is never possible to construct a perfect hearing, we have made every attempt to accommodate a variety of informed opinions regarding H.R. 11. Although we are unable to accommodate all requests to testify in person, we have included witnesses who are both in favor of and oppose the legislation.

Therefore, our purpose today is simple. We need to examine this bill in detail and receive the benefit of testimony from the administration, the State of California, Members of Congress, and experts and interested parties in the private sector. In other words, this is an old-fashioned legislative hearing on the bill. Our purpose is to both educate the Commerce Committee concerning this legislation and establish a legislative record.

Again, I want to thank our witnesses and congratulate Mr. Bilbray on his ceaseless energy and dedication with respect to this matter. I also want to thank Chairman Bilirakis for his effort in holding this hearing and in furthering the committee's review of H.R. 11. Thank you, Mr. Chairman.

Mr. BILIRAKIS. Thank you, Mr. Chairman. The purpose of today's hearing is to receive testimony regarding H.R. 11, legislation introduced by my colleague, Representative Brian Bilbray, concerning the operation of the Federal reformulated gasoline program in California.

This is the second hearing that this subcommittee has had held on this issue. On April 22 of last year, the subcommittee held a hearing on H.R. 630, legislation introduced by Mr. Bilbray which is identical to today's measure. During our hearing, the subcommittee received testimony from the EPA, from the Department of Energy, the California Air Resources Board and a panel of stakeholders.

Today's hearing will receive further testimony from Members of Congress, the U.S. EPA, the California Environmental Protection Agency, and private stakeholders. And I am hopeful that this hearing can further illuminate the subcommittee's examination of this legislation as well as assist the subcommittee in reviewing events of the past year affecting the Federal RFG program and the separate California clean-burning gasoline program.

Let me say at the outset that it wasn't possible to extend invitations to all interested witnesses. In some cases the subcommittee was unable to invite all parties that may be impacted by this legislation or the current operation of the Federal RFG or California CBG programs. As you may know, we already have four panels, but we still had to turn down a few people who wanted to testify in person.

It is my intent, however, to have additional views and materials published in a final hearing record and we will work with members of the subcommittee on motions and requests to allow such material into the record. It is not my intent to limit any significant views in this legislation, but rather to conduct a hearing which can be completed in a timely and efficient manner. That being said, I believe today's witnesses will help the subcommittee gain an updated understanding of H.R. 11 and its impact on the operation of current RFG and CBG programs. Since Federal RFG currently represents about one-third of the domestic gasoline market, legislation which would alter the operation of the current program must be thoroughly assessed.

I must say, however, I am extremely disappointed that the Environmental Protection Agency has chosen to ignore or at least not have responded to a specific written request for legal opinion on its ability to waive or otherwise administratively alter the Federal 2 percent oxygenate requirement.

While I appreciate that there are complexities involved, this issue is central to the issue of Federal legislation to amend the Clean Air Act. I believe that the EPA had sufficient verbal and written notice on this matter and yet its written testimony—and I might add that the verbal notice preceded the written notice—yet its written testimony indicates only that it is “looking closely” at the California waiver request.

I would remind EPA that a request for a waiver from section 211(k) requirements and an ongoing blue ribbon panel review of the use of oxygenates in RFG are separate and distinct issues. The letter of invitation did not ask for a policy analysis. It requested

a legal analysis of the California waiver request as well as EPA's ability to waive or otherwise not enforce the requirements contained in section 211(k) of the Clean Air Act in California or any other State. This is a necessary request—and I repeat a necessary request—of the subcommittee directly related to its legislative function. And we must insist that the EPA provide such an analysis in a timely fashion.

Hopefully, quite frankly, legislation will not be necessary depending on what their response might be, but we need that response. Otherwise, I think the subcommittee can benefit from information concerning recent studies which have been completed in California as well as information regarding the environmental impact of the Federal RFG program. Testimony received by the committee provides some indication of the real-world benefits of reformulated gasoline, and I am informed that more information may be available shortly in the form of a new National Academy of Sciences study.

Altogether, I would like to thank the gentleman from California, Mr. Bilbray, for his efforts regarding H.R. 11.

As I stated at last year's hearing, he has been a tireless advocate for this legislation. That statement is even more true today, and Mr. Bilbray has brought both the energy of youth as well as the wisdom of age together in his effort to address a most serious concern in his home State of California.

I am therefore glad that we are able to move forward with today's hearing and I look forward to receiving the testimony of our witnesses. I ask for brevity from members of the subcommittee in their opening statement so that we can extend proper courtesy to all these members who have other things to do as we do, too. Mr. Brown.

Mr. BROWN. The wisdom of age, I understand. The energy of youth—

Mr. BILIRAKIS. I sometimes wonder about the wisdom of age.

Mr. BROWN. First of all, Mr. Chairman, I would like to ask unanimous consent to enter into the record Mr. Dingell's opening statement, two other documents and other opening statements of members which I have.

Mr. BILIRAKIS. Without objection.

[Additional statement submitted for the record follows:]

PREPARED STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF MICHIGAN

Mr. Chairman, I thank you for the opportunity to hear the divergent views of a variety of stakeholders, as well as our Congressional colleagues, the Environmental Protection Agency, the state of California, and Mayor O'Connor on H.R. 11. I know that our colleague, Mr. Bilbray, has had a keen interest in this subject, and this legislation, for some time. While my interest may not be as pronounced as his, particularly because the current version of H.R. 11 is a California-oriented bill, I am interested in proposals that pertain to the reformulated gasoline program, a largely successful national program which I support. Moreover, I believe that this Subcommittee must scrutinize any amendments to the Clean Air Act. We must exercise caution in reopening the Act for *any* reason—the threshold must be high and the proposal must be sound. With the possibility of Mr. Bilbray's proposal becoming more national in its scope, as I expect we will learn from our witnesses today, I fear that an objective of passing a narrowly-crafted amendment may fail. I trust that my colleagues share this concern, and I hope that we may commit to one another,

should this bill gain momentum, that only by our mutual agreement will we expand its language or scope.

Even as we consider this legislative proposal today, the EPA is fervently writing rules to implement the Clean Air Act. We have seen thousands of pages of regulatory activity in the past nine months, including such major actions as the NO_x SIP call, the regional haze rule and now the Tier II proposal. These proposals, and other actions by the Agency, have not gone unnoticed by our Congressional colleagues, nor their constituents. They will be costly to the American public. I do not mean to diminish Mr. Bilbray's bill by comparison, but I do mean to warn that there are a number of agendas pertaining to the Clean Air Act, some of which I support. I am well aware that those agendas are in search of any vehicle at this time, and will be even more so as time passes in this Congress.

I have heard opposition to this bill from my constituents who support the ethanol industry. For years, the Monroe County Corn Growers, Farm Bureau and Michigan Corn Growers Association have actively supported ethanol. There is concern in my district that the California Governor may support legislation that would prevent the use of ethanol as a replacement for MTBE—a decision viewed as having serious repercussions for our corn farmers. I do not know whether H.R. 11 would prevent the use of ethanol in California or any other state, but I intend to answer this question.

I have heard from others who worry about the continued use of MTBE in California, and who advocate banning MTBE. In addition to ethanol as an alternative to MTBE, there are other possibilities. But have we carefully examined the availability, the costs and the quality of these alternatives? We certainly must obtain the answers to these questions, and we must answer these questions for every state, not just California.

I thank the Chairman for inviting witnesses who support H.R. 11, as well as witnesses who may oppose the bill. I look forward to hearing their views.

Mr. BROWN. Thank you, Mr. Chairman. I would like to thank Mr. Bilirakis for holding this hearing on H.R. 11. I also would like to welcome Senator Feinstein, Congressman Franks, Congresswoman Tauscher, and Mayor O'Connor. Thank you for joining us.

Under the 1990 Clean Air Act Amendments, regions of the country with the worst ozone pollution are required to use reformulated gasoline which must include 2 percent of an oxygenate by weight. While the Clean Air Act does not specify the type of oxygen, gasoline refiners primarily use either ethanol or MTBE. Substantial improvements in air quality have been attributed to the use of oxygenates. Use of MTBE comes at a price.

MTBE is highly soluble, biodegrades slowly, and is persistent in groundwater. Leaking underground storage tanks and other sources have released MTBE into groundwater, causing the concern that has led many of my colleagues from California to support H.R. 11. The Governor of California has signed an executive order phasing out MTBE over 3 years and asked the EPA for a waiver from the Clean Air Act oxygenate requirement. The State would prefer, instead, relying on the reformulated gasoline required under California's clean air law.

Governor Gray's interest in protecting California citizens from contamination of drinking water by MTBE is laudable and understandable. I find this situation rather ironic, however, in light of another problem involving a gasoline additive with health and environmental drawbacks. The Ethyl Corporation, an American company, produces a fuel additive called MMT, a manganese-based compound that enhances octane and reduces engine knocking. Health experts believe the neurotoxins in the manganese in MMT pose a significant public health risk, and automobile manufacturers contend that MMT damages pollution control equipment in vehicles.

When the Canadian Government banned the MMT, the Ethyl Corporation sued it under Chapter 11 of the North American Free Trade Agreement for expropriation of property, loss of sales and profits, and harm to its reputation. Fearing it would lose the lawsuit, the Canadian Government settled with the Ethyl Corporation. Canadian taxpayers paid \$13 million to this privately held U.S. company and the Canadians repealed their environmental law, lifting the ban on MMT. Interestingly, California, the only State in the country that could, has banned MMT for public health reasons.

It is troubling that because of NAFTA, the Canadian Government, unlike the State of California, cannot protect its citizens from a problematic gasoline additive.

Mr. Chairman, I believe everyone at today's hearing shares the goal of achieving cleaner air while avoiding further environmental or health complications from gasoline additives. We all know that development of the Federal reformulated gasoline program in the 1990 Clean Air Act Amendments required extensive negotiations. While I support State flexibility in meeting clean air requirements, any amendment to the Clean Air Act should be approached with caution.

I am aware, Senator Feinstein, you have introduced a bill to waive the oxygen content requirement nationally and, Congressman Franks, you have introduced a bill to prohibit the use of MTBE in gasoline. I suggest to the subcommittee that it be extremely important to hear this thorough testimony on a national approach before any broad action is taken on the Federal reformulated gas program. I look forward, Mr. Chairman, to hearing the views of today's witnesses.

Mr. BILIRAKIS. I thank the gentleman.

Mr. Bilbray for an opening statement.

Mr. BILBRAY. Thank you, Mr. Chairman. Let me echo my colleague's, the ranking member's comments about making sure that we address the issues specific before us, which is why my legislation, H.R. 11, has been designed in such a way to reflect the rifle-shot approach that this committee has proven so successfully in the past.

I would just like to say, Mr. Chairman, I appreciate your support allowing this hearing to move forward and, Mr. Chairman Bliley, I am really grateful for the bipartisan willingness to work together on this issue. In California we are really sort of celebrating the fact that here is an issue that everyone has finally gotten together and gotten behind. Very seldom do you ever see a delegation the size of California where you have 52 of the 54 elected representatives in the Federal Government not just supporting but strongly support the legislation, and I appreciate the fact that my colleagues from California have been willing to get behind this.

You may ask why. Frankly, this is the third Congress in which I have introduced this bill. It was first introduced long before there was any discussion about additive concerns and everything else, and was based mostly on my experience working with the Air Resources Board in California who have some of the best toxicologists and air pollution strategists in the world. My bill is content neutral, outcome-based and California-specific, and I think that the se-

cret here is that we have focused it on being California-specific and outcome-based.

I want to thank Senator Feinstein because her leadership in the Senate has been essential at getting the message across, not just across to the Senate but across this country, and I appreciate the Senator's leadership on this issue. She has supported this legislation for two Congresses now and has been way ahead on this issue, and I appreciate her understanding of air pollution issues—those of us who come from local government who have worked these environmental issues in California understand why we need this bill. We are basically talking about a public health issue and placing the public health above and supreme to other strategies and other economic and social concerns.

I would also like to thank Congresswoman Tauscher for her leadership. She has a district that is well aware of this situation, and has taken a lead here. Subcommittee members Capps and Eshoo have both been strongly in support here and I want to thank them.

Mr. Chairman, when I introduced this bill in 1976, some claimed that it was going to be used as a blanket approach——

Mr. BILIRAKIS. Not in 1976.

Mr. BILBRAY. 1996, I am sorry. 1976 was the first year I was elected, about the time the Senator was involved. But I just want to point out that the issue at that time was the fact that the 2 percent oxygen approach was based on a concept that it was the best public health strategy that the Federal Government could initiate in the most polluted areas at that point in time. The Clean Air Act at that time—in fact going back to the original Clean Air Act—reflected the fact that California was way ahead of the Federal Government in many ways. That is why the original act back in the 1970's specifically isolated California's clean air strategies and gasoline fuel strategies in this regard from other States—in fact, California has a specific section in the act. That is why my bill is written specifically for California, because I am not talking about opening up the entire act. With H.R. 11, we are only talking about opening up that section that specifically has been earmarked for California's clean gasoline.

The EPA has recognized again and again that California has developed and designed a “better mousetrap” when it comes to cleaner burning gasoline. The Federal EPA understands that, and has said it clearly, working with my—with my ex-colleague from California who has now gone back to California, Mary Nichols. Her frustration with the fact that the law did not foresee that Federal regulations may stand in the way of a clean air strategy led to my first introduction to this bill in 1996.

Let me just say, though, that things have changed. Things have changed dramatically since I first introduced the bill. New scientific information reinforces the merits of H.R. 11. Some past opposition has actually evolved into thoughtful support for H.R. 11. Here I would ask that the statements of the American Methadol Institute and the Methanex Company be introduced into the record at the appropriate time.

Mr. BILIRAKIS. Without objection.

[The information referred to follows:]

METHANEX METHANOL COMPANY
DALLAS, TX 75251
May 4, 1999

Honorable BRIAN BILBRAY
U.S. House of Representatives
Washington, D.C. 20515-0549

DEAR REPRESENTATIVE BILBRAY: I am writing to express Methanex Methanol Company's conditional support for your legislation, H.R. 11, to provide flexibility to the state of California under the Clean Air Act's (CAA) reformulated gasoline (RFG) program. Would you please ensure that this letter is placed in the record for the May 6, 1999, Subcommittee on Health and Environment hearing on H.R. 11.

As we have discussed previously, Methanex believes that the anti-federalism aspects of the CAA's requirement for a minimum oxygen content in RFG make it very difficult to devise a rational and workable solution to the problem of methyl tertiary butyl ether (MTBE) in groundwater. A major provision of a rational and workable solution should provide refiners of RFG with maximum flexibility to meet stringent fuel performance standards that ensure continued progress in the reduction of air emissions from mobile sources. Within that flexibility, refiners should be allowed to use the type and amount of oxygenates, including MTBE, that make the most sense for their refineries.

While Methanex disagrees with Governor Davis' decision to phase out the use of MTBE in California, we understand his desire to address the MTBE water contamination problem using the most effective means available. The lack of flexibility under the minimum oxygen requirement of the CAA limited the options available to the Governor and contributed significantly to his decision to phase out MTBE. At this point, a continuing requirement to add a minimum level of oxygen in RFG while simultaneously phasing out the use of MTBE will only force refiners to use other oxygenates that are more expensive, in short supply, and not as effective in reducing air emissions.

Given this, Methanex supports the enactment of H.R. 11 provided that the bill is amended to ensure that the repeal of the oxygen standard and removal of oxygenates for gasoline will not result in backsliding on air quality benefits currently being achieved in California. In this regard, Methanex endorses the statement submitted by the American Methanol Institute in support of H.R. 11.

I look forward to working with you as the debate on RFG and MTBE continues in the Congress.

Sincerely,

FRED T. WILLIAMS
Methanex Methanol Company, Vice President Marketing

PREPARED STATEMENT OF JOHN LYNN, PRESIDENT & CEO, AMERICAN METHANOL INSTITUTE

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to provide you with testimony regarding H.R. 11. I am John Lynn, President and CEO of the American Methanol Institute, our industry's trade association here in Washington, D.C. The methanol industry is a principal partner in our nation's clean air programs. This year, over 1 billion gallons of methanol will be used to manufacture the oxygenate methyl tertiary butyl ether or "MTBE." Nearly one-third of all gasolines sold in the United States is cleaner-burning reformulated gasoline, and MTBE is the oxygenate of choice. Further, about 70 percent of all gasoline sold in the country contains some MTBE.

In the United States, there are 18 methanol plants located in eight states with total annual production capacity of over 2.6 billion gallons, about one-fourth of the worldwide capacity. Our industry creates over 18,000 jobs in the U.S., while generating nearly \$3 billion in economic activity each year. The methanol industry also is a major consumer of domestic natural gas—our basic feedstock—using 200 trillion BTUs of natural gas each year.

In the last decade, the methanol industry has undergone an enormous transformation. While methanol continues to be an important building block for hundreds of widely used products, the production of the gasoline additive MTBE now serves as the largest market for methanol in the U.S. The methanol and oxygenates industries, along with the gasoline refining industry, have spent billions of dollars developing the production capacity to meet the reformulated gasoline market directed by Congress in the Clean Air Act Amendments of 1990.

The reformulated gasoline program has been one of the shining success stories of the Clean Air Act, dramatically improving air quality for 75 million Americans. RFG reduces smog precursor emissions by 36,000 tons per year, which is equal to removing over eight million cars from our streets and highways. According to the U.S. EPA, the *actual* emission reduction benefits of reformulated gasoline have *greatly exceeded* the mandated targets of the Clean Air Act for volatile organic compounds (VOCs), oxides of nitrogen (NO_x), and air toxics. In just eight months, the second phase of the reformulated gasoline program will begin, with twice the smog-fighting benefits being achieved today. MTBE has been the refinery industry's oxygenate of choice in reformulated gasoline.

This past weekend, President Clinton announced the Administration's Tier II proposal to set tougher standards for tailpipe emissions, and cut sulfur levels in gasoline by about 90 percent over the next five years. The EPA estimates that this cleaner gasoline will only cost between one and two cents per gallon more at the pump. One way refiners may choose to meet these fuel requirements would be to add MTBE to replace the octane lost by removing sulfur, and for its favorable dilution benefits.

Just over a year ago, AMI Chairman Roger Seward testified to this Committee expressing concern about the legislation offered by Congressman Bilbray regarding California's participation on the federal RFG program. A lot has happened in the past year, most notably the Executive Order instituted by Governor Gray Davis of California.

Today, the American Methanol Institute is prepared to offer its support for H.R. 11, *if* the bill is amended to ensure that the air quality benefits Californians now enjoy are not compromised. We recognize that the bill as drafted attempts to prevent backsliding on air emissions by requiring equivalency. However, we are concerned that "equivalency" refers to the emission reduction requirements of the Clean Air Act, which fails to take into account the fact that *actual* air quality benefits being achieved through the use of reformulated gasoline have *greatly exceeded* the mandated targets. Based on discussions with the Oxygenated Fuel Association, we would like to offer the following language to provide greater definition on this critical point:

Equivalent air quality shall be demonstrated for actual in-use vehicle fleet mass emissions of Volatile Organic Compounds (VOCs), Oxides of Nitrogen (NO_x), and Air Toxics (i.e., the reactivity adjusted sum of benzene, butadiene, formaldehyde, acetaldehyde and polynuclear organic matter), using the California Air Resources Board's predictive model in effect on December 31, 1998. The new gasoline formulation shall also be shown to result in equivalent or lower mass emissions of Carbon Monoxide (CO), and Particulate Matter smaller than 2.5 microns (PM 2.5), as well as equivalent reactivity-adjusted ozone emissions.

We believe that the addition of this or similar language will prevent air quality backsliding, and ensure that the *actual* air quality benefits that are provided citizens of California *today* are not lost or sacrificed by this change to the Clean Air Act. We also believe that this legislation, if amended, will provide the refining industry with the flexibility needed to meet California's gasoline demands. Without the language necessary to safeguard today's air quality benefits, the American Methanol Institute will be forced to oppose passage of H.R. 11.

AMI's insistence on protecting the air quality gains that have been achieved is consistent with the actions taken by Governor Davis. Keep in mind, that the actions taken in California were not instigated by any immediate concerns for human health. Rather, the Governor was reacting to incidences of groundwater contamination from MTBE. Our industry continues to be concerned about the lax response to state and federal requirements for the upgrading of underground storage tanks (USTs), and the uneven enforcement of existing law. Of the 892,000 federally regulated USTs, the U.S. EPA estimated that only 56% were in compliance with federal upgrade standards when the December 22, 1998 deadline was reached. As a nation, we must do more to ensure the proper handling and containment of gasoline products. Further, any new fuel formulations must be carefully evaluated for their potential to impact groundwater resources and to affect air quality.

Finally, I'd like to close my remarks by looking ahead. In a few weeks, the U.S. EPA Blue Ribbon Panel on Oxygenates will be issuing its final report and recommendations. Likewise, the Northeast States for Coordinated Air Use Management (NESCAUM) will be issuing a set of policy recommendations to guide officials in the Northeast states. I would strongly urge the Congress not to take any precipitous action on the federal reformulated gasoline program until these reports have been made available, and given an ample opportunity for review and comment. The RFG program has been a huge air quality success, and there is no pressing health

concern that would warrant premature action by Congress that may ultimately weaken this program.

Thank you for providing the American Methanol Institute with this opportunity to express our thoughts.

Mr. BILBRAY. I believe that this evolution of thinking is reflecting the philosophy that the underlying bill, H.R. 11, needs to be passed.

Mr. BILIRAKIS. Please finish up.

Mr. BILBRAY. I will, Mr. Chairman. I just want to close by saying the issue here is that H.R. 11 is content-neutral. We don't chase our tail trying to figure out what to allow or what to outlaw. We basically say that outcome is what is really important. MTBE contamination and other issues can be addressed locally with the California option if you provide that flexibility. And I want to remind you that the Senate has discussed the flexibility issue, along with the possibility of making it national.

Mr. Franks has introduced a bill specifically to outlaw MTBE and now it is my understanding that my colleague, Mr. Pallone, is also contemplating a national approach to my California-specific bill. I think all of these approaches point out that there is strong support not just in California but across the country to allow California to go specific with this bill and to see exactly how much public benefit we can have by allowing the flexibility to allow the State of California to do the right thing for the people at the right time with this legislation, and I hope we gain your support.

Mr. BILIRAKIS. The gentleman's time has expired.

[The prepared statement of Hon. Brian P. Bilbray follows:]

PREPARED STATEMENT OF HON. BRIAN P. BILBRAY, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF CALIFORNIA

Mr. Chairman, thank you for holding this hearing today, and for your willingness to work with me on behalf of the State of California on this important issue. As you are well aware, this is an issue that I've been working on since the 104th Congress, and on which the State of California is united in support. I appreciate your ongoing support and that of our colleagues, as the circumstances surrounding H.R. 11 have evolved into the higher profile landscape which we face today.

We will hear witness testimony shortly, but I want to take this opportunity to specifically thank Senator Dianne Feinstein, who has been a champion on this issue in the Senate and has introduced companion legislation to H.R. 11 in the last two Congresses, for taking the time to be here today. I would also like to thank our House colleague Ellen Tauscher, who represents California's 10th District in the Pleasanton area, and has been a tireless advocate in support of this legislation among our delegation and the entire House.

Mr. Winston Hickox, the new Secretary of the California EPA, is here on behalf of Governor Davis and H.R. 11, and I should say here that I am very grateful for the long and continuing history of support from CalEPA and the ARB on this legislation, which has been essential. We will also hear strong support for H.R. 11 from Mayor Pam O'Connor from the City of Santa Monica, part of California's 29th District which is represented by our Committee colleague Henry Waxman.

Mr. Chairman, it has certainly been very interesting watching the landscape around H.R. 11 evolve. When I first introduced this *content-neutral, outcome-based* and *California-specific* legislation back in 1996, it came under fire by some stakeholders which characterized it as a "camel's nose under the tent", the "real" intention of which was to erode the national 2% oxygenate requirement, by allowing states other than California to take advantage of its flexibility. Well, Mr. Chairman, then as now, three years later, this bill is specific *only* to California, recognizing the facts that 1) Congress has already provided California with a unique and exclusive provision in the Clean Air Act that allows it to operate its own fuels program, and 2) since 1990, California has built the proverbial "better mousetrap" in that it has developed a cleaner-burning gasoline that meets or exceeds existing federal emissions standards.

But despite the resounding stability of this message of regulatory flexibility for California throughout three Congresses, Mr. Chairman, there have been a number of developments, albeit separate from H.R. 11 itself, which nonetheless have served to color the ongoing discussion of this issue. There is compelling new information which serves to further underscore the benefits of and need for the bill, and there is also new support of the bill from several stakeholders which have in the past expressed skepticism or been opposed to this legislation outright. Expanding on this, I have statements here from the American Methanol Institute, and a former member of the Oxygenated Fuels Association, the Methanex Company, which I would ask to be included in the record at their request. I strongly believe that this evolution is a result of a much-improved understanding of the intent and scope of this bill, and an acknowledgement of the strength and merits of the outcome-based philosophy which underlies H.R. 11. Also for the record, Mr. Chairman, I would also like to include with this the July 31, 1996 letter to Chairman Bliley from then-Chairman of the Air Resources Board John Dunlap in support of this legislation, and the September 10, 1996 letter to Chairman Bliley from AMI, OFA, and RFA. I think these letters help to show, respectively, the continuity of the argument on behalf of H.R. 11 since its introduction, and how the perception of it has evolved among specific stakeholders.

At this point, Mr. Chairman, I think it would be helpful to reiterate two basic points—first, H.R. 11 is *content-neutral*, and because it is focused on outcome and not process, it neither requires nor bans the use of any particular ingredient which might be used to manufacture California's reformulated gasoline. Its purpose is to provide California-specific relief from the federal mandate which California's own fuel has outpaced, and it is written to give California that added flexibility by which to meet its already stringent emissions standards. Second, I want to emphasize that this legislation *predates*, and is not a direct reaction to, the separate issue of MTBE contamination, which since this bill was first introduced in 1996 has itself developed into a public health concern of such magnitude in California that Governor Davis was recently compelled to issue an executive order to phase out its use.

Clearly, in California, which, led by Governor Davis, continues to strongly support H.R. 11, the MTBE issue has reached new levels of concern. As a result, Governor Davis has taken decisive action, based on the findings of several comprehensive scientific studies, including by the University of California, to phase out the use of MTBE in California over the next three years.

Several other states have begun to experience similar concerns and explore similar actions, and in the Senate legislation has been drafted which would seek to provide governors with the kind of flexibility which would be provided to California by H.R. 11. Our New Jersey colleague Mr. Franks, who has introduced legislation which deals solely with MTBE, will provide his state's perspective on H.R. 11, and it is my understanding that our Committee colleague Mr. Pallone may be contemplating taking up a broader bill on state flexibility similar to that now pending in the Senate. Some might find it rather ironic that there is *now* a growing discussion of whether the kind of flexibility that H.R. 11 would provide only to California should be available to other states. However, while these other initiatives may take differing perspectives from H.R. 11, they are part of an important ongoing dialogue on this broader issue, all of which I believe keeps circling back to H.R. 11 as the practical solution.

Separately, Mr. Chairman, let me say that I appreciate your specific interest in requesting EPA to discuss whether it has the legal authority to waive the 2% minimum oxygen requirement in section 211(k) of the Clean Air Act, for California or any other state. As you are aware, this was a primary consideration which led to my initial introduction of this legislation in the 104th Congress. Prior to introduction of what was then H.R. 3518, I worked in close consultation with EPA, particularly Mary Nichols, who like myself is an alum of the California Air Resources Board, and who then served as EPA's Administrator for Air and Radiation. Based on these consultations, it was clear at that time that legislative action *was* in fact necessary to provide California with the legal ability to operate its own fuels program in lieu of the federal program established by the 1990 Clean Air Act Amendments, and I introduced legislation, now H.R. 11, as a result. Given this history, I am very interested in the views of Mr. Perciasepe on the State of California's question to this effect.

Having touched on these more recent developments, Mr. Chairman, I would like to revisit the basic principles which underlay the bill and its high level of support. H.R. 11 would simply build on the existing California-specific provision in the Clean Air Act to allow California to meet its already tough standards without being mandated to follow a specific "recipe". In essence, the state's more stringent RFG program would operate in lieu of the overlapping and less stringent federal program,

so long as the state program continues to demonstrate that it is achieving equal or better reductions in overall emissions of VOCs and air toxics. The U.S. EPA has recognized that the California program is more stringent, and has stated as much in several past federal register notices. This can be accomplished without sacrificing or "backsliding" on any public health or environmental benefits that California now enjoys; indeed, the broad support of air quality and water districts around the state are testament to this fact, and I believe that our witnesses from the California EPA and the Association of California Water Agencies can address this in greater detail.

More specifically, H.R. 11 has been carefully drafted to build exclusively on California's unique and preexisting ability under the existing Clean Air Act to operate its own fuels program. This is so for good reason, as California has historically had unique air pollution challenges which require innovation and creativity to address. Recognizing this, Congress singled it out for special status in Section 211(c)(4)(b) of the Clean Air Act, which reads "*Any state for which application of section 209(a) has at any time been waived under section 209(b) may at any time prescribe and enforce, for the purpose of motor vehicle emission control, a control or prohibition respecting any—fuel or fuel additive.*" Under Section 209(b)(1) a waiver may only be provided to "*any State which has adopted standards...for the control of emissions from new motor vehicles or new motor vehicles engines prior to March 30, 1966, if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards.*" California is the only state which has met this criteria; as a result H.R. 11 as it is written applies exclusively to California under the Clean Air Act, and is not applicable to any other states.

I also want to reiterate to my colleagues that I continue to be sensitive to concerns which have been expressed about the potential for this legislation to "open up the Clean Air Act" or somehow serve as a "vehicle" for other amendments which might be harmful to the Act. Let me again clarify that this is neither the intent nor effect of H.R. 11—it is tailored to be applicable to California only, and to meet its specific needs by building on its unique status under the existing Act. This Committee has on several occasions in recent years demonstrated its ability to shepherd through the legislative process other bipartisan "rifle-shot" amendments to the Clean Air Act, without "opening it up" in a harmful manner, and I have great confidence in the ability of Chairman Bilirakis and Chairman Bliley to manage the process accordingly to do so again. I appreciate their concern for the integrity of the public health and high standards of air quality, and look forward to working with them and our stakeholders to create a favorable environment for the passage of this bill.

In conclusion, Mr. Chairman, ever since I first introduced this legislation, I have tried to be as plain as I can about my intent with H.R. 11, and my door has been open continuously to all interested parties. I believe that the broad support which it now enjoys, including new expressions of support from previously skeptical or opposed stakeholders, serves to reinforce the level of awareness and education that has gone into this process since I first introduced this legislation in 1996. I greatly appreciate the amount of time and energy which the Subcommittee and my colleagues have devoted to this important clean air issue, and their willingness to learn about and support a common-sense response to it.

We are reaching, if we have not already, a "critical mass" for H.R. 11—the need for this bill has never been greater, or more evident to Members of both the House and Senate. What is boils down to is simple fact—California has different (and more difficult) air quality needs than the rest of the nation. The Clean Air Act already reflects this. California has used this unique authority under the Act to develop an advanced, cleaner-burning fuel which outpaces the federal standard—the proverbial "better mousetrap". H.R. 11 will maximize the State's ability under the Act to achieve and improve upon its more stringent air quality standards and respond appropriately to other public health concerns which may arise. This is the essence of the justification for and rationale behind this bill, and is what all our participants should be focused on today; I look forward to the testimony of our witnesses.

Mr. Chairman, I have several letters of support for H.R. 11 which I would like to be added to the record, including letters from the California Air Pollution Control Officers Association, the California Chamber of Commerce, the California Manufacturers Association, the Los Angeles County Board of Supervisors, the Metropolitan Water District, and the California Business Alliance, to name just a few. I also have other supporting material which I would ask to be included in the record.

Thank you, Mr. Chairman.

Mr. BILIRAKIS. Mr. Pallone.

Mr. PALLONE. Thank you, Mr. Chairman. Mr. Chairman, I do not believe Congress should legislate a California-only bill. California's Governor has already signed an executive order waiving the State's oxygenate requirement and banning MTBE, and therefore I introduced a bill just last evening that would address reformulated gasoline nationally.

My bill, which is H.R. 1705, would waive the 2 percent oxygenate requirement for the entire country essentially in the same manner as Senator Feinstein's bill and I want to commend the senator for moving toward a national initiative.

The bill I have introduced phases out MTBE in 3 years, as is the case in California, as long as an adequate supply of gasoline remains available and Clean Air Act requirements continue to be met.

My bill would not preclude or prohibit the use of ethanol. It would also require the National Academy of Sciences to conduct the study of all other oxygenates and their combustion byproducts to determine their health and environmental effects.

The bill I have introduced is supported by groups such as Oxybusters, which originated in New Jersey and now exists nationwide. I would ask unanimous consent, Mr. Chairman, that testimony from this group be submitted as part of the formal record.

Mr. BILIRAKIS. Without objection.

[The information referred to follows:]

PREPARED STATEMENT OF OXY-BUSTERS OF NEW JERSEY

Oxy-Busters of New Jersey supports Congressman Frank Pallone's bill to ban oxygenated fuel throughout the nation. The accomplishment of this feat would be the culmination of six years of tireless efforts to rid our country of these dangerous and useless fuel additives.

When oxygenated fuel was introduced in New Jersey in November 1992, hundreds of unsuspecting victims experienced severe health problems that included pounding headaches, sinus problems and breathing difficulties. I, too, suffered from severe headaches, which prompted my formation of Oxy-Busters, a grassroots organization dedicated to the elimination of oxygenated gasoline.

Our efforts to rid New Jersey of oxygenated fuel were stymied by the insensitivity of the state Department of Environmental Protection, which continued to assert that oxygenated fuel was cleaning the air. It was only recently that a University of California study proved what Oxy-Busters had asserted all along—that oxygenated fuel has little, if any, effect on cleaning the air. Even when Oxy-Busters presented 15,000 signed petitions to Gov. Whitman calling for a ban on oxygenated fuel, our state government continued to do nothing to protect its citizens' health. Gov. Whitman claims she has been supportive of our movement, yet her token efforts pale in comparison to those of more progressive governors who have managed to ban some forms of oxygenated fuel from their states.

Maine, North Carolina, Montana, Alaska and California have successfully fought against oxygenated fuel and have helped ensure the well-being of their states' citizens. With the assistance of Frank Pallone, the entire nation can be free from all oxygenates and all citizens will be able to breathe the air outside their homes again. We applaud Congressman Pallone's national leadership on this issue.

Just as our air has been polluted by oxygenated fuel, so, too, has our water supply. Oxygenated fuel has been discovered in ground water in numerous places throughout the country, and because some oxygenates are suspected carcinogens, this water contamination should be a cause for great alarm.

In New Jersey alone, Oxy-Busters has documented more than 800 cases of people suffering ill health effects from oxygenated fuel. Keep in mind that most of these people had never experienced any type of chemical sensitivity prior to the introduction of oxygenated fuel. We shudder to think of how many people throughout the United States are also suffering but are unaware of what is making them ill, or think they have nobody to turn to.

Now, thanks to Congressman Pallone, they do.

BARRY GROSSMAN
Founder, Oxy-Busters of New Jersey

PREPARED STATEMENT OF OXY-BUSTERS OF NEW JERSEY, SOUTHERN DIVISION

Oxybusters of New Jersey is a grass roots organization that opposes the use of oxygenates in gasoline. We are part of a national movement that began in 1993 after thousands of people became ill from exposure to oxygenated fuel. Our group opposes the use of oxygenates for the following three reasons:

1) Health Effects—oxygenates create harmful combustion byproducts when used in gasoline. These include formaldehyde, acetaldehyde, tertiary butyl alcohol, formic acid, isobutylene and nitrogen oxides. These toxic chemicals can cause severe respiratory irritation. We believe the dramatic increase in asthma in recent years is linked to these byproducts. The federal EPA has only recently begun to study these chemicals.

2) Air Quality Effects—the purpose of oxygenates was supposed to be to reduce emissions of carbon monoxide (CO) and volatile organic compounds (VOCs). Oxygenates are unnecessary for either purpose, and in some respects, counter-productive. All cars built since the mid-1980's have oxygen sensors, which control the oxygen mixture. In these cars, oxygenates have no impact on CO—but they do result in increased nitrogen oxides emissions, which create smog. Generally speaking, CO is not the major problem of vehicle emissions that it was in the 1980's, because of the oxygen sensors.

While oxygenates have replaced some VOCs in gasoline, refiners have acknowledged they can maintain these reductions without using oxygenates. Extensive studies done by the Auto and Oil industries, and also by the University of California, all concluded that oxygenates do not make gasoline burn cleaner.

3) Water Contamination—MTBE has contaminated water supplies throughout the country. Because it is ether-based, it is highly soluble in water, unlike other components of gasoline. It also biodegrades very slowly, and is extremely costly to cleanup.

For these reasons, our group believes that the oxygen requirement for reformulated gasoline should be eliminated. In addition, all ether-based additives should be banned on a national level. We very much appreciate the interest Congressman Frank Pallone has taken in these issues. We would support any federal legislation that would accomplish these goals.

BARRY DORFMAN
Director of Special Projects

Mr. PALLONE. There are other groups such as the California chapter of the Sierra Club which support the policy concepts of this bill. The American Lung Association also has expressed support at least for lifting the oxygen caps nationally.

I introduced this legislation because other parts of the country deserve to breathe clean air and experience the same health benefits as California. In my State of New Jersey and elsewhere as—I was going to say Senator Franks; better be careful, Bob—as Representative Franks and others will reiterate, groundwater problems and health problems from MTBE, which is used as an additive for reformulated gasoline, are cropping up.

For example, the New Jersey State Department of Environmental Protection issued a 1998 report which indicated that approximately 400 private wells were contaminated with MTBE beyond the New Jersey safe drinking level of 70 parts per billion. And yet my home State is not considering banning MTBE and that is why we need national legislation.

Let me just mention also the oxygenate requirement currently in law. Research efforts conducted separately by the University of California, Dr. Peter Joseph of the University of Pennsylvania, the American Petroleum Institute and others, indicate that the oxygenate requirement not only does not improve air quality, it actually increases nitrogen oxides which is a precursor to smog and can in-

crease exhaust emissions of formaldehyde and other toxic compounds.

The Sierra Club is on record opposing an oxygenate requirement and in arguing that such a mandate would increase the potential for smog and air toxins, and the research has now proven that added oxygenates reduces carbon monoxide. I have also been told some companies, which are represented here today, have market-ready alternative fuels that can meet clean air standards without using oxygenates. So it appears the oxygenate requirement doesn't necessarily reduce emissions and may cause harmful consequences as well.

Last, Mr. Chairman, I just wanted to mention with regard to MTBE and the compounds used to meet the RFG oxygenate requirement, MTBE is highly soluble in water, biodegrades slowly and is costly to clean up. Like some of the witnesses here today, I do not believe we should wait for more groundwater contamination and more people to get sick before we take nationwide action. And the costs of removing MTBE upfront are far less than cleaning up contaminated groundwater supplies and paying for health expenses related to MTBE exposure.

DOE estimates that removing MTBE in conjunction with lifting the oxygenate requirement would cost only a few pennies per gallon of gasoline. Since the EPA is already issuing regulations to remove sulfur from gasoline, which would already serve to reduce environmental impacts, the cost would probably be even lower than these estimates.

Mr. Chairman, I am basically writing a letter to each of our witnesses, asking that comments on my bill be included in the record, and, ask unanimous consent that the record be kept open for this purpose, with your permission.

Mr. BILIRAKIS. I thank the gentleman.

Mr. Bryant, for an opening statement.

Mr. BRYANT. Thank you, Mr. Chairman. I do want to express my gratitude to you and to Mr. Brown for holding this hearing today on legislation introduced by my colleague from California, Mr. Bilbray. Although this legislation specifically relates to the situation in California, several issues we will examine here this morning should concern us all. We are all affected or potentially affected by the Clean Air Act and the amendments of 1990. There isn't a congressional district in this country that isn't affected by the cost and supply of gasoline, and we are certainly all impacted by air and water quality.

Not being an expert in environmental policy, I am looking forward to hearing and learning from the testimony of our witnesses today. I also want to thank all of you for taking the time to be with us and thank you, Mr. Chairman. I yield back.

Mr. BILIRAKIS. Mrs. Capps, for an opening statement.

Mrs. CAPPS. Thank you, Mr. Chairman, for holding this important hearing on H.R. 11. I welcome our witnesses today. I especially want to welcome my own Senator and good friend, Dianne Feinstein, and my California colleague, Ellen Tauscher, who have both been leaders on this issue along with Mr. Bilbray to help sponsor this legislation.

I am very proud to be an original co-sponsor of this bill and pleased that an almost unanimous agreement exists among the California colleagues in the House to support this important legislation.

H.R. 11 will provide my home State the flexibility it needs to keep our air clean without adversely affecting our drinking water supply. California leads the Nation in air pollution control programs. We already have the Nation's strongest cleaner burning gasoline standards, which are stronger than the Federal clean air standards. California has adopted a performance-based program that allows gasoline refiners to use innovative fuel formulas to meet clean air requirements without mandating potentially harmful additives such as MTBE.

We all share the same goal here, to develop the cleanest burning fuel to reduce air pollution. However, clean air must not come at the expense of clean drinking water. With recent studies showing the harmful effects of MTBE to California's groundwater, it was no surprise that our new Governor ordered the elimination of that additive to California's gasoline within the next 3 years. A recent Federal survey indicates that 69 percent of California's population relies on groundwater for their source of drinking water. Furthermore, the U.S. EPA has indicated that MTBE is an animal carcinogen and has a human carcinogenic hazard potential. The bottom line is that MTBE is not needed, and dangerous.

California can meet Federal clean air standards by using their own State clean gas regulations. It simply does not make sense to continue using a chemical additive that is unnecessary, pollutes California's drinking water supply and threatens the public health.

H.R. 11 will allow California the flexibility it needs to ensure clean air and clean water. I hope we can bring this bill to a vote soon. Thank you.

Mr. BILIRAKIS. Thank you, Dr. Ganske.

Mr. GANSKE. Thank you, Mr. Chairman. I will be brief. There is ample evidence that oxygenates help fuel burn cleaner. We want clean air so we have oxygenates. We don't want contaminated water, so get rid of MTBE. But I am not in favor of exempting California from all oxygenates simply because there is an alternative called ethanol. I look forward to testimony by Eric Vaughn from the Renewable Fuels Association. Thank you, Mr. Chairman.

Mr. BILIRAKIS. I thank the gentleman, Mr. Waxman.

Mr. WAXMAN. Thank you very much, Mr. Chairman. I want to thank you for convening today's hearing on an issue of great importance to California and to our Nation and I am looking forward to getting the testimony. I know you are all looking forward to giving us the testimony from our witnesses that are sitting at the table and are going to follow them.

I particularly want to welcome Mayor O'Connor from Santa Monica in my own district for being here, and my own State U.S. Senator, Dianne Feinstein.

This bill would allow California's reformulated gasoline to substitute for Federal reformulated gasoline. The most significant impact of this change would be to exempt California from the congressionally mandated Federal oxygenate requirement.

When this legislation was first introduced, its goal was to eliminate overlapping requirements between Federal and State law, now the center of a raging MTBE controversy in California and in other parts of the country.

I would like to mention briefly the major problem associated with MTBE use and leaking underground fuel tanks of California. Nowhere has this created more of a crisis than in my own district of Santa Monica. MTBE has been detected at high levels in two of Santa Monica's drinking well water fields, the Arcadia and the Charnock well fields. The water from these wells smells and tastes like turpentine. Even if we were sure it was safe to drink, and we are not sure of that, the taste and odor problems render it undrinkable. Both of these drinking water wells have been closed down, forcing Santa Monica to secure alternative water supplies at a considerable loss of self-sufficiency.

The U.S. EPA has initiated a Federal enforcement action to clean up the most significant of these well fields, but cleanup is proving more complicated, costly, and time-consuming than expected.

I am concerned that Santa Monica's experience may become a reality in other areas. Preliminary studies, for example, indicate that MTBE is already showing up in groundwater supplies in the northeastern States. We would do well to gather what lessons we can from Santa Monica's experience to help address other areas where MTBE may be an emerging problem.

As one of the few members of the California delegation who has yet to co-sponsor H.R. 11, I am interested in assuring that as we move forward, we do everything we can to fix California's problem and realize that this is a growing national problem. We have to ensure that other States can prevent harm.

It is important to note that neither the Clean Air Act nor the California fuels program requires that any specific fuel additive be used to satisfy oxygenate requirements. Instead it was the oil companies' choice to use MTBE to satisfy Clean Air Act requirements.

MTBE currently accounts for 76 percent of oxygenate used in the United States. Although the oil companies are the ones financially responsible. And they recognize that responsibility, we need to prevent contamination rather than try to clean it up after it has occurred. So I want to ensure that we prevent the widespread adoption of other fuel additives which may pose unsuspected risks to the public health or environment and put us in a similar situation 5 or 10 years from now.

It is also essential, of course, that this subcommittee and our committee consider steps that directly deal with problems of leaking fuel tanks. It appears that previous legislation has not adequately addressed this serious issue. In addition as we mark up legislation, we need to make sure that any changes don't result in more emissions of toxic air pollutants and we need to also take into account potential impacts on global warming.

Mr. Chairman and my colleagues, it would be easy to say let's deal with California alone, but this is a growing national problem and we have to look at the full consequences of this issue and any changes we make and how it is going to affect the whole country.

I want to thank you again for holding today's hearing. I look forward to working with you and my colleagues on a bipartisan bill

that protects our environment and adequately addresses the serious problems posed by MTBE.

Mr. BILIRAKIS. I thank the gentleman.

Mr. Green?

Mr. GREEN. Thank you, Mr. Chairman, for holding this hearing on H.R. 11. The Clean Air Act regulations on reformulated gasoline are clearly becoming not only in California but also in other States a point of contention. Because I was not here when the Clean Air Act Amendments were passed in 1990, I was not involved in the decision prescribed how to formulate reformulated gasoline. To be honest, I understand the need and reasoning behind mandating RFG performance levels, but I can't imagine why we would find the need to mandate the formula with which refineries meet these standards. Maybe someone who was around back then can explain that point during the hearing.

Nevertheless, the Federal Government established the oxygenate standard as a major component of the Clean Air Act RFG standards. Whether you agree or disagree with that decision, the fact remains it was made, and companies in Texas have stepped up to meet the Nation's needs.

While H.R. 11 does not go as far as Governor Davis' executive order to remove MTBE from RFG in California, nor does it go as far as some Federal bills that have been introduced into the House and Senate that would prohibit the use of MTBE in gasoline for the entire country, I do believe it starts us down a road that could simply not be ready for the traffic.

Before we abandon the use of MTBE in reformulated gas, we need to make sure we have a viable alternative as safe as MTBE is, as effective in reducing volatile organic compounds, does not have other negative effects on the environment, is affordable and is accessible throughout the country. And I find that I agree with partial parts of all my colleagues' statements before me.

Let me first address the public health issue. While it is well known and documented MTBE causes odor and taste problems in drinking water, it is not known at what levels the contamination becomes hazardous. Unfortunately the public health effects of the alternative of MTBE ethanol is also not known. We should not rush to use another oxygenating compound before we know more about it. Let's not make the same mistake again.

Likewise, there is still very little known about non-oxygenated gasoline. What we do know is that the product has more aromatics which will significantly increase the level of toxic emissions into the air.

Finally, on the issue of affordability and accessibility, the simple fact is that ethanol, because it is so difficult to transport and more expensive to produce, cannot currently be counted on to meet the Nation's needs if MTBE was banned.

Mr. Chairman, let me conclude by saying we all want to protect the quality of our drinking water, and Texas water is a scarce resource and we do all we can to protect it. However, the most direct approach in protecting water is to make sure our underground storage tanks are sound and to be careful when handling gasoline. The fact is many storage tanks do not meet Federal safety guidelines, so replacing MTBE with another type of gasoline will only mean

different substances will leak into that ground. Some flexibility may be needed in the fuel oxygenate standard; however, no resulting policy should undermine air quality or reduce the accessibility of fuel for any Americans. We need to be cautious and thorough before we proceed. Thank you, Mr. Chairman.

Mr. BILIRAKIS. Thank you.

Ms. Eshoo.

Ms. ESHOO. Yes, good morning, Mr. Chairman, and thank you for holding this important hearing. First I would like to welcome our very, very distinguished senior Senator of the State of California. She has distinguished herself in everything that she has done in public service, so we are very proud to have you here; and a special welcome to my Bay Area colleague, Ellen Tauscher.

Mr. Chairman, there is a saying that as California goes, so goes the Nation. And I think an awful lot of that is built into this bill which I am very proud to be a co-sponsor of. We know that we have a problem with MTBE. We know that there are health risks. We know that there is contamination of over 10,000 groundwater sites in California. California is not asking to be let out the back door on the Federal Clean Air Act. We are asking for flexibility; that we meet the Federal requirements, but that we do it in a different way.

I think that we have established a clear case of the problems with MTBE, and I think that the solution we put forward would not only be good for California but also would be a model for other States in addressing similar problems. It wouldn't mandate that other States do that, but it would simply set up California as a major case in the country, and California is always a major case since we are the largest State in the Nation.

So I am proud to co-sponsor the bill. I think it is sensible. I think that it asks for the right kind of flexibility, but it does not let California out from under the stringent standards which I have always supported relative to the Federal Clean Air Act.

Last, Mr. Chairman, I would like to request unanimous consent that a statement from the Santa Clara Valley Water district be entered into the record.

Mr. BILIRAKIS. Without objection.

Ms. ESHOO. Thank you and I yield back.

Mr. BILIRAKIS. Thank you. I think that completes our opening statements. Ms. DeGette was here but I am not sure she will be returning right off. Apparently not.

I, too, want to add my welcome to the first panel and particularly to our colleagues and to Ms. O'Connor for having come so very far to testify here today.

As per usual, your written statement, those of you who have provided one, is a part of the record. I will set the clock at 5 minutes for each of you and hope that you could stay within that time. If not, as long as you are on a particular point, in the middle of a sentence, you can continue. We will kick off with the Honorable Senator Feinstein.

**STATEMENT OF HON. DIANNE FEINSTEIN, A U.S. SENATOR
FROM THE STATE OF CALIFORNIA**

Senator FEINSTEIN. Thank you very much, Mr. Chairman, I am really delighted to be here. I will put my written statement in the record.

What is clear is the committee knows a lot about this. I am really heartened to see this. I would, just like to talk with you informally this morning. I want to begin by thanking Congressman Bilbray for his longstanding work in this effort. I have introduced his bill in the Senate, as well as three others which I will talk about in a moment.

I also know that Representative Henry Waxman with his real expertise on health and environmental issues is playing a vital role in this, and I want to particularly thank Representatives Lois Capps and Anna Eshoo for their expertise. A good deal of what Mr. Pallone has said I strongly agree with. I am really very concerned about this because there are a number of Catch-22s on the way to working out a solution.

Congressman Bilbray is right. We really do need to work on a bipartisan basis and it is unacceptable to clean our air by polluting our groundwater. And let there be no doubt, MTBE is a serious pollutant.

But it is not only in California. I think clearly you will see the extent in California. This map shows the sites of leaking underground fuel tanks and leaking public wells in California. You see the Los Angeles area. You see the San Francisco Bay area. You see the Central Valley area. It's a big problem.

It is also a problem developing in other States as well, in at least 19 other States. The U.S. EPA survey in 1998 found MTBE in 251 of 422 public wells in 19 States. The U.S. Geological Survey and a 12-State survey of New England mid-Atlantic States said that using MTBE in gasoline results in a four- to sixfold increase in its presence in water.

MTBE to date has been detected in water in States such as Maine, Pennsylvania, Virginia, Texas, Kansas, New York, New Jersey, Georgia, Alabama, Colorado, New Hampshire, Massachusetts, Delaware, and Arizona. There is no question it is carcinogenic in animals. Now that has not been proved for humans, but there is strong scientific belief that when it happens in animals, everybody should be alerted.

The Catch-22 is that there are those, including the EPA and environmentalists, who don't want to see the Clean Air Act opened up. There are those that don't want a California-only solution. We hear some of that on this committee. It exists in the Senate. I have worked with the Chairman of the Environment Committee, Senator Chafee, who has made clear that he doesn't want only a California solution.

The other Catch-22, frankly, is the ethanol lobby, the Renewable Fuels Association. I have the pleasure of meeting with them this afternoon and I hope we can clean the air which is clouded, I think, by several misimpressions. They view any action as the camel's nose under the tent with respect to ethanol and they want to ratchet up the ethanol requirement in gasoline to 5 percent. Consequently, we have all of these conflicting things going on. At the

same time, we have MTBE which spreads dramatically in groundwater.

I first was brought into this when I was visited by the mayor of Santa Monica who spelled out with charts and graphs, and had her attorneys there, about the pollution of 50 percent of the groundwater of Santa Monica. Since that time and beginning this week, south Lake Tahoe's drinking water is being rationed. Tosco has moved very rapidly to pull MTBE out of the water that goes to Lake Tahoe, but there isn't enough clean water. Consequently, they are rationing water. In Santa Clara County it has infiltrated their groundwater; 52 out of 58 water districts, counties, have said, please help. I would like to put their resolutions and their statement in the record.

Mr. BILIRAKIS. Without objection.

Senator FEINSTEIN. Chevron has indicated very clearly to me—and their representative is here today to answer any questions, Mr. Hopkins—that they can clearly, if they have flexibility, make gasoline that conforms with the California performance model, which is the strongest model anywhere in America for the cleanest gasoline anywhere in America without MTBE. They would have to use ethanol certain times of the year in the southern California market.

I think what I am pleading for is to provide flexibility in whatever you do and allow us to work on a bipartisan basis. I will be very pleased to sit down with the Renewable Fuels Association. For some reason, they feel I am attacking them. I am not trying to attack them. I am just trying to find a way to be able to provide flexibility in the law.

If it is a California waiver, that is just part of the problem. There has to be, I sincerely believe, a national solution to this because it is going to percolate through groundwater of other States and other States are going to be resentful if it is a California-only solution.

So I think one of the keys is flexibility. I think allowing a situation whereby the EPA can grant a waiver to States who can show that they can meet the clean air guidelines without MTBE or without an oxygenate, that that should be allowable. I think it is a mistake for Federal policy to have a rigid percentage of anything if that anything isn't necessary to meet the Federal guidelines.

So I am happy to really work in the Senate with the House, work with Republicans and Democrats, and see if we can't break through some of these Catch-22s and come up with a piece of legislation that really serves the purpose.

[The prepared statement of Hon. Dianne Feinstein follows:]

PREPARED STATEMENT OF HON. DIANNE FEINSTEIN, A U.S. SENATOR FROM THE
STATE OF CALIFORNIA

Thank you for the opportunity to share with you my concerns about the contamination of drinking water by the gasoline additive, MTBE.

My goal is narrow and simple: get MTBE out of California's water. MTBE smells like turpentine and tastes like paint thinner. Relatively low levels can simply make drinking water undrinkable.

MTBE is a contaminant that is "frequent" and "widespread," impacting at least 10,000 sites in California, according to a June 1998 Lawrence Livermore study.

I have with me here today a map of my state showing the extent of contamination all across California. The San Francisco Examiner on December 14, 1998 called it "a ticking timebomb."

THE MTBE PROBLEM

Why is MTBE so objectionable?

Unlike other components of gasoline, MTBE does not biodegrade.

MTBE is difficult and expensive to get out of the water. It costs around \$1 million to clean up one well in California and \$5 million to clean up a reservoir.

MTBE has a bad taste and odor.

MTBE travels quickly through soil and gravel. Lake Tahoe officials have told me that "out-of-control" MTBE plumes move one to nine feet per day, where it is now 1,000 feet from the lake.

Where does it come from? MTBE comes from gasoline—from leaking underground storage tanks, from pipelines, from motorboat engine discharges and exhausts, from spills and leaks at gasoline stations, from automobile accidents, from stormwater runoff and sometimes from sources unknown.

A June 13, 1997 Oakland Tribune article reported that MTBE levels in the air around the San Francisco Bay area "have risen dramatically," quoting Bay Area Air Quality Management officials who said that MTBE detections in the air grew after MTBE was introduced in gasoline in the area. More recently (March 9, 1999), the Reno (NV) Gazette-Journal reported, "Traces of methyl tertiary butyl ether were discovered last week in air samples taken by the South Tahoe Public Utility District."

A South Lake Tahoe official on February 5 told the Sacramento Bee that MTBE traveled through the sewer system, through the treatment system, through the export pipeline, across a stream and now into a reservoir 30 miles away.

It is time to end it.

GOVERNOR DAVIS HAS ACTED

California Governor Gray Davis on March 26 issued executive order D-5-99 taking 11 steps to stop MTBE contamination, which Secretary Winston Hickox will describe for you later this morning. Governor Davis's actions included the following:

- (1) a phaseout of MTBE use in gasoline by December 31, 2002;
- (2) a request to U.S. EPA for a waiver for California's cleaner-burning gasoline from the federal requirement of oxygen in reformulated gasoline;
- (3) support for legislation to allow U.S. EPA to waive the federal oxygenate requirement;
- (4) labeling of gasoline pumps, indicating that gasoline contains MTBE;
- (5) new guidelines for cleaning up MTBE contaminated areas;
- (6) an evaluation, by December 31, 1999, of ethanol transport in air and water; and
- (7) a report on the potential for development of a California waste-based or other biomass ethanol industry.

STUDIES RAISE SERIOUS QUESTIONS

Several authoritative studies have raised questions about MTBE in drinking water.

University of California

A distinguished group of University of California scientists in November 1998 in a five-volume study recommended that MTBE be phased out over several years and that refiners be given flexibility in gasoline formulations to achieve air quality.

Importantly, UC found that "there is no significant additional air quality benefit to the use of oxygenates such as MTBE in reformulated gasoline, relative to" California's reformulated gasoline formula. UC also found that "there are significant risks and costs associated with water contamination due to the use of MTBE."

Lawrence Livermore National Laboratory

A June 1, 1998, Lawrence Livermore National Laboratory study reached five important conclusions:

1. "MTBE is a frequent and widespread contaminant in shallow groundwater throughout California. There are presently 32,409 leaking underground fuel tank sites recognized in the state, 13,278 at which hydrocarbons are known to have impacted groundwater. A minimum estimate of the number of NME-impacted sites in California is greater than 10,000."
2. "MTBE plumes are more mobile than BTEX (benzene, toluene, ethylbenzene, and xylenes) plumes." Thus, it moves quickly to infiltrate groundwater.
3. "The primary attenuation mechanism for MTBE is dispersion."
4. "MTBE has the potential to impact regional groundwater resources and may present a cumulative contamination hazard."

Association of California Water Agencies

The Association of California Water Agencies has detected MTBE in shallow groundwater at over 10,000 sites in California. Some deeper drinking water wells have also been affected.

ACWA's December 1998 study also documented MTBE contamination in many of the state's surface water reservoirs, concluding that motorized recreation is the biggest contributor of MTBE contamination and confirming other studies findings that MTBE tends to stay in the uppermost portion of the reservoir.

A sampling dated April 22, 1999 detected MTBE in 44 groundwater sources and 28 surface water sources in California.

MTBE IS NOT NECESSARY

California can meet federal clean air standards by using our state gasoline regulations, which Mr. Hickox can thoroughly discuss with you. California's reformulated gasoline rules provide about twice the air quality benefits of federal reformulated gasoline. California has the cleanest gasoline in the world.

Clean gasoline without MTBE can be and is being manufactured by several refiners, including Chevron Products Company, who wrote me on September 11, 1998, "We believe it is possible to replace gasoline, which currently contains MTBE with a combination of ethanol-blended gasoline and non-oxygenated gasolines, while maintaining the clean air benefits that the California Cleaner Burning Gasoline program has provided."

A POSSIBLE HEALTH HAZARD

U.S. EPA has indicated that "MTBE is an animal carcinogen and has a human carcinogenic hazard potential." The University of California study clearly concluded that we need more research to fully understand the human health impacts of MTBE, when the UC study called for a phaseout.

Dr. John Froines, a University of California scientist, testified at a state hearing on February 23, 1999, as follows on their work:

We in our report have concluded that cancer evidence in animals is relevant to humans. There are acute effects in occupationally-exposed workers, including headaches, dizziness, nausea, eye and respiratory irritation, vomiting, sensation of spaciness or disorientation and burning of the nose and throat.

MTBE exposure was associated with excess cancers in rats and mice, therefore, multi-species. He cited "multiple, endpoints, lymphoma, leukemia, testicular cancer, liver and kidney."

All four of the tumor sites observed in animals may be predictive of human cancer risk...

The related question is whether there is evidence which demonstrates the animal cancers are not relevant to humans. The answer developed in detail in our report is no. There is no convincing evidence that the data is specific to animals. That is our conclusion. Nobody has come forward to tell us a basis to change that point of view.

Many authorities believe that the human health effects of MTBE were not adequately known or considered when Congress last amended the Clear Air Act in 1990.

MTBE IS SPREADING TO OTHER STATES

While there is no comprehensive survey available, we do have some data to show that MTBE is contaminating the water in other states. A 1998 U.S. EPA-funded survey by the University of Massachusetts found MTBE in 251 of 422 public wells in 19 states. A recent study of by the U.S. Geological Survey, reported April 29 to the EPA "blue ribbon" MTBE panel, found in a 12-state survey of New England-Mid-Atlantic states, that using MTBE in gasoline results in a four- to six-fold increase in detection frequency. Another USGS study found MTBE detected in 21 percent of 480 wells in community water systems in a sampling of wells nationwide.

MTBE has been detected in water in states such as Maine, Pennsylvania, Virginia, Texas, Kansas, New York, New Jersey, Georgia, Alabama, Colorado, New Hampshire, Massachusetts, Delaware and Arizona.

LEGISLATIVE ACTION NEEDED PROMPTLY

We need an all-out attack on MTBE. That is why I have introduced 4 bills:

My first bill, S. 266 (the companion to H.R. 11, introduced by Rep. Brian Bilbray), would provide that if a state's reformulated gasoline rules achieve equal or greater

emissions reductions than federal regulations, a state's rules will take precedence. The bill would apply only to states which have received waivers under Section 209(b)(1) of the Clean Air Act, the provision of law that allows a state to establish its own reformulated gasoline rules. California is the only state that currently has established its own reformulated gasoline rules.

My second bill (S. 267) requires U.S. EPA to make petroleum releases into drinking water the highest priority in the federal underground storage tank cleanup and enforcement program. Leaking underground petroleum storage tanks and their pipelines are a major source of MTBE in drinking water.

My third bill, S. 268, addresses motorcraft engines and accelerates the federal emissions standards to make them effective by 2001, consistent with California's standards. This bill, which covers spark-ignition outboard marine and personal watercraft engines, beginning in model year 2001, would speed up a complete fleet turnover by 2024.

My fourth bill, S. 645, would authorize the U.S. Environmental Protection Agency to waive the two percent federal oxygenate requirement in *any state* if gasoline with less than two percent or with no oxygenates meets clean air standards.

Here are four approaches. There may be others. In short, we need a legislative remedy that allows states to use gasoline rules that are performance based, achieve clean air goals and do not contaminate the drinking water. Current federal law prevents that kind of flexibility.

CONCLUSION

I have appended to my statement a list of the local governments, water agencies and others who support my MTBE legislation. You will see that there is broad support for ending the use of MTBE.

Let me give you a clear message. We must get MTBE out of California's drinking water. Millions of Californians should not have to drink water contaminated with MTBE. Millions of Californians should not have to breathe MTBE in the air. I believe we can put in place a clean air policy using clean gasoline that does not contaminate our drinking water.

I am not trying to wage a war for or against a particular oxygenate. If ethanol or another oxygenate achieves clean air goals in California and is safe for human health, for our air, water and natural resources, so be it.

California's rules have shown we can make the cleanest gasoline in the world. I believe we can leave the formula for gasoline formulations to the experts and use an approach like California's predictive model which is performance based and does not rely on a prescriptive federal recipe for gasoline. We can have both clean air and clean water.

I am not trying to "open up the Clean Air Act" or dismantle the Clean Air Act's protections. I am not trying to undo the reformulated gasoline program. The reformulated gasoline program has no doubt reduced unhealthy vehicle emissions.

I am trying to get MTBE out of the drinking water. It is not needed for making clean-burning gasoline or for cleaning up the air.

We should not contaminate our water to clean up our air. As CARB and other authorities have documented, we are poisoning our water by an indefensible policy that was intended to clean up our air. California has a better way. We should not continue to use MTBE when we have a sound alternative that keeps both our air and our water clean.

SUPPORT FOR ELIMINATING MTBE—AS OF MAY 6, 1999

Local Governments and Air and Water Districts

Alameda County Flood Control and Water Conservation District, Resolution No. 97-1850 (March 19, 1997); Alameda County Water District, Paul Piraino (October 2, 1998); Bella Vista Water District, Robert W. Dietz (September 30, 1998); Branham Homeowners' Association, Diane Delbridge (September 23, 1998); Casitas Municipal Water District, John J. Johnson/James W. Coultas (October 2, 1998; December 1, 1998); City of Azusa, Robert W. Bowcock (October 5, 1998); City of Campbell City Council, Resolution No. 9422 (September 1, 1998); City of Colfax City Council, Arturo de la Cerda, Resolution 35-98 (November 25, 1998); City of Costa Mesa City Council, Resolution No. 98-82 (September 21, 1998); City of Gilroy City Council, Resolution No. 98-41 (August 3, 1998); City of Los Altos City Council, Resolution No. 98-24 (August 18, 1998); City of Milpitas, Henry Manayan (September 3, 1998); City of Monte Sereno City Council, Resolution No. 1868 (July 21, 1998); City of Morgan Hill City Council, Resolution No. 5213 (August 5, 1998); City of Santa Clara, Judy Nadler (June 30, 1998); City of Santa Monica, Pam O'Connor

(February 11, 1997; March 20, 1997); City of Sebastopol, Kathy Austin (October 8, 1998; November 17, 1998); City of South Lake Tahoe, Hal Cole (September 14, 1998; October 13, 1998); Clear Creek Community Services District, Richard K. McDonald (October 2, 1998); Coachella Valley Water District, Tom Levy (October 5, 1998); Contra Costa Water District, Joseph L. Campbell (October 6, 1998); County of Amador, Resolution No. 98-089 (March 10, 1998); County of Contra Costa, Resolution No. 98/484 (September 22, 1998); County of El Dorado, John Upton (September 29, 1998); County of Lake, Louise Talley (January 9, 1998); County of Los Angeles, Joanne Sturges (August 19, 1998; December 16, 1998); County of Placer Board of Supervisors, Resolution No. 98-283 (December 1, 1998); County of San Diego, Roger F. Honberger/Thomas P. Walters (May 4, 1998; January 26, 1999); County of Santa Clara Board of Supervisors, Donald F. Gage (July 20, 1998); County of Sonoma Mayors' and Councilmembers' Association, Resolution (November 12, 1998); East Bay Municipal Utility District, Dennis M. Diemer, Resolution No. 33135-99; (April 15, 1998, February 10, 1999); El Dorado County Water Agency, Merv de Haas (October 9, 1998); Los Altos Hills City Council, Patricia Dowd (August 24, 1998); Los Gatos Town Council, Resolution No. 1998-139 (September 8, 1998); Los Gatos Village Association, Victor Acevedo (August 30, 1998); Marin Municipal Water District, Pamela J. Nicolai (October 1, 1998); Mesa Consolidated Water District Board of Directors, Resolution No. 1207 (August 27, 1998); Metropolitan Water District of Southern California, John R. Wodraska (October 5, 1998); Orange County Transportation Authority, Sarah L. Catz (July 27, 1998); Orange County Water District, William R. Mills, Jr./Ron Wildermuth (September 1, 1998; September 24, 1998); Placer County Agricultural Commission, Richard A. Johnson (November 12, 1998); Placer County Water Agency, David A. Breninger (September 30, 1998; November 12, 1998); San Diego Air Pollution Control District, R.J. Sommerville (April 17, 1998); San Diego County Board of Supervisors, Greg Cox (September 14, 1998; October 13, 1998); San Gabriel Valley Water Association, David D. De Jesus (September 30, 1998); San Joaquin Valley Unified Air Pollution Control District, David L. Crow (April; 1, 1998); San Miguel Neighbors Association, Tim Giltz (October 6, 1998); Santa Clara Valley Water District, Robert W. Gross (February 17, 1998; July 10, 1998; September 1, 1998; September 15, 1998); Solano County Water Agency, David B. Okita (October 2, 1998); South Lake Tahoe Chamber of Commerce, Duane Wallace (August 25, 1998); South Tahoe Public Utility District, James R. Jones/Robert G. Baer (March 19, 1998; July 16, 1998; August 24, 1998; September 4, 1998; September 14, 1998; October 2, 1998; February 1, 1999); Town of Windsor, Lynn Morehouse (December 3, 1998); Tuolumne Utilities District, Judy Delbon (October 5, 1998); United Water Conservation District, Sheldon Berger (October 5, 1998); Ventura County Air Pollution Control Board, Susan K. Lacey (May 12, 1998); Walnut Valley Water District, Richard C. Engdahl (October 8, 1998); Water Advisory Committee of Orange County, Robert Hanson (October 2, 1998)

State Officials

Governor Pete Wilson, California (August 7, 1998); California Environmental Protection Agency, John D. Dunlap (February 28, 1997); California Energy Commission, David A. Rohy (September 15, 1997); The Honorable K. Maurice Johannssen, California State Senate (October 2, 1998); The Honorable Lynne C. Leach, California State Assembly (September 22, 1998); The Honorable Richard L. Mountjoy, California State Senate (September 14, 1998); The Honorable Richard K. Rainey, California State Senate (October 1, 1998).

Statewide Organizations and Other

Arco and Arco Corporation, Mike Bowlin/Robert Healy (February 22, 1999; February 24, 1999); Association of California Water Agencies, Stephen K. Hall (September 14, 1998); Association of Ground Water Agencies, William R. Mills, Jr. (October 2, 1998); Bluewater Network Coalition, Russell Long (February 18, 1999); California Audubon Society, John McCaull (February 8, 1999); California Chamber of Commerce (May 4, 1999); California Farm Bureau, George Gomes (February 8, 1999); California Independent Oil Marketers Association, Evelyn Parker Gibson (October 23, 1997; March 6, 1998; February 22, 1999); California Independent Petroleum Association, David Gilbert (January 23, 1998; February 11, 1998); California Manufacturers Association (February 19, 1999); Californians Against Waste, Mark Murray (February 8, 1999); Chevron Corporation, Philip T. Cavanaugh (March 6, 1998); Chevron Products Company, David J. O'Reilly (September 11, 1998, February 9, 1999; February 22, 1999; April 16, 1999); Clean Water Action, Marguerite Young (February 8, 1999); Ecoworks, Francesca Vietor (February 3, 1999); Exxon Corporation, James J. Rouse (March 6, 1998); Gasoline Marketers of America, R. Timothy Columbus (March 6, 1998); Mobil Corporation, Sandra G. Swirski (March 6, 1998);

National Marine Manufacturers Association, Testimony (September 16, 1998); Parsons Engineering Science, Inc., Richard W. Bentwood (October 2, 1998); Shell Oil Company, Steve Ward (March 6, 1998); Texaco, Inc., James C. Pruitt (March 6, 1998); Tosco Corporation, Duane B. Bordvick/Ann Farner Miller (October 11, 1997; March 6, 1998); Western States Petroleum Association, Doug Henderson (March 6, 1998).

Mr. BILIRAKIS. Thank you, Senator.

Senator FEINSTEIN. I thank you.

Mr. BILIRAKIS. Will you be able to stay?

Senator FEINSTEIN. I would like to stay for a little bit. Yes, thank you.

Mr. BILIRAKIS. Mr. Franks. Bob Franks is from our side of the Capitol and represents a portion of the State of New Jersey and as far as this subject is concerned, I suspect the entire State of New Jersey. Bob.

**STATEMENT OF HON. BOB FRANKS, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF NEW JERSEY**

Mr. FRANKS. Mr. Chairman, thank you very much for the opportunity to testify today. I am here to lend my support to H.R. 11, a bill that would allow the State of California to opt out of the 2 percent requirement of the Clean Air Act and to urge the committee to go one step further. There is compelling evidence that this requirement, which was designed to reduce carbon monoxide emissions in 10 areas of the country has led to another serious risk to the public health. A University of California study into MTBE, which was released last November 12, concluded and I quote, "Within a relatively short period of time, MTBE has become one of the most highly publicized and widely released contaminants of surface and groundwaters. Introduced as a gasoline additive without adequate investigation of its fate, transport, and toxicity, it is now potentially a major threat to human health."

As Mr. Pallone noted, in our State of New Jersey, the State Department of Environmental Protection reports that 400 private wells and 65 public wells have now been contaminated with MTBE. This contamination has been found in wells providing drinking water to homes and businesses throughout our State. One particularly serious threat is to the Kirkwood-Cohansey Aquifer, a massive storehouse of drinking water for southern New Jersey where wells have been found to have unacceptably high levels of MTBE.

Mr. Chairman, I think it is important for the committee to note that many States are not waiting for the EPA to take more definitive action. Growing evidence and concern about the health and environmental impact has prompted Alaska, North Carolina, Missouri, Montana, and Maine to stop the use of MTBE. And as Senator Feinstein has said so articulately, back in March Governor Gray Davis of California ordered MTBE be eliminated from the gasoline supply of that State by 2003 and called the chemical, "a serious significant risk to California's environment."

I urge this committee, Mr. Chairman, to follow the lead of these States and to put an end to the use of MTBE in gasoline across the United States. Legislation that I am sponsoring, H.R. 1367, would ban the use of MTBE as a fuel additive over the next 3 years. By banning MTBE, we can prevent the spread of this chemical to other sources of drinking water.

But phasing out the use of MTBE does not mean that we have to sacrifice our commitment to clean air. Several refineries have announced that they are already developing new additives that will produce the same clean-burning effect without the use of MTBE.

It is time for the Federal Government to admit that MTBE was a mistake and to look for better, safer ways to clean our air that do not endanger our safe drinking water. I applaud Mr. Bilbray for his efforts and I encourage this committee to go beyond Mr. Bilbray's legislation and ban MTBE nationwide.

[The prepared statement of Hon. Bob Franks follows:]

PREPARED STATEMENT OF HON. BOB FRANKS, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF NEW JERSEY

Thank you, Mr. Chairman, for the opportunity to testify today. I'm here to lend my support to H.R. 11, a bill that would allow the State of California to opt out of the 2% oxygenate requirement of the Clean Air Act... and to urge you to go one step further.

There is compelling evidence that this requirement—which was designed to reduce carbon monoxide emissions in 10 areas of the country—has led to another risk to the public health.

It comes from Methyl Tertiary-Butyl Ether, or MTBE, the fuel additive of choice in many areas of the country because it was the least expensive way of meeting the two percent oxygenate requirement.

MTBE has been found to have contaminated the water supply in California and in other areas across the country—including in my home state of New Jersey.

A University of California study into MTBE, released on November 12, 1998, concluded: "Within a relatively short period of time, MTBE has become one of the most highly publicized and widely released contaminants of surface and ground waters. Introduced as a gasoline additive without adequate investigation of its fate, transport and toxicity, it is now potentially a major threat to human health."

As we mark Safe Drinking Water Week—in recognition of 25 years of the Safe Drinking Water Act—it is only appropriate that Congress act to curb this risk to our national water supply.

In New Jersey, the state Department of Environmental Protection reports that 400 private wells and 65 public wells have been contaminated with MTBE. The contamination has been found in wells providing drinking water to homes and businesses throughout the state. One particularly serious threat is to the Kirkwood-Cohansey aquifer—a massive storehouse of drinking water in South Jersey—where wells have been found to have unacceptably high levels of MTBE.

The EPA is currently in the process of conducting additional research into the health effects of MTBE on humans. In the meantime, it has proposed that the chemical be included in the list of drinking water contaminants that are regulated under the Safe Drinking Water Act.

Many states are not waiting for the EPA to take more definitive action. Growing concern about the potential health and environmental impact has prompted Alaska, North Carolina, Missouri, Montana and Maine to stop the use of MTBE.

And in March, Governor Gray Davis of California ordered that MTBE be eliminated from the gasoline supply in California by 2003, calling the chemical "a significant risk to California's environment."

I urge this committee to follow the lead of these states and put an end to the use of MTBE in gasoline—across the United States.

Legislation I am sponsoring—H.R. 1367—would ban the use of MTBE as a fuel additive over the next three years. By banning MTBE, we can prevent the spread of this chemical to other sources of drinking water.

Phasing out the use of MTBE does not mean that we have to sacrifice our commitment to clean air. Several refineries have announced that they are already developing new products that will produce the same clean-burning effect without the use of MTBE.

It's time for the federal government to admit that MTBE was a mistake and to look for better, safer ways to clean our air that do not endanger our safe drinking water.

I applaud Mr. Bilbray for his efforts. And I encourage this committee to go beyond Bilbray's legislation and ban MTBE nationwide.

Mr. BILIRAKIS. Thank you, Bob.

Next, also from our side of the Capitol, The Honorable Ellen Tauscher from the State of California. Ellen, please proceed.

STATEMENT OF HON. ELLEN O. TAUSCHER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. TAUSCHER. Thank you, Mr. Chairman, for calling this hearing. Mr. Brown, thank you very much for your leadership. I want to applaud my colleague, Mr. Bilbray, and certainly Senator Feinstein for her leadership in the Senate, and I want to thank my colleagues both from California and throughout the country for their support for H.R. 11 and efforts to remove MTBE from California's gasoline.

As you know, I testified last year before this panel on the need to move quickly to provide California the flexibility necessary to maintain its clean air while protecting the State's water resources. By requiring California to blend an oxygenate such as MTBE into two-thirds of the State's gasoline, the Congress is unnecessarily putting our environment at risk. It makes little sense to continue using a chemical additive that is polluting the general drinking water supply in California and is both difficult and expensive to remediate.

Furthermore, many experts believe, as Senator Feinstein has said, that MTBE may be a human carcinogen. H.R. 11 is a bipartisan, performance-based, and environmentally sound bill which enjoys the support of 50 members of the California delegation. And as others have said, perhaps most importantly, California Governor Gray Davis issued an executive order on March 25 in which he prudently and appropriately established a timeline for the elimination of MTBE from California's gasoline. We in Congress must act now to ensure a seamless transition for the State's refiners and the families who depend on gasoline on a daily basis, and I urge the committee to swiftly consider this vital legislation.

Mr. Chairman, our State already suffers from very tight gasoline supplies. California's air pollution problems require that we use a cleaner blend of gasoline than is even required by the Federal law, making our gasoline market an island that is difficult and expensive to serve. If this bill fails to pass, studies conclude that California families could see their gasoline prices jump even higher than they are.

H.R. 11 will significantly mitigate any price increases associated with removing MTBE from gasoline by ensuring that a competitive market remains in place in California. Quite frankly, I fear a full-scale backlash against our State's clean air strategies if that comes to pass.

In sum, H.R. 11 will restore to California the flexibility it traditionally has had in this area. It will enable California to set fuel standards based on performance standards that set a required level of emissions reductions from the tail pipe and then leave it to the refiners to figure out how best to achieve those reductions. These are exactly the type of environmental strategies I support: Set a level and let the States achieve it in their own way. Put simply, we should be about results, not about process.

I want to thank you again, Mr. Chairman, and ranking member Brown and the members of the subcommittee for hearing this testi-

mony, and I urge you to support this important measure. And I yield back the balance of my time.

[The prepared statement of Hon. Ellen O. Tauscher follows:]

PREPARED STATEMENT OF HON. ELLEN O. TAUSCHER, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

I thank the Subcommittee for allowing me to testify today to express my support for H.R. 11 and efforts to remove MTBE from California's gasoline.

As you know, I testified last year before this panel on the need to move quickly to provide California the flexibility necessary to maintain its clean air while protecting the State's water resources. By requiring California and other states to blend an oxygenate such as MTBE into two-thirds of the state's gasoline, the Congress is unnecessarily putting our environment at risk.

It makes little sense to continue using a chemical additive that is polluting the general drinking water supply in California and is both difficult and expensive to remediate. Furthermore, many experts believe MTBE may be a human carcinogen.

H.R. 11 is a bipartisan, performance-based and environmentally sound bill which enjoys the support of 50 members of the California delegation. Perhaps most importantly, California Governor Gray Davis issued an Executive Order on March 25 in which he prudently and appropriately established a timeline for elimination of MTBE from California's gasoline. We in Congress must act now to ensure a seamless transition for the State's refiners and the families who depend on gasoline on a daily basis, and I urge the Committee to swiftly consider this vital legislation.

We must not lose sight of the fact that the important issue at hand is ensuring that our air is clean and that pollution is reduced—not how we get there. By federally mandating particular chemical additives to gasoline, it takes away the local flexibility that could achieve the same or better results.

By clearing away this federal mandate, this bill will greatly benefit existing clean air strategies throughout California. Residents, industries, and air quality watchdogs in California—from the California Air Resources Board and the oil and auto industries, to environmental groups and ordinary citizens—support the California Cleaner Burning Gasoline (CBG) program. The CBG initiative already has shown dramatic improvements in air quality and is certain to succeed if given a full opportunity. It has proven to exceed the emissions reductions achieved by Federal RFG because of the performance-based nature of California's fuel program.

What's more, this bill was narrowly drafted to apply only to the State of California, so as to avoid a controversial re-opening of the Clean Air Act; and as I said, almost every California Member has cosponsored it. It presents an excellent opportunity to demonstrate to America's working families that Congress has the ability to work together and lead in a bipartisan fashion on an important environmental and public health issue. Most importantly, H.R. 11 is an example of exactly the type of second generation laws and rules governing environmental protection that we should promote. Our national approach to environmental stewardship should be modernized to improve the environment through performance standards rather than "command and control" approaches, thus increasing public and private sector efficiency, and instilling more fairness and accountability.

Unfortunately, without the passage of H.R. 11, California residents stand to suffer dramatically higher prices at the gas pump because the oxygenate mandate will cripple the ability of refiners to supply clean-burning gasoline in a cost-effective manner. We will be left in California with no option but to use ethanol in every gallon of federal RFG. In effect, in the nation's largest gasoline market, federal law would give the ethanol industry a legally-mandated monopoly for a taxpayer-subsidized product, controlled by an oligopoly in which three companies own almost 60 percent of the market and one company owns about 45 percent. That is a very unhealthy economic prospect.

Mr. Chairman, our state already suffers from very tight gasoline supplies. California's extreme air pollution problems require that we use a cleaner blend of gasoline than is required even by federal law, making our gasoline market an island that is difficult and expensive to serve. If this bill fails to pass, studies by the California Energy Commission conclude that California families could see their gasoline prices jump even higher than they are today. H.R. 11 will significantly mitigate any price increases associated with removing MTBE from gasoline by ensuring that a competitive market remains in place in California. Quite frankly, I fear a full-scale backlash against our state's clean air strategies if that comes to pass.

In sum, H.R. 11 will restore to California the flexibility it traditionally had in this area and that it lost in the 1990 Clean Air Act Amendments due, as best as we can

tell, to an oversight or technical glitch. It will enable California to set fuel standards based, not on a federal mandate or on the filing of a mound of paperwork with the Federal EPA, but rather based on performance standards that set a required level of emissions reductions from the tailpipe and then leave it to the refiners to figure out how best to achieve those reductions. Cal EPA and CARB can then follow with necessary state law changes. These are exactly the type of environmental strategies I support—set a level, and let states achieve it in their own way.

Put simply, we should be about results, not about process.

I thank you, Chairman Bilirakis and Ranking Member Brown, and the members of the Subcommittee for hearing my testimony and I urge you to support this important measure.

Thank you.

Mr. BILIRAKIS. Thank you. And from the city of Santa Monica, its Mayor, The Honorable Pam O'Connor. Please proceed, Ma'am.

STATEMENT OF HON. PAM O'CONNOR, MAYOR, CITY OF SANTA MONICA

Ms. O'CONNOR. Good morning, I am Pam O'Connor, Mayor of Santa Monica, California. I want to thank you, Mr. Chairman, and members of the subcommittee, for the opportunity you give me to testify before you today. I would also like to thank Congressman Waxman and Senator Feinstein for all their efforts on behalf of the people of Santa Monica.

My entire statement has been submitted to you so I will go into the highlights here.

Yes, H.R. 1 takes a step back from oxygenates. But what H.R. 11 does is to allow us a time to get it right, to plan the safest and most responsible course to eliminate contaminants like MTBE from the water we drink while finding long-term solutions to air pollution.

While removing oxygenates is a requirement for cleaner gasoline, it is not enough. We need your help. We need the Federal Government to embark on a plan to aggressively clean up MTBE that has leaked. Each day that MTBE is allowed to travel in soil, it gets closer to destroying more of our Nation's limited water resources.

It happened in Santa Monica, and I am here to share with you the key lessons we learned from our experience with MTBE. Santa Monica depends heavily on groundwater for its drinking supply. Before MTBE contamination, the city produced 70 percent of its water from our own wells. However, now after the MTBE contamination, the city imports more than 80 percent of its drinking water.

MTBE has handed Santa Monica our greatest environmental disaster. MTBE caused rapid and near complete loss of drinking water supplies. It has an uncanny ability to find its way to water systems. It attacks suddenly.

MTBE strikes at the heart of public confidence in the safety of drinking water. People are not going to drink water that smells and tastes like turpentine. For 3 years now, Santa Monica has been searching for a solution to this pollution problem. No end is in sight. The projected costs of cleanup are between 100 and \$150 million. Think of these costs replicated nationwide. We need the Federal Government to see to it that other drinking water supplies are not gambled away, that more good money is not thrown after MTBE and that groundwater that has been polluted is restored.

Any future attempt to introduce a new chemical to the Nation's fuel supply must first be accompanied by a complete and inter-

disciplinary assessment of its impacts, its health, safety, and environmental impacts. MTBE fell through the cracks, the regulatory cracks, and they were far too wide. That is why H.R. 11 is important.

I am not a scientist and I certainly don't have all the answers to the problems caused by MTBE. I can't predict how long it will take to clean up the MTBE pollution problem or how much it will cost overall, but let me tell you what I do know. Gasoline tanks, especially underground storage tanks, leak. And once tanks leak, their contents can cause unexpected problems.

Whether there is H.R. 11 or some other legislation, we need to move away from MTBE and from any untested oxygenates or chemicals that take its place. For the past 3 years, many oil companies and their trade groups called MTBE the most studied chemical ever. I suspect some similar votes will be made about other oxygenates touted as better than MTBE or miraculously able to clean the air with no downsides. But let's not repeat the mistakes of the past. Let's create better options. That is what H.R. 11 is about.

Coming from southern California, I know all too well that we need to rapidly clean up our air, but the last 3 years has reminded me that we need clean air and clean water. We should never again sacrifice one for the other.

From California to Connecticut, people know you don't clean air by polluting drinking water. By looking to clean air goals instead of chemical formulas for gasoline additives, H.R. 11 allows us to refocus the simple wisdom of the Clean Air Act to clean up our air and in doing so not make things worse.

Thank you for your time and attention today and thank you all for all the hard work you do for us.

[The prepared statement of Hon. Pam O'Connor follows:]

PREPARED STATEMENT OF HON. PAM O'CONNOR, MAYOR, CITY OF SANTA MONICA

Thank you members of The Subcommittee on Health and the Environment for the opportunity to testify before you today on H.R. 11 and MtBE. By taking a step back from oxygenates, H.R. 11 allows us all the necessary time to plan the safest and most responsible course to eliminate contaminants like MtBE from drinking water while finding long-term solutions to air pollution. Yet removing oxygenates as a requirement for cleaner gasoline is not enough. The Federal Government must also embark on a plan to aggressively cleanup the MtBE that has leaked. Each day that MtBE is allowed to travel in soil, it gets closer to destroying more of the nation's limited water resources. I would like to share with you today the key lessons we have learned from our experience with MtBE in Santa Monica.

Santa Monica is a city of 92,000 permanent residents. Over one hundred thousand additional persons visit and work in the City daily. The City depends heavily on groundwater for its drinking water supply. In this regard, MtBE's impact on Santa Monica could not be more cruelly ironic. Prior to the MtBE catastrophe, Santa Monica strove to maximize the use of local groundwater supplies, in an effort to build self-sustainability and to reduce its reliance on water imported from Northern California and the Colorado River. Before MtBE contamination the City produced locally 70 percent of its water supply. Now after MtBE contamination the City imports more than 80 percent of its drinking water. This is a dramatic turn of events. MtBE contamination has forced the City to further tax the State's water system. In doing so, MtBE contamination has all but destroyed any notion that the City could sustain itself in an emergency.

MtBE has handed Santa Monica the City's gravest environmental disaster and Santa Monica has learned that the "real world" impacts of MtBE the hard way:

- MtBE causes rapid and near complete loss of drinking water supplies. MtBE travels quickly and combines readily with water like no other gasoline additive;

- MtBE manifests aberrant characteristics. The City found MtBE in its water supply shortly after MtBE was introduced into fuel supplies. In contrast, other fuel constituents have been in gasoline supplies much longer without the same catastrophic contamination events. MtBE has an uncanny ability to find its way into water systems through natural or human pathways not taken by other contaminants;
- MtBE attacks suddenly. Once discovered, MtBE levels in the City's wells rose quickly. If not for extreme City vigilance, water heavily laden with MtBE may have been delivered to the public;
- MtBE strikes at the heart of public confidence in the safety of drinking water supplies. Although the full extent of the health impacts of MtBE may not yet be completely known, people will not drink water laced with MtBE because of its turpentine-like odor and taste. In effect, water containing even low levels of MtBE becomes unusable as a drinking water supply.

For three years now the City has been searching for a solution to its pollution problem. No end is yet in sight. The City cannot use a majority of its drinking water supplies. The cleanup costs of MtBE are staggering. The projected cost to clean up the City's Charnock well field is currently estimated at between \$100 to \$150 million. The cost to clean up the City's Arcadia well field will exceed \$5 million. Cleanup at these sites may take ten years or more. Replicated nationwide, these costs are unacceptable. Yet, without any concerted state and nationwide MtBE cleanup underway, the future costs may be even greater. It is far wiser to enact policies that seek to end this kind of expenditure now. The Federal Government must see to it that other drinking water supplies are not gambled away, that more good money is not thrown after MtBE and that ground water that has been polluted is restored.

Like water agencies throughout the nation, Santa Monica has over the years spent tens, if not hundreds, of millions of dollars to secure and to protect its water supplies. Yet, as our experience has proven too clearly, this investment is fragile at best and can be lost by the near silent action of one gasoline additive. What happened to Santa Monica should be more than a cautionary tale. What happened to Santa Monica should never be repeated. Any future attempt to introduce a new chemical to the nation's fuel supply must be first accompanied by a complete and interdisciplinary assessment of its health, safety and environmental impacts. MtBE fell through regulatory cracks that were embarrassingly far too wide, which is why H.R. 11 is important.

I don't pretend to be a scientist. I certainly don't pretend to have all the answers to the problems caused by MtBE pollution. I can't predict how long it will take to clean up MtBE pollution or how much it will cost. But I do know some things. First, gasoline tanks, especially underground storage tanks, leak. It makes almost no difference who owns them and when they were put in. Whether they belong to oil companies, to churches or to the federal government, whether they were installed 10 years ago or last year, storage tanks leak. Second, I also know that once tanks leak, their contents can cause unexpected problems. Once out of the tanks, unpredictability reigns with alarming regularity. Pollution results with sometimes dire consequences.

Whether it is H.R. 11 or some other piece of legislation, we need to devise an exit strategy away from MtBE and away from any like oxygenates or other chemicals that may take its place. MtBE has caused us to relearn a simple truth that all too often all of us forget—we are not as smart as we think we are. Our best intentions can go awry. And what we think we know, but don't, can hurt us more than we care to imagine.

For the last three years many oil companies and their trade groups have called MtBE "the most studied chemical" ever. They've made this boast to down-play the threat that MtBE poses to drinking water and to public health. Yet no one warned Santa Monica or anyone else that MtBE could quickly wreak havoc on the public's drinking water supply if it leaked out of storage tanks. Almost no one spent any time seriously studying what would happen if unsuspecting people accidentally drank a gasoline additive because it polluted a drinking water supply. This threat was all but ignored. In fact, if it was not for Santa Monica bringing the MtBE problem to the nation's attention, it might still not be studied.

I suspect that similar boasts will be made about other oxygenates or chemicals that might be touted as "better" than MtBE. They too maybe labeled "silver bullet", able to miraculously clean the air with no downside. But before we run the risk of repeating the mistake of the past, we need to create better options, which is what H.R. 11 is about.

Coming from Southern California I know all too well the need to rapidly clean up our air. No one has to convince me that our reliance on cars has come at a high

price. Yet, the last three years has reminded me too well we need clean air and clean water. We should never again sacrifice one for the other.

From California to Connecticut, reasonable people know that you don't clean the air by polluting the drinking water. We made a mistake. We need to move on with solutions to air quality that do not destroy drinking water. H.R. 11 is a step in the right direction. By looking to clean air goals, instead of the chemical formulas of gasoline additives, H.R. 11 allows us to refocus on the simple wisdom of what the Clean Air Act is about—which is to clean up our air and in doing so not make things worse.

Thank you for your time and attention.

Mr. BILIRAKIS. Thank you, Mayor. I will kick off the questioning. I suppose I have a little bit of a dilemma in my mind. For instance, Senator Feinstein, you have introduced, I know you introduced at least a couple of pieces of legislation. Apparently it is been more than just a couple. Mr. Waxman has already admitted he hasn't co-sponsored it but sounds like he's relatively supportive of what H.R. 11 is attempting to do. So it seems like the entire California delegation is basically there. Considering the credibility and the influence of that delegation, particularly on environmental issues, I would imagine we should be able to move H.R. 11 relatively quickly.

Now, the national approach, which many would rather see, probably, will take more time and who knows, the way the process works. So I guess my dilemma is because we feel relatively confident that we can move H.R. 11, should we just go forward with H.R. 11 and keep working toward maybe the national solution, if you will?

Senator FEINSTEIN. In my view, yes, Mr. Chairman. I think. Very important that a start be made and that the House, if the House will take action, I think we can move the Senate to take some action. It may be different but I think in conference it can be worked out. I think it would be very desirable to sit down with Senator Chafee who is now willing, I think, to move a bill. Again, I believe it will be a national solution, but I think if the House takes action, we can move something in the Senate.

Mr. BILIRAKIS. And I don't see—I don't hear opposition to a national solution. I guess my point here is H.R. 11 could probably move a heck of a lot quicker than the other would. And I am sure that that is of concern to you.

Ellen, did you want to offer anything?

Mrs. TAUSCHER. Mr. Chairman, I just want to reinforce the fact that the problems in California are acute. I would hope that with your leadership and Senator Feinstein's leadership in the Senate, that we could mitigate any questions that people have about a California-only solution versus a national solution, in that we could have California move forward on H.R. 11 and then quickly, as soon as the committee is ready to, to continue our hearings on the national situation and move that forward.

But we desperately need H.R. 11 in California and we will work with you in any way we can to make sure that the results that are happening in California on the passage of H.R. 11 can be used to help create a national solution.

Mr. BILIRAKIS. As I indicated in my opening statement, a couple of weeks ago in writing, I inquired of the EPA to let us know if they have legal authority to waive section 211(k) in California. And we haven't heard from them; and it was prior to that, sometime

prior to that that we orally, not in writing, indicated to them that we would like to get some sort of an opinion. If we can get a quick opinion from them, assuming that they would say yes, that they have the legal authority to waive, then of course California would then receive what it wants and we could maybe focus all of our efforts toward possibly the national solution.

I would ask you, Senator, can you—and I am not putting words in EPA's mouth and they will be testifying in a moment, but I know that they have—sometime last winter—established a blue ribbon panel to study this issue. I don't know whether EPA is just going to come back to us and say well, we want to wait until we get the results of that panel, but do you see any reason—

Senator FEINSTEIN. That is what I have been told, that they want to wait till they get the results. I would welcome a change. I think it is clear. I don't know why we need a blue ribbon panel. I mean, I think the Livermore study is very compelling, as is the University of California study.

I think Representative Tauscher is right: Let's just take the action and begin it. You see, this just gets complicated when it comes to the Senate and if it is phased out in California, ethanol is going to come in as a substitute where it is necessary, which is largely certain times of the year in the southern California market, and that amount of ethanol is substantial, equal to the national use today. So I don't understand why the ethanol people have been so resistant to taking this action in the Senate—a profound resistance, I must tell you. I am very disappointed by it.

Mr. BILIRAKIS. Thank you. Mr. Brown. I am sorry, Bob. Go ahead.

Mr. FRANKS Mr. Chairman, I just want to say Mayor O'Connor graphically underscored the problems with MTBE. It was a marvelous statement. Candidly, I could produce a half dozen mayors from New Jersey who could illustrate the same kinds of problems. I appreciate that California has an enormous problem, but the fact of the matter is it is concentration on MTBE, the properties of which are identical in its use in New Jersey as they are in California. If we need to get it out of the water supply in California, which we ought to do in an urgent way, that same urgency ought to appear to getting this contaminant out of the water supply in New Jersey. It is not just a carcinogen, Mr. Chairman. It is nausea, it is headaches, it is dizziness. This has a severe public health impact and this committee should take action immediately.

Mr. BILIRAKIS. I would just hate to see California become—what is the word that I am looking for—a subject to what happens on a national scope, if in fact it can be done and California can go into effect, it wouldn't hurt the national picture. At least I hope it would not hurt the national picture. That is my thinking on the subject. Mr. Brown.

Mr. BROWN. Ms. Tauscher, you testified last year in the same committee, the same issue. You stated a State ban of MTBE would, "create tremendous dislocation in an already tight gasoline supply and could make it impossible to comply with Federal laws in some parts of the State and some times of the year."

Since your testimony, obviously Governor Davis ordered the phaseout of MTBE from gasoline sold within the State. What happens if Congress doesn't pass this?

Mrs. TAUSCHER. Well, I think that we have a very desperate situation in our State right now. We have very, very high gasoline prices. We have a cyclical issue, obviously, coming up in the summer. The best blue ribbon panel I have ever seen are the citizens of California and American citizens. The citizens of the State of California are very upset about the fact that they have been forced into a tradeoff between clean air and clean water. They want us to act.

The Governor has done, I think, a very good job by putting forth this executive order. The short-term issue for us is how do we get the relief as fast as possible, how do we make sure that California's acute problems are taken care of, and that we are mindful of the fact that this is a national problem.

Mr. BROWN. How soon—is it totally impractical to think that California could—that MTBE over some time could be replaced with ethanol? Is that just totally impractical because of the size of the market in California and the emergency nature of the situation? Senator Feinstein?

Mrs. TAUSCHER. It is about flexibility.

Senator FEINSTEIN. No, it could be replaced by ethanol. It takes some time to change the refining equipment, but there is no question—I mean, the gasoline companies have all said that to me, their CEOs directly.

Mr. BROWN. Over what period of time?

Senator FEINSTEIN. Two to 4 years, I am told. But you see, in California you don't need MTBE. You could just drop it right now and then they make the change to bring in more ethanol over a period of time. We could still meet the clean air performance standards.

Mr. BROWN. In New Jersey, Mr. Franks?

Mr. FRANKS. Mr. Brown, I don't claim to be an expert on ethanol, but candidly, if California's entire gasoline supply were to be treated with ethanol, questions have been raised as to whether or not the availability of ethanol would be adequate to supply gasoline in other areas that are currently under the reformulated gasoline requirement.

Mr. BROWN. Understanding what Senator Feinstein just said, that California can meet the clean air standards simply by dropping MTBE, not replacing it with ethanol, New Jersey is not in the same situation but doesn't have the same size market obviously.

Mr. FRANKS. Correct.

Senator FEINSTEIN. May I say one other thing? The Governor's phaseout is carefully calculated to allow some time to generate the ethanol that would be required in what I understand are 6 winter months in the southern California market. And what I have been told is the key to this is flexibility, so that there is some time and that there aren't just frozen numerical mandates. The performance model of California works well and I know Mr. Hickox is here to speak about it and I think he can really give you the technicalities very well on how this would work.

Mr. BROWN. It is almost a circuitous argument. If the CEOs are telling you it will take 2 to 4 years, if Governor Davis is phasing out MTBE, can't the phaseout complement the phase-in of ethanol without Federal action? I am not necessarily arguing against Federal action. I am just pretty open-minded still about this. Why do you need Federal action if Governor Davis can do that and ethanol can begin to displace the MTBE?

Senator FEINSTEIN. I suspect there is going to be a lapse. Perhaps not. I think it is a complicated—it is not easy, but you have had some where Tosco has stopped putting MTBE in its gasoline. Bingo, just stopped it. I must tell you, I think that is preferable to polluting the groundwater because the cost of cleanup is a million dollars a well. Just enormous. Its spread is so fast.

Mr. BROWN. In other words, you support the Governor's phaseout but you would, perhaps all of you, especially Mayor O'Connor, would like to accelerate the Governor's phaseout which this legislation would ultimately allow, right?

Senator FEINSTEIN. Yes, that is correct.

Mr. BILBRAY. Would the gentleman yield?

Mr. BILIRAKIS. The Chair yields to Mr. Bilbray.

Mr. BILBRAY. I would just like to point out to the ranking member the letter from Governor Davis indicating that H.R. 11 was essential in establishing his phaseout strategy, that the flexibility—and this is where we get back to the outcome-based issue—of this bill wasn't designed around one additive. It was around a system that those of us who had been involved in environmental policy-making saw was going—was creating problems and going to create problems. And with the new Governor looking at this issue, he has clearly indicated to us that this flexibility is essential to making the transition out of one additive and the appropriate use of another.

Senator FEINSTEIN. Why don't you read those two paragraphs?

Mr. BILBRAY. Go ahead, Senator. Why don't you read it?

Senator FEINSTEIN. "I have directed the appropriate State regulatory agencies to devise and carry out a plan to begin an immediate phaseout of MTBE from California gasoline, with 100 percent removal to be achieved no later than December 31, 2002. However, in order for California to achieve this necessary goal without a major disruption of our fuel supply, it is imperative that Congress provide flexibility to California to meet Federal clean air emissions standards without mandatory use of oxygenates. Both the House bill H.R. 11, as well as the Senate bills 266 and 645, provide exactly the flexibility California needs, without weakening air quality regulations."

Mr. BILBRAY. Mr. Chairman, I think that clarifies the ranking member's issues there. I would only like to clarify on the ethanol issue that estimates which have been made are that with H.R. 11 and the action that the Governor is planning, that the use of ethanol in the State of California, as pointed out by the Senator, will increase by huge amounts while still maintaining the clean air, and actually reducing, in the long run, overall cost to the consumer and making it safer for our environment. Less expensive, cleaner, and safer. That is all H.R. 11 is trying to do.

Senator, thank you very much. I yield back, Mr. Chairman.

Mr. BILIRAKIS. I thank the gentleman. Mr. Waxman?

Mr. WAXMAN. Thank you very much, Mr. Chairman. Mayor O'Connor, we are all trying to figure out how to cut through the legislative roadblocks, and the rest of the country is starting to recognize that this may not be a problem unique to California. We have had a terrible experience in Santa Monica.

Would you just briefly share with the people here—you did it in your statement—but what lessons did we learn that they are going to have to learn unless we take some action?

Ms. O'CONNOR. Well, the bottom line is if there is any additive to gasoline, it needs to be studied. We need to understand what are the impacts both in terms of air and water, all the environmental impacts. You are finding more and more instances where pollution has already occurred so it is important for us to seek help both through EPA in terms of enforcement and technical assistance to help with that cleanup.

But again, the bottom line is whatever is introduced, it needs to be thoroughly studied beforehand. Folks thought MTBE had been studied, but it looked at the air impacts. No one had thought about or looked at its affinity toward water and what would happen. No matter what regulations we all have in place in terms of the underground tanks and making them as good as possible, still spills occur sometimes, whether it is underground tanks, pipelines, or other kinds of spills occurring. So we need to understand all the consequences and impacts of any additive.

Mr. WAXMAN. Would you share with the committee our experience with cleaning up these two wells? One, there wasn't a difficulty because the oil company took responsibility. But in the other one, the Charnock field, we have had a real tough time. Just so people here should be aware of it, tell us about it.

Ms. O'CONNOR. How to best clean it up is still not known. That is where the technical assistance—

Mr. WAXMAN. How to do it and who is to pay for it.

Ms. O'CONNOR. Right. First of all, there are the folks who—potentially responsible parties identifying where the leaks are, who polluted it, as well as figuring out how to clean it up. And there were no answers. No one knew how to clean it up. In fact, we are still struggling with that and for us locally, that means it is now going on 3 years; going to be 4, 5 down the road till we can have our drinking water back because there is no consensus. There is no proven way to clean it up and we are still struggling with those technical aspects of it.

Mr. WAXMAN. Mr. Brown asked why don't we turn to ethanol for California. First of all, we don't need ethanol to achieve the environmental objectives. Second, if we required ethanol for California, there would be no ethanol for the rest of the country. California is a huge market and we should never forget that fact.

What we want to do is meet air quality performance standards. We don't want to do anything to harm the drinking water of this country. We also have to be mindful that there is a problem with toxic air pollutants and global warming and we have to take all that into consideration. And I am hopeful that when legislation is finally passed, and hopefully soon, we will keep all of these points in mind. Thank you very much, Mr. Chairman.

Mr. BILIRAKIS. Any further inquiries of this panel? Mr. Ganske.

Mr. GANSKE. Thank you, Mr. Chairman. Two comments on timing and supply. Ethanol has twice the oxygen content of MTBE. By the way, I think that Congress ought to look at banning MTBE for the rest of the country. We are looking at it in Iowa, even though we primarily use ethanol. There is some MTBE in the gasoline there and it is a big—I agree with you 100 percent—it is a big, big problem and we don't know how to get it out of the water once it gets in there.

But to move on to the supply, because ethanol has twice the oxygen content of MTBE, half of the volume supplies the same amount. And if you look at the estimate for California's ethanol demand, you would be looking at somewhere around 40,000 barrels per day. With the current U.S. ethanol production capacity, this would require only an additional 26,000 barrels per day capacity, and I think that can be done in a relatively short period of time, probably in 6 months or less by some estimates.

But Senator Feinstein, I wanted to ask you a question. I want to read a rather lengthy segment from the statement by the renewable fuels people, and since you will be gone when they come here, I would like to get your response to this and then we will—then I will ask them.

This is from their testimony today. "The California Energy Commission recently completed an analysis supplying costs of alternatives to MTBE in gasoline. The CEC report provides an estimate of the potential costs or savings to the public in increases or decreases in retail gasoline prices for each alternative when compared to MTBE. In all cases studied, i.e., near term, medium term, long term, eliminating the use of oxygenates resulted in the largest cost increase for California consumers.

"For example," the report states, "in the long term, a complete ban on all oxygenates would result in the greatest average cost increase for gasoline for this time period compared to all other alternatives studied. Refiners would need to make significant investments to modify their facilities, totaling over \$1.1 billion. This is the primary reason for the average cost increase. In all cases, the ethanol option was less expensive than a non-oxygenated case. Indeed, the ethanol case was shown to potentially save consumers money over the long term if adjustments to the predictive model are made recognizing the carbon monoxide and exhaust emissions benefits of ethanol which would obviate the need for refiners to secure especially tailored blend stocks for ethanol.

"While the report also showed that passage of legislation for making oxygenates optional in California would be the least expensive option, this conclusion is based on the assumption that other oxygenates, including MTBE, continue to be used. Thus, this option, while potentially less expensive, perpetrates the water contamination problems that have plagued the program. Moreover, the economic analysis did not include the potential costs of remediation if ether oxygenates continue and additional drinking water supplies are contaminated from that."

It is a long statement but I would kind of like your response, because basically the thrust was that eliminating the use of

oxygenates in California gasoline could increase consumer costs. Would you like to respond to that?

Senator FEINSTEIN. Of course ethanol has a subsidy. Therefore, its use is automatically going to help with price; hopefully reduce price. Let me just quote from Mr. Hickox's oral presentation today.

"If the Federal oxygen requirement remains in effect, California gasoline costs could increase as much as 6 to 7 cents per gallon due to the huge increase in ethanol demand, according to the California Energy Commission. If H.R. 11 or its companion bills are approved, cost increases could be only 2 to 3 cents per gallon." I know he is going to testify. I think he is much more qualified to answer that question than I.

Mr. GANSKE. Thank you.

Mr. BILIRAKIS. The gentleman's time has expired. Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman. I think it is appropriate I follow my colleague from Iowa. If I was from Iowa, I also would be in favor of banning everything but ethanol, but I don't think we grow enough corn to do that and if we did, we surely wouldn't be able to eat corn, much less drink it in corn whiskey.

Mr. GANSKE. If the gentleman would yield, we need to solve the drought problem so you guys can grow some corn down there.

Mr. GREEN. Well, if we had a tax benefit like ethanol, we might be able—

Again, that is not coming from someone who hasn't been involved in this issue. I remember in the legislature in the seventies, I supported gasohol and the tax benefits for gasohol. Obviously it fell flat on its face. And that was in Texas.

Let me ask of this panel, and I know we are going to have other panels and particularly from U.S. EPA in California, one of the concerns I have in following Mr. Bilbray's bill now for about 3 years is that the MTBE contamination into the groundwater, is it predominantly from the underground storage tanks or is it from just the burning of it and the pollution from our cars? Is it the underground storage tank problem?

Senator FEINSTEIN. By and large, yes. Water reservoirs are being polluted from the air. The two stroke jet ski engines at Lake Tahoe produce huge amounts. About a third of the gasoline goes into the water and the ethanol, you know, leaches into the shore groundwater. So it is a variety, I would say.

Mr. GREEN. I know Mr. Waxman's concern that no matter what substance, whether it is MTBE or something else, if it is getting into Lake Tahoe or if it is leaching in from a leaky storage tank—and I guess that is one of the concerns.

And I know, Mr. Chairman, I may not be here for the California EPA, but in December 1998, California's compliance with underground storage tanks regulations were 60 percent, yet 5 months later became 90 percent, and I would just like to know the secret in 5 months of how that happened, because I think if we could duplicate it in other parts of the country, that no matter what substance is developed—except ethanol, because it evaporates but it will cause problems in Lake Tahoe or in our subsurface formations and that is what the concern is.

We are attacking MTBE but we are not looking at the problem of the leaking storage tanks and beginning with that kind of suc-

cess, I guess you wouldn't. But I would like to see how that happened.

Let me—the study of the other additives, I don't think there is a problem. The technology in our country is great, and I think that if we have some flexibility, the petrochemical industry will develop it. But again I think you have to realize it takes time to do that and, like I said in my statement, I wasn't here in 1990, although I supported the Clean Air Act. I just don't know how we were so specific to have that requirement to develop that. Again, hindsight is always 20/20, but that is my statement.

Mr. BILBRAY. Would the gentleman yield?

Mr. GREEN. I would be glad to.

Mr. BILBRAY. Just to clarify how we got that, and the gentleman from Santa Monica isn't here, in 1990 the best science said 2 percent by weight was the cleanest technology for burning gasoline at that time. What has happened is in California, with our toxicologists and our different formulations, in 1994 California came out with an outcome-based rather than content-based strategy which has 50 percent less toxins than the 1990 fuel. So what happened was the Federal fuel got locked into a mandate while the State was able to, with flexibility, produce a better mousetrap.

Mr. GREEN. And again, I have no problem. Of course, again, maybe sometimes longevity has problems. I remember the Federal Government in the 1970's banned the use of natural gas for power plants, and we regretted that for many years after that. But a decision was made in 1990 to have a specific formula, and it was wrong. And here 9 years later, we are saying okay, what can we do? I would not like to build that wrong mousetrap now and have to do it 9 years later, after people invest, people who buy gasoline invest.

There is no secret that billions of dollars went into creating MTBE facilities.

Mr. BILBRAY. That is why there is flexibility in this bill.

Mr. BILIRAKIS. The gentleman's time has expired. Mr. Shadegg?

Mr. SHADEGG. Thank you, Mr. Chairman. I will be brief and simply say that I compliment the Chairman for holding this hearing. I am very supportive of H.R. 11. Arizona is very affected by what happens in the California refineries. More than 50 percent of our gasoline comes from there. I think this is a great illustration of how local control can improve both the environment and other things.

In Arizona we just recently experienced a dramatic increase in gas prices, going from less than \$1 a gallon just a few short months ago to over \$1.40 a gallon now. And if the California authorities have come up with a cleaner fuel which is less expensive and does less environmental damage, it looks to me like it is a no-brainer.

I do have an opening statement which I would like to put in the record and again I compliment the proponents of this idea.

[The prepared statement of Hon. John Shadegg follows:]

PREPARED STATEMENT OF HON. JOHN B. SHADEGG, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF ARIZONA

Chairman Bilirakis, thank you for holding this hearing on H.R. 11. I appreciate the opportunity to discuss this bill and the positive precedent that it could set for other states which have concerns with implementation of the Clean Air Act.

The Clean Air Act currently requires the use of gasoline containing an oxygenate in certain areas to reduce air pollution. There are two types of oxygenates which are used in gasoline to reduce pollutant emissions: Methyl Tertiary Butyl Ether (MTBE) and ethanol. California is planning to prohibit the use of gasoline containing MTBE because of concerns over its environmental effects and, under the Clean Air Act, only gasoline oxygenated with ethanol will be allowed in many areas of the state.

H.R. 11 modifies the Clean Air Act to allow California to use a type of nonoxygenated, clean burning gasoline approved by the state. This means that the state will not be forced to use only one type of gasoline and allows it greater flexibility to address its air pollution problems.

This issue is important to my state of Arizona for two reasons. The first reason stems from the fact that approximately half of the gasoline used in Arizona comes from California refineries. Factors which affect production in these refineries have a direct impact on the prices which Arizonans must pay for gas. This effect was illustrated recently by the major price increases which Arizona experienced following explosions in several California refineries. For example, the price of gasoline in Phoenix shot up from less than one dollar per gallon in January and February to approximately one dollar and forty cents today! While this astronomical increase was not completely due to refinery problems in California, these problems did make a significant contribution to the inflated prices which citizens of my state are now forced to pay.

If significant areas of California are forced by the Clean Air Act to use only ethanol oxygenated gasoline, they will compete for the supply of this gasoline with the cities of Phoenix and Tucson, both of which require that motorists use oxygenated gasoline. This competition will further increase the prices which Arizonans must pay.

This bill is also important to Arizona because of the possibility that my state may also choose to prohibit the use of MTBE because of the potential which it carries to contaminate supplies of groundwater. Passage of H.R. 11 will directly benefit California, and it is extremely important to ensure that other states share in this benefit.

On a more fundamental level, H.R. 11 reiterates the importance of local control over matters of environmental protection. The air quality situation in each state is unique, due to differences in geography, climate, population, and industry. The Clean Air Act recognizes these differences to some degree by giving states flexibility in deciding how to structure their State Implementation Plans to achieve air quality goals. It is logical to carry this flexibility one step further by allowing states which certify alternative types of clean burning gasoline to use those types in place of the federal standard.

I look forward to the insights on this issue which our witnesses will offer us today.

Mr. BILIRAKIS. Thank you, Ms. Eshoo?

Ms. ESHOO. I don't have any questions. Thank you.

Mr. BILIRAKIS. Any questions of this panel?

Ms. DEGETTE. No, not of this panel.

Mr. BILIRAKIS. All right. You have been tremendously helpful. It is unusual to have members sit here this very long and basically suffer the inquiries that come from the panel and we appreciate it very much. It has been very helpful.

Mrs. TAUSCHER. All because of you, Mr. Chairman.

Mr. BILIRAKIS. Panel two consists of The Honorable Robert Perciasepe, the Assistant Administrator for Air and Radiation, U.S. Environmental Protection Agency.

STATEMENT OF ROBERT PERCIASEPE, ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. PERCIASEPE. Thank you, Mr. Chairman and members of the subcommittee. Thank you for the opportunity to talk with you today about this very important and critical national issue. If I might just do a tiny piece of business before I start the testimony.

I am going to try to summarize my testimony from a couple of charts. I want to make sure——

Mr. BILIRAKIS. Is that business responding to our letter?

Mr. PERCIASEPE. I will get to that. If I don't, I am sure you will ask me a question. I want to make sure the members have copies of these charts I am going to use.

Mr. BILIRAKIS. Yes, sir.

Mr. PERCIASEPE. That was the business. First, I think it is important to note that the United States has made tremendous progress on air quality over the last decade, and this is in no small part due to the work that Congress did in constructing the 1990 Clean Air Act and those amendments that were in the 1990—the amendments to the Clean Air Act of 1990 and the programs that were envisioned in them.

And I am going to review some of that, because the context of the work that we are doing here and the discussions we are having on this legislation and this issue really need to also take place in the context of the larger whole of our clean air goals as well as our clean water goals.

And I want to preface that by saying that I would agree, as the EPA does, with the statements that have been made by the members. We cannot achieve that kind of air quality coverage at the expense of other environmental concerns. And I want to make that clear, that it is a vitally important thing. I think it is central to the issue we are talking about here.

There are a number of issues that come beyond the clean air requirements. If you look at the chart, when Congress looked at the fuels part of the Clean Air Act, we looked at not just at the air quality improvement, they looked at energy security and how these are things—and these requirements might affect the provision of fuel and the supply of fuel. They looked at renewable resources and what role that should play in the national fuels program, and they looked very carefully at the balance between what fuel programs were going to do for clean air and what vehicle technology was going to do for clean air and how those two would work together. This has resulted, as I said, in a very successful outcome.

On a national level where reformulated gas is used, we see toxic reductions of about 30 percent. I don't have on that chart the progress that has been made on carbon monoxide also around the country with most places, although not all yet, that used to be non-attainment for carbon monoxide, now in attainment. The fuels have played no small part in that, as has the car technology and the oxidation catalysts that are used in automobiles.

Ambient benzene reductions. Now, benzene is a known human carcinogen and measurements in the air 1 year after the implementation of the Federal reformulated gasoline program in those areas where it was envisioned show a 38 percent reduction in the ambient concentration. This is what people are breathing.

Volatile organic compounds, another precursor to ozone, about a 20 to 25 percent. It does vary a little bit, and the bottom line is that this has improved significantly the air quality for over 75 million people in the United States, particularly in terms of air toxins and in ozone formulation. The concentrations of ozone have gone

down all over the country. I won't go into the great detail on that that I could.

Now, as we look at the issues that the committee is looking at and that Mr. Bilbray's bill brings to the forefront, and as we are looking at this at the national level with our panel that I think was mentioned in the last panel's discussion, which I will talk about in a little more detail, we are looking at how do we maintain these air quality benefits. They have been significant. They have helped many local areas around the country achieve their goals with a very cost-effective approach. How do we maintain that? But how do we deal with the fact that we have this water contamination problem? What is different about this water contamination problem than gasoline leaking into groundwater without MTBE in it? Many of these places that we've talked about today also have benzene and toluene and other components of gasoline in the water as well.

How do we do a better job of preventing fuel leaks? I know it would be idealistic, but if there were no fuel leaks there would be no problem. And what are the impacts of alternatives? That all came up in the previous panel as well.

And whatever direction we take, what effect does it have on the fuel supply of the United States and the cost of that fuel supply?

I don't think it requires a lot of thought to understand how important fuel supply is in the United States and, obviously, for the economy of the country and what the cost is. And how do we balance that appropriately to make progress on the issues that we are talking about?

Let me tell you quickly what steps we are taking here at the national level. Mr. Chairman, what I want to point out is that these dovetail very closely with the issues that have been talked about here already. We are working with California and other States. We have been working both on terms of technical assistance, financing, pilot projects to look at remediation, enforcement actions where we can use our authority to help facilitate cleanup.

This is something that has been going on in the Santa Monica area. We have been looking at approaches to remediate leaks. We have a research program: What can we do to find cheaper ways to remediate leaks not just where MTBE is involved, but in general, but specifically MTBE and to prevent these leaks? What more can be done to prevent this problem, because even if MTBE or any other component of gasoline wasn't in gasoline, the thing we must remember is gasoline is a potent toxic mixture of chemicals with or without certain oxygenates.

We as you have mentioned I think in one of your statements, Mr. Chairman, and as the Senator mentioned—we have a blue ribbon panel that we appointed last fall because we recognize, as does the Congress, that the status quo was probably going to have to change in regard to how we deal with these national clean fuels programs. And our panel is about 2 months away from recommendations to us, and we are working pretty hard with them, and so I will talk a little bit more about that during the question and answers.

We are reviewing the statutory and regulatory flexibilities we have. I know that the committee asked very specifically, do we have the authority to grant a waiver? I will talk about that in just a moment. And, very importantly, at the bottom of that list there,

because it is sequential, after we do those other things, it is going to be imperative that we coordinate with Congress on how we move this whole thing forward.

So I am going to say that that is the summary of my opening statement. I am sure there will be lots of questions. The key point I want to make here is that we are in a process at EPA and at the Federal Government. We have many people involved with our process, including four people from California on our panel. We have people from the drinking water industry in California. We have a person from Berkeley. We have a person from Lawrence Livermore. And we have a person from the California Air Resources Board on our panel, and so we are very coordinated in terms of where we are trying to push the panel's assessment and where California—what information we can get from California. I am going to end there with my opening comments and take some questions.

[The prepared statement of Robert Perciasepe follows:]

PREPARED STATEMENT OF ROBERT PERCIASEPE, ASSISTANT ADMINISTRATOR, OFFICE
OF AIR AND RADIATION, U.S. ENVIRONMENTAL PROTECTION AGENCY

Thank you, Mr. Chairman and Members of the Subcommittee, for the invitation to appear here today. I am pleased to have this opportunity to share with the Subcommittee the environmental benefits of the reformulated gasoline or RFG program, and to address issues raised by H.R. 11, introduced by Congressman Bilbray. H.R. 11, if enacted, would potentially exempt gasoline used in several California cities from the federal RFG requirements, including the 2.0% oxygen Clean Air Act (Act) requirement.

An understanding of the history of the federal RFG program is important in order to put H.R. 11 in perspective. As you know, the Clean Air Act Amendments of 1990 put in place a number of programs to achieve cleaner motor vehicles, and cleaner fuels. By and large, these programs have been highly successful. Only after extensive deliberations did Congress strike the balance between vehicle and fuel emissions control programs. The RFG requirements also emerged from combining several Congressional goals, including air quality improvement, enhanced energy security by extending the gasoline supply through the use of oxygenates, and encouraging the use of renewable energy sources.

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 30 areas still in nonattainment of the current 1-hour ozone standard, and more expected to exceed the new, 8-hour ozone standard.

Ozone has been linked to a number of health effects concerns. Repeated exposures to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other health effects attributed to ozone exposures include significant decreases in lung function and increased respiratory symptoms such as chest pain and coughing.

RFG is a cost-effective way to reduce ozone precursors such as volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), when compared to other air quality measures. The Clean Air Act Amendments of 1990 required that RFG contain 2.0 percent minimum oxygen content by weight. The first phase of the RFG program, from 1995 through 1999, requires average reductions of ozone-forming volatile organic compounds and toxics of 17% each, and NO_x by 1.5%. In the year 2000, the second phase of the RFG program will achieve even greater average 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. This is equivalent to taking more than 16 million vehicles off the road. RFG provides these reductions at a cost of less than five cents per gallon.

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. This includes Sacramento, Los Angeles, and San Diego. Although not required to participate, some areas in the Northeast, in Kentucky, Texas and Missouri that have poor air quality have elected to join, or "opt-in" to the RFG program as a cost-effective measure to help combat their pollution problems. At this time, approxi-

mately 30% of this country's gasoline consumption is cleaner-burning reformulated gasoline.

We are often asked about the "real-world" benefits of RFG. Since 1995, RFG, on average, has exceeded expectations for VOC, NO_x and toxic reductions. Most notably, overall toxics reductions are about twice that required, with about a 30% reduction versus a 17% requirement. It is estimated that about two-thirds of the additional air toxic reduction is a result of the use of oxygenates.

Ambient monitoring data from the first year of the RFG program also showed strong signs that RFG is working. RFG areas showed significant decreases in vehicle-related VOC concentrations. One of the air toxics controlled by RFG is benzene, a known human carcinogen. The benzene level at air monitors showed the most dramatic declines with a median reduction of 38% from the previous year.

Because of the severe air pollution that occurs in parts of California, and the leadership California has shown in addressing air pollution, the Clean Air Act provides the state with unique authority to establish its own clean fuels programs. Using that authority, California introduced its current formula of reformulated gasoline in 1996. Although reformulated gasoline sold throughout California must comply with the strict state requirements, all gasoline sold in three metropolitan areas (LA, San Diego and Sacramento) must also comply with the federal RFG requirements. In order to alleviate the burden on California refiners to meet overlapping requirements, EPA has provided them flexibility in a number of areas, including reporting and fuel survey requirements, and sampling and testing techniques.

Neither the Clean Air Act nor EPA requires the use of MTBE in RFG. The statute and EPA's regulations only specify the oxygen content as a performance standard, they do not specify what oxygenate to use. Both ethanol and MTBE are used successfully in the current RFG program, with fuel providers choosing to use MTBE in about 76 percent of the RFG.

Like federal RFG, California's Cleaner Burning Gas substantially reduces harmful emissions from motor vehicles. When oxygenate is added to RFG in California, in both federal and California RFG areas, almost all of it is MTBE. Oxygenates help to reduce emissions of ozone precursors and air toxics by diluting or displacing gasoline components such as benzene, olefins, aromatics, and sulfur and by altering the distillation index. Oxygenates also help to reduce carbon monoxide by improving the fuel combustion process. In addition, since oxygenates increase octane, refiners have chosen to add them to gasoline since the late-1970's. And because oxygenates comprise up to 11% of the volume of reformulated gasoline, they can extend the gasoline supply through displacement of some gasoline components. This reduces our reliance on foreign petroleum imports—a fact as important today as it was in the 1970s.

Despite the air quality aspects of oxygenates in RFG, there is growing concern about contamination of drinking water by MTBE in Santa Monica, several other areas in California, as well as in Maine and other states. As a result, Governor Davis has recently taken action to phase out MTBE use in California by the end of the year 2002. EPA is also concerned about the detection of MTBE in drinking water in California and other states. For the most part, levels detected in drinking water have been quite low. For instance, the California Department of Health Services requires public drinking water systems to monitor for MTBE. As of April, 1999, 3.8% of California's drinking water systems sampled have detected MTBE. Most of those detections are below the state's secondary standard (or taste and odor action level) of 5 parts per billion.

The U.S. Geological Survey (USGS) has reported that about 3 percent of ground-water wells in RFG program areas have detections of MTBE at or above 5 parts per billion. 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 spills from distribution facilities. These leaks are unacceptable regardless of whether or not MTBE is present in the gasoline. However, the presence of MTBE at these leak sites suggests the need for improved early warning systems for underground storage tank leaks. The Agency's underground storage tank (UST) program is expected to substantially reduce future leaks of all fuels and additives, including MTBE, from underground fuel storage tanks. All USTs were required to be upgraded, closed, or replaced to meet these requirements by December 1998. Over 80% of the regulated tanks have complied with this requirement and EPA is continuing to work with the states to ensure further progress.

In response to health and water contamination concerns associated with the use of oxygenates in gasoline, the Administrator established a blue-ribbon panel of leading experts from public health and scientific communities, water utilities, environmental groups, industry, and local and state government, including California, to as-

sess issues posed by the use of oxygenates in gasoline in California and the rest of the nation. The Administrator requested recommendations from the panel by July 1999. This panel is currently grappling with a number of complex issues. This includes an assessment of alternatives to the use of MTBE to ensure that the air quality benefits that RFG currently provides are continued, and the additional benefits of the second phase of the program are not endangered.

There is concern about the availability and viability of potential substitutes such as ethanol, or alkylates, that could help to provide the dilution and octane benefits currently obtained with MTBE. Refiners are using about 260 thousand barrels per day of MTBE in RFG, as compared to about 25 thousand barrels per day of ethanol. If substitutes can be made available, what time frame would be needed? Are there potential environmental consequences of substitutes that need to be considered? What are the potential impacts to water quality if these substitutes are accidentally released to the environment? What will the public ultimately have to pay for such alternatives? These are just a few of the many questions the panel is considering as it begins to develop options.

Options being considered by the panel include the following: maintain the status quo and continue current efforts to protect water sources; enhance existing water protection programs; increase flexibility on the use of oxygenates with no new constraints on the use of MTBE; increase flexibility while also phasing out the use of MTBE; or maintain the oxygen mandate but phase out MTBE. We are impressed with the high caliber of individuals that are serving on the panel, and are looking forward to hearing the panel's recommendations regarding steps that should be taken to ensure continued improvement in both air and water quality.

Mr. Chairman, I want to assure you that we are committed to working with the state of California to continue to look at options, including potential actions that could be taken within the state to align fuel distribution with state and federal RFG requirements. At the same time EPA is carefully assessing our statutory authority to determine what, if any, options we have to address Governor Davis' recent request for flexibility on the oxygen mandate. The waiver request submitted by the Governor is the first one EPA has received. Since this is the first case, there is no precedent for an administrative response to such a request. We are therefore looking closely at the Governor's request, and assessing both our authority and the evidence presented by the state.

Again, I want to emphasize that the blue ribbon panel is in the process of conducting a robust evaluation of issues posed by the use of oxygenates, nationwide. The panel has painstakingly taken the time to hear from a wide variety of stakeholders in this matter, including an open meeting in Sacramento, California. From that input, the panel has now begun to formulate a number of options for consideration. Once we have the panel's recommendations, it is important that we work with states, and coordinate with Congress over the next three to four months. During that time frame, we will not only have the benefit of the panel's advice, but we will have a better understanding of our authority to respond to Governor Davis' request for flexibility on the oxygen mandate. We will then be in a better position to coordinate with Congress to ensure that air quality benefits are preserved, while continuing to protect the nation's water quality.

This concludes my prepared statement. I would be happy to answer any questions that you may have.

Mr. BILIRAKIS. Thank you, sir. I am sure we all have questions. I am going to yield to Mr. Bilbray.

Mr. BILBRAY. Thank you, Mr. Chairman. On April 22, 1998, the EPA testified that they could not—EPA cannot support the bill at this time. Now, I have looked at and reviewed your prepared statement, and it gives a very comprehensive history of the reformulated gasoline program, but it is completely silent on H.R. 11. Is the subcommittee to assume that EPA no longer opposes the Bilbray/Feinstein bill?

Mr. PERCIASEPE. I think the administration has no position at this time on this bill or any of the other bills that are currently beginning to be introduced, and we want to find a way to coordinate between recommendations from our blue ribbon panel, which we expect in the next several months, and what the legislation might start to look like.

I would have to say that we would lean toward looking at national approaches, but assuming that the panel puts forward recommendations that look at national approaches and that legislation is part of that, we are about 2 months behind you, I would imagine.

Mr. BILBRAY. Do you see any damage, looking at California specifically, to us?

Mr. PERCIASEPE. I think the fact that you are having this hearing is helpful to the entire debate on this subject. I think it is very important that we keep in mind the broad base of issues that I put up there, because it is not just the groundwater contamination, although that is vital and something we have to take into account. We have to look at how we don't lose the air quality benefits, we have to look at the fuel supply issues, the cost issues and everything else.

I think as several people have already said, as goes California, so goes the Nation. Clearly it will be a bellwether, and I think it is very important for me, at the national level, to have some view about where that is going to go before I make a decision one way or another to advise the administration specifically on your bill.

Mr. BILBRAY. Okay. Let us point out some specifics about California that may make it kind of unique. Does the EPA agree that California clean-burning gasoline is equal or superior to the Federal reformulated gasoline formula?

Mr. PERCIASEPE. I think that is an accurate statement, yes.

Mr. BILBRAY. Thank you. I think, just to clarify, in February 1994 the EPA's position was that California's program was at least as stringent as the Federal program. In 1994, in the Federal Register in February, a statement of EPA was that California has a greater emission reduction performance than the Federal Phase 1.

In February 16, 1994, the EPA stated in the Federal Register that the fuel meeting the standards of the California Phase 2 program has a greater VOC and toxic performance reduction than fuels meeting the Federal formulated gasoline standards.

So I think to clarify here, H.R. 11 in no way is indicating to outlaw oxygenates in the fuel, but at the same time, California is one State that EPA has concluded has a fuel that is equal or superior than the 1990 formula.

That is fair to say?

Mr. PERCIASEPE. Yes. The reformulated program in the Clean Air Act on the national level has two phases to it, phase 1, which was in 1995, and phase 2, which takes effect in 2000. When phase 2 takes effect, those differences will narrow, but the equivalence will be the same.

Mr. BILBRAY. Do you have any other State equal to the California reformulated gasoline?

Mr. PERCIASEPE. When States start using the second phase of the reformulated program, they will be equivalent.

Mr. BILBRAY. At this time—

Mr. PERCIASEPE. The refinery industry, they are somewhere in between, I should say. They are somewhere in between phase 1 and phase 2 reformulated gas as they ramp up, and are probably getting closer this summer.

Next summer they have to be there.

Mr. BILBRAY. Thank you very much. I appreciate it. I yield back, Mr. Chairman.

Mr. BILIRAKIS. The gentlelady from California, Ms. Eshoo.

Ms. ESHOO. Thank you, Mr. Chairman.

Good morning to you and welcome. As you know, the Clean Air Act gives California a unique authority to administer its own fuels program to reduce vehicle emissions. Despite this authority, the reformulated gasoline requirements of the Clean Air Act still apply to California.

So as I understand it, this means that California is the only State in the country where Federal requirements apply in conjunction with State regulations that have proven to be more effective in terms of producing cleaner burning gasoline.

Can you provide any further insight as to whether or not EPA is willing to grant a waiver from the Federal reformulated gas requirement to California as requested by the Governor, and, if not, what is the basis of your thinking?

I have another question as well, and that is that H.R. 11 requires that in order to obtain the flexibility it wants, a California refiner would have to demonstrate to EPA that its nonoxygenated gas burns at least as clean as the Federal RFG. Do you have a problem with the principles of a performance standard, even when your own agency gets to decide whether the standard has been met?

Mr. PERCIASEPE. I will try to go in order there.

Ms. ESHOO. Don't run out of time.

Mr. PERCIASEPE. On the equivalency, next summer there will be very little difference between the Federal program and the California program in terms of the performance from an air quality perspective. So the differences in terms of one being superior to the other will really fade away next summer.

The waiver request that the Governor has——

Ms. ESHOO. This coming summer?

Mr. PERCIASEPE. The summer of 2000, the Federal reformulated gasoline program will be roughly equivalent to the California program. There will be some differences, but it will be roughly equivalent.

Ms. ESHOO. California being more stringent.

Mr. PERCIASEPE. Right now. In 2000, they will be much closer.

Ms. ESHOO. I hope everyone hears that on the committee.

Mr. PERCIASEPE. Of course, it is only used in the Sacramento area, the Los Angeles area, and the San Diego area. The request for a waiver that the Governor has sent to EPA was for a waiver from the 2 percent by weight oxygenate requirement. To my knowledge, all of the California clean gas also has oxygenates in it. But the Sacramento, Los Angeles and San Diego areas, since those are the Federal reformulated gas areas, have to have at least 2 percent by weight of oxygenate.

There was a request from the Governor to provide some flexibility on that or a waiver specifically for that. That doesn't mean there will not be oxygenates in it but the 2 percent waiver.

Now, you sort of asked me the question already in your opening statement, but the Clean Air Act does provide for a waiver, so the simple legal interpretation is yes, EPA has the authority to grant a waiver. But the problem is, let me tell you what it is for. I will

read it to you. Upon a determination by the administrator that compliance with such requirement, the 2 percent oxygenate requirement, would prevent or interfere with the attainment of the area, in this case the southern part of California and Sacramento, with ambient air quality standards.

So the authority we have in the Clean Air Act, given to us by Congress, to grant a waiver, is based on whether or not the 2 percent oxygenate requirement interferes with the attainment of National Ambient Air Quality Standards.

So when I say, yes, we have the authority to grant a waiver, I have to preface it with—and the reason I didn't answer as explicitly in my written testimony yet, we have never been asked whether the oxygenate requirement is interfering with the implementation or the attainment of National Ambient Air Quality Standards. As the chart showed earlier, all the evidence shows it is helping attain the National Ambient Air Quality Standards.

So this is what we are reviewing with the State of California and why we don't have a final answer yet on the waiver part.

I am afraid I forgot the third one. I think it was—you had a third question there.

Ms. ESHOO. Do you have a problem with the principles of the performance standard, even where your own agency gets to decide whether the standards are met or not?

Mr. PERCIASEPE. We are in favor of performance standards. That is pretty much the way the Clean Air Act is set up.

Mr. BILIRAKIS. Did you have anything more?

Ms. ESHOO. No, I will honor the clock going off.

Thank you.

Mr. BILIRAKIS. Well, sir, of course, the waiver request was made by the Governor, but the Commerce Committee request was for a legal analysis.

You have a policy decision, you referred to your charts. But we are interested in a legal decision. All we asked about was the legal decision and your ability to grant a waiver of the requirement, and we haven't heard anything.

You are saying you do have that legal ability, but that it is—

Mr. PERCIASEPE. Yes. The plain language of the act says we can grant a waiver to the oxygenate requirement if it is interfering with the attainment of air quality standards.

Mr. BILIRAKIS. That is the only basis that you would have to grant a waiver?

Mr. PERCIASEPE. That is a specific—

Mr. BILIRAKIS. The only basis? Is that the way you read the act?

Mr. PERCIASEPE. We are looking at the rest of the act as well, but that is a specific provision in the act that can grant a waiver for the oxygenate requirement.

Mr. BILIRAKIS. So what you are telling me is that you are looking at other sections of the Clean Air Act to determine whether, in fact, you have the legal authority to grant a waiver?

Mr. PERCIASEPE. We are trying to be as expansive in our review of this request that you have given us as we can. We haven't completed it. Obviously we are looking into it. We will continue to do that.

Mr. BILIRAKIS. Sir, with all due respect, and really, I mentioned, and it has been brought up here, that there are always dangers with opening up the Clean Air Act. Granted, if you go into the national approaches to this situation you are doing it there anyhow. But if we don't have to open up the Clean Air Act for California, I think it is an advantage, and we have kind of opened up the door here.

It sounds to me, frankly, with all due respect, like you are stonewalling. Do you just not want to make a decision? The least you can do is tell us whether you can make the decision. The way we read the Clean Air Act, you have the legal authority to either grant or disapprove the waiver. But we haven't flat come out and said that. We have asked you if, in fact, you could do it.

Mr. PERCIASEPE. Okay. Our counsel is still working on this, and we would be more than happy to talk to your counsel about what ideas that they have on it. Obviously there are advantages if we don't have to have Federal legislation if there is a way to solve a problem.

I want to point out something else that has come up several times here, and that is California doesn't need a waiver to ban MTBE. If the Governor has made this decision, which he has done, simply moving to an alternative oxygenate, you don't have to have a waiver.

Mr. BILBRAY. If the gentleman will yield, to simply move to another oxygenate, to me, is the most insensitive statement I have heard here.

You are talking about the largest consumer of petrochemicals in the world, and with the cost impacts to our consumers right now, this is not just a simple thing of saying let us just start trucking in one product instead of the other.

I don't know if you have ever been involved in the transformation of one fuel to another. I have over 10 years ago. I did it 3 times. It is not a simple thing.

I am sorry, Mr. Chairman, but I have to clarify. The simple issue here with H.R. 11 is giving the flexibility, and EPA has not, going back 5 years ago with Mary Nichols, has not determined they have had that flexibility in the past, and I would think the Chairman is just trying to get a clarification. But don't say it is a simple transition, because I'm sorry it isn't.

Mr. PERCIASEPE. You are correct.

Any transition from the way the fuel is provided now will not be simple. Any transition—and any transition is going to take time, both in California and nationally, and will cost money. The option is open to California to achieve its policy objectives—are to have more flexibility with oxygenates, which I understand is the question at hand, and/or try to do—I am using up whose time—well, if we can go around to the Member again.

Mr. BILIRAKIS. All right, look, I think it is just a simple request that was submitted in writing on April 23 and prior to that verbally. That is an awful lot of time. Common, I have practiced law too.

But can you give me a date? Can you give me a time when we are going to hear from EPA whether they feel that they have the

authority to grant a waiver? To grant the waiver regarding the—of course, the application made by the Governor.

Mr. PERCIASEPE. I don't want—it is not my intention to be argumentative here.

Mr. BILIRAKIS. I don't intend that either. Put yourself in our shoes. We are trying to do a job here, and I don't know, it looks like Mr. Shadegg is no longer here, but he made comments about how it looks like a no-brainer, because it would clean up the air, it would clean up the water, it would result in less cost to the consumer, et cetera, et cetera.

Whether you accept all that or not, I don't know. But it indicates if you do, it is a no-brainer. In this committee, we are pledged to do a particular job and we are requesting the cooperation of EPA, just a simple request. We didn't even ask you if you would grant the waiver, but can you in fact?

Mr. PERCIASEPE. I can say at this particular juncture it is clear under certain circumstances we could grant a waiver, and at least in one provision of the Clean Air Act if lays out what those circumstances are, that there is an interference with the attainment of national air quality standards.

Mr. BILIRAKIS. I guess we are going to have to suspend. I was hoping, sir, we could finish up and release you.

Ms. ESHOO. Could you yield for 30 seconds?

Mr. BILIRAKIS. We have something less than 5 minutes to vote.

Ms. ESHOO. I just want to get this in before I leave and not jeopardize my vote on the floor, and that is I want to underscore what the Chairman is struggling to say here.

I don't think that the California Clean Air Act or the Federal Clean Air Act was anything but a magnificent effort at a health-based environmental law. I helped implement the Federal Clean Air Act, meshed the California Clean Air Act, before I came here, together in the Bay Area Air Quality District. I come to the table with, I think, well-earned environmental credentials.

So to skirt around this issue or to not address it head on and not work as a genuine partner—it is one thing to talk about the Federal Clean Air Act. What about the rest of this testimony as to what we are subjected to in the State of California? We have responsibilities to work with one another to make this thing work.

Mr. BILIRAKIS. I am going to suspend the proceedings until we can return from the vote.

Mr. HALL. Are you going to keep this witness?

Mr. BILIRAKIS. Yes, sir.

Mr. PERCIASEPE. I will continue when you return.

Mr. BILIRAKIS. As soon as we get back. Thank you, sir.

[Brief recess.]

Mr. BILIRAKIS. Okay, let us get started. Are you ready, sir?

Mr. PERCIASEPE. Yes, Mr. Chairman.

Mr. BILIRAKIS. Mr. Perciasepe, again, you know, I think that your concern and the concern of EPA is the opening up of the Clean Air Act and the problems that may come from it and everything of that nature. So it stands to reason that if you can grant the waiver, and we haven't asked you to grant the waiver, we haven't asked for a policy decision, we merely asked if you feel that you have the legal authority to grant the waiver.

But if you can grant the waiver, obviously then we are not re-opening up the Clean Air Act insofar as at least as California is concerned. You certainly ought to take that into consideration.

Anyhow, getting again to the legal decision, Mr. Meyers is right here to my right. I know he has worked with your people over the years. When can we expect to find out whether, in fact, you feel that you can, you have the authority at least, to grant the waiver regarding the specific request?

Mr. PERCIASEPE. I am hesitant to give you an exact time, but, you know, I don't want to waste a lot of time on this. I don't want the committee wasting their time either. I am very respectful to the position that you are putting forward here, that obviously if there is an administrative way to deal with some of these things, that reduces at least some of the legislative work that may need to get done.

If it is within the bounds of what everybody is comfortable with, that makes everything work better. I recognize that, and obviously I want to do it in a timely fashion so we can work with you. I want to keep coordinating with you. I would like to coordinate with your counsel. I want to have some time to consult with the State of California. I haven't been able to do that yet as well. I mean, we have had general discussions. So I am talking—

Mr. BILIRAKIS. Forgive me, because I am not ordinarily this way in the Chair, but, again, you say coordinate with the State of California, and all we are wondering is do you have the authority, the legal authority to grant the waiver?

I am not even asking you whether you would grant the waiver.

Mr. PERCIASEPE. Right. I understand that.

Mr. BILIRAKIS. But you are not sure? You can't respond?

Mr. PERCIASEPE. I think the answer, in simple terms, is yes.

The question is what constitutes those conditions that are in the statute. You know, I want to spend time understanding the basis of California's interest in any interference with meeting the air quality standards. I would rather not make that up.

Mr. BILIRAKIS. I am going to ask counsel here then to coordinate with the committee by this time next week to find out what has transpired in that regard, because I would hate to think that—well, I have said it, and Ms. Eshoo said it a lot better than I. The word "stonewall" is basically what is being used here. It is a shame. She mentioned the word "partnership." We should be working together.

Mr. PERCIASEPE. We agree with that. I want to make it really clear that I agree with that statement, and what the Congresswoman said, and I want—as Mr. Bilbray said earlier, I am not here in opposition to this bill, like has been the past practice of the Environmental Protection Agency.

We are changing our views on what has to be done here, but we have a process under way where—maybe perhaps a little bit behind you, I put up there as one of the principles we want to coordinate with Congress.

You used the word partnership. I agree with that term too. I want to be clear to all the members of the committee that we are not here trying to stonewall, we are not here trying to say let us not do something if it needs to be done. We are here in a different position than we have been in the past Congresses, and I appre-

ciate the frustration and I respect the need for you to know what you are asking me.

Mr. BILIRAKIS. Okay.

Senator Feinstein quite clearly indicated that she did not think that the blue ribbon panel and their deliberations had anything at all to do with the immediate subject matter of this hearing and the request for the waiver.

Then I do appreciate what you say about the overall picture, because decisions have to be made regarding the overall picture. But, again, that is the policy.

I think my time has expired. I will give you all opportunities to finish up.

Mr. BILBRAY. Can I make a statement for the record?

Mr. BILIRAKIS. Yes, you can.

I was going to give you that opportunity anyhow.

Mr. BILBRAY. I just want to clarify that my original introduction of this bill in 1996 was after extensive discussion with Mary Nichols of the EPA, after a request and consultation with the State of California between and among Mary Nichols, myself, and the California EPA.

The reason for this legislation is that the representative of the EPA at that time, as now, evidently felt that she did not have the authority under the act to grant the waiver. That is the purpose of the whole legislation. I yield back, Mr. Chairman.

Mr. BILIRAKIS. To the ranking member of the subcommittee, Ms. DeGette.

Ms. DEGETTE. Thank you, Mr. Chairman. To shift ground just a little bit, one of the things you focused on in your testimony was this concern about leaking underground storage tanks, and this is a concern in my district as well in Colorado and around the country as well as in California.

I was curious to learn that you thought it was a big concern here today in your testimony, because last year when we had testimony on this legislation, we heard that there was a compliance deadline for the tanks at the end of 1998. Then we subsequently learned that the EPA intended to give low enforcement priority to certain categories of tanks.

So I guess I am wondering, given the concern that you have about MTBE today—and maybe you can also explain, we now have two statistics. One comes off of your web site which says only 500,000 of the 892,000 storage tanks are in compliance with Federal standards, and then the other statistic in your testimony today says 80 percent are in compliance.

So my questions are, No. 1, which is it, and, No. 2, what is the agency doing to bump this up on the priority list?

Because it would solve a lot of the immediate health hazards, although I don't think it would solve the whole problem.

Mr. PERCIASEPE. Right.

Let me just say that 80 percent is our current estimate of the compliance rate. We expect it to be around 90 percent next year. We are pushing it as hard as we can.

It is a very important program. We are trying to work with water supply programs to look at targeting compliance in areas where there is source water protection for drinking water, coordination

between the water program and the underground storage tank program.

So, yes, it is a high priority, particularly in those sensitive watersheds. I think it is fair to say in addition to what you said, that underground storage tanks are by no means the only source of gasoline getting into the environment. Obviously it could be transportation pipelines or overturned tanker-trailer trucks, or even in a rural area where you have private wells, very small leaks could cause problems.

So you are correct in that assessment.

Ms. DEGETTE. To follow up, what happened with that 1998 deadline? Did it get extended?

Mr. PERCIASEPE. The deadline is not extended. All the legal requirements are still in place, and we are sweeping through to get the compliance to 100 percent.

It is going to take time though.

Ms. DEGETTE. How much time? Are you seeing in a place like California any improvement in the groundwater—or any dissipation of the problem of groundwater contamination as you move more toward this?

Mr. PERCIASEPE. We definitely anticipate, whether it be California, Colorado or anywhere, when the tanks are upgraded to the more modern tanks that have the coating and the protection from electric arching and all these other things, that it will reduce substantially the risk of leaking from the tanks.

But there are historic leaks we find when we dig them up—you probably know all this from looking at the problem before—that have to be remediated.

Ms. DEGETTE. So you haven't actually seen any changes in the last year in California in particular?

Mr. PERCIASEPE. I don't have enough information to answer that question right here.

Ms. DEGETTE. Let me ask you another question.

Last year when we heard from the Department of Energy about Mr. Bilbray's bill last year, which was almost identical to this, he identified a key supply related issue called regulatory stability and discussed major investments in oxygenate production as well as refinery equipment that were made by the regulated entities with the expectations that the regulations would remain stable.

He opined particularly that as we moved into the implementation of the phase 2 that you were talking about a few minutes ago, its regulatory uncertainty would reduce stability of the reformulated gas program.

Do you have those concerns as you move into phase 2?

Mr. PERCIASEPE. I think the issues you bring up are reasons why I testified earlier this morning that there are national issues at play here, and as we start to make decisions, whether it be in California or Maine, Colorado, or New Jersey, that they are going to have a cascading effect on how we try to deal with this issue nationally.

I can't put blinders on and say that isn't the case. Notwithstanding the very real problems that have to be dealt with today.

It is true that time is probably one of the more important ingredients to making an appropriate transition, whether it be in Cali-

fornia—and the Governor clearly recognized this in his executive orders. And you will be able to ask the California folks how they came up with their approach. But time to allow a transition so there is no disruption in fuel supply, so there are no spikes in price and run-outs in certain areas is vitally important. I don't have a good answer for what that time line would be on a national level to do this kind of transition.

But the issues that were testified to last year are issues that we are trying to grapple with in our blue ribbon panel. We have experts on that panel from the refining industry and from the Department of Energy and from California who have already gone through some of this analysis to look at how, whether it is flexibility or whatever kind of transition that might come to be, that it is done in a way that protects the American fuel supply from any of those eventualities.

That would have to be taken into account as we look at this issue nationally.

I don't want to say that California hasn't. The Governor did take these things into account.

Ms. DEGETTE. Thank you. I am out of time.

Mr. BILIRAKIS. Dr. Ganske.

Mr. GANSKE. Thank you, Mr. Chairman.

Mr. Perciasepe, if I am pronouncing your name right, you know, from a lot of the comments that members of the first panel made and comments from the committee sitting here, it seems like a lot of members think that there is a significant problem with MTBE in groundwater. Is that the EPA's view as well?

Mr. PERCIASEPE. MTBE is less toxic than many other constituents of gasoline, so the toxicity part, while a very important part, if you took it out, the gasoline would have constituents in it that are just as and more toxic than MTBE itself.

What MTBE does have is a unique physical characteristic, and that is its solubility in water. It has the ability to move more quickly than the other constituents of gasoline. When we get the leaks, we get the other stuff, the toluenes and benzenes, that gets into the water also, but it doesn't move as quickly and get as far away.

So the answer is yes, MTBE in gasoline does present a difficult set of issues when gasoline gets spilled into the environment. I guess we would want to have this world where this doesn't happen, but it does. So not having MTBE in the gasoline will not make it okay to spill gasoline into the environment or drink it or anything like that. But having it in there and its unique physical characteristic, does exacerbate the remediation and it does increase the amount of groundwater that can be affected in a shorter period of time.

So from that perspective, yes, it has a different impact.

Mr. GANSKE. So you are saying that it is unique in that it is very soluble, that it tends to move, and in that respect, it is unlike other parts of gasoline.

Is that a fair summary of what you just said?

Mr. PERCIASEPE. That is probably a fair summary. I don't know every chemical in gasoline. There may be other ones in there that are equally soluble. In general.

Mr. GANSKE. Since there is another oxygenate available that doesn't present the same kind of problems, why doesn't the EPA just ban MTBE?

Mr. PERCIASEPE. I know this committee doesn't seem to be very amenable to my sort of legalistic or bureaucratic answers here, but we don't have the authority—we don't really have the authority to ban specific—

Mr. GANSKE. If you had the authority, would you think about doing that for this because of this unique property of this chemical?

Mr. PERCIASEPE. I think that is why we have changed our position on this and why the administrator has appointed a blue ribbon panel, to look at all the consequences of this. I certainly don't want to easily slip out of the frying pan into the fire with whatever answer that we come up with there, so I am well aware of the competing opportunities that are presented and how this will come out.

But I am very hopeful that if we keep our eyes on the ball, to use that sports analogy, in this deliberation that we are in, that we can come up with a fair and environmentally protective set of recommendations that we will obviously share and coordinate with Congress.

Mr. GANSKE. Let us see if we are in agreement with some things. It is my understanding that oxygenates reduce exhaust emissions of carbon monoxide and volatile organic compounds, VOC's, particularly in higher emitting vehicles. Carbon monoxide is a precursor to the formation of urban ozone. In fact, as VOC emissions from vehicles have been reduced, the importance of carbon monoxide to ozone formation has become more critical.

Recent studies indicate that exhaust carbon monoxide emissions from gasoline vehicles make about as much ozone as do exhaust VOC emissions. Neither Federal RFG or California CBG includes a carbon monoxide performance standard. In the absence of an oxygen requirement then, an increasingly important contributor to the formation of urban ozone will be increased.

Do you agree with that?

Mr. PERCIASEPE. Increase in carbon monoxide?

Mr. GANSKE. In the absence of an oxygen requirement, an increasingly important contributor to the formation of ozone will be increased.

Mr. PERCIASEPE. Well, I don't know whether I can agree with that point-blank, because I don't have enough information. But let me say there are two things that work against that being an absolutely true statement.

First, as I mentioned earlier in my testimony, Congress envisioned an optimization between the automobile technology and the fuels. And one of the reasons, among many, that there is not a carbon monoxide component to the reformulated gas is because the oxidizing catalysts that are put on the tailpipe of the automobile oxidize carbon monoxide. So there is a control technology on the car. Both California and the Federal Government have a very strict tailpipe performance standard for automobiles for carbon monoxide.

So regardless of what happens to the fuel, the automobiles can't exceed that performance standard at the tailpipe. To the extent that we have total balance the fuel and the technology on the car,

that is another one of these national issues that is before us as we look at these formulations.

Mr. GANSKE. Mr. Chairman, I have one question in follow up to that on the exhaust. I—may I have 1 additional minute?

Mr. BILBRAY. One additional minute.

Mr. GANSKE. If reducing ozone then is the objective, exhaust VOC emissions are more important than evaporative VOC. Would you agree with that? Because exhaust emissions are more reactive. Exhaust emissions will form ozone more quickly and readily than evaporative emissions.

In the absence of the oxygen requirement, it is very likely that exhaust emissions will increase relative to evaporative emissions. Thus, ozone increases even if mass-based VOC—even if the mass-based VOC standard, which does not distinguish between exhaust and evaporative emissions is met.

Would you agree with that?

Mr. PERCIASEPE. I would agree—

Mr. GANSKE. Thank you.

Mr. PERCIASEPE. No, no. I would agree that a simple mass-based performance standard for either VOC's or toxics can be met with varying degrees of actual performance in the ambient air because different VOC's do have different reactivities, and different toxics have different toxicity.

One of the concerns in looking at oxygenates and/or other formulations of gasolines are—is if there are less or more of them, what are they displacing and what is replacing them. If I replace oxygenates, for instance, with more aromatics, and benzene would be an example of an aromatic, or olefins this could increase toxic emissions in terms of toxicity, but you still could be meeting the performance standards of toxic mass reductions.

On the VOC question that you have specifically asked, we have asked the National Academy of Sciences to give us advice on that, and we are—I know this sounds like a broken record, almost like I was going through with the chairman earlier, but we are hoping that the National Academy of Sciences is going to give us some input on that within the next several weeks.

Clearly there can be variability underneath those mass standards.

Mr. GANSKE. My last question then, it is possible that eliminating the oxygen requirement in California could result in increased environmental problems?

Mr. PERCIASEPE. Yes, depending on the formulation that replaces it.

Mr. GANSKE. Thank you.

Mr. BILBRAY [presiding]. I think the discussion with the gentleman from Iowa clarifies why outcome-based, not process-based environmental strategies are essential. Right now you have a standard based on what you put into it, and you make assumptions based on what comes out.

Sometimes the assumptions are a major problem. I would just like to say as somebody who worked on the evaporative emission problem, I don't know what has been done in the last 2 years, but I remember our problems where we underestimated the evaporative emissions problem by 75 percent, I remind my colleague in

this nonattainment area of California, they have the Smog Check-2 tailpipe inspection program, which the gentleman from the EPA pointed out, which is the most stringent in the world. It is part of this.

So trying to look at these things in isolation is tough if you don't see the whole strategy. I have to say one thing, EPA is right, in that you do have to look at the big picture.

I would like to recognize my colleague from New Jersey, Mr. Pallone.

Mr. PALLONE. Thank you. I wanted to ask you two questions. One about my bill, and then the other about the underground storage tanks.

First, I know the bill was just introduced yesterday, but I just wanted to get an idea whether the EPA would support the concept behind it, which basically is a waiver of national oxygenate requirements, the MTBE phaseout, and the national study of health and environmental effects of oxygenates.

Mr. PERCIASEPE. Congressman, I am going to find myself in generally the same position in not opposing it, again in a little advance—we are trying—I think Congress deserves EPA when it comes before it and says this bill, or this piece of this bill, or this piece of this bill, works, because it works in this context. You deserve to get that from us. Unfortunately, as I mentioned earlier, you are ahead of us having that context.

Now, I am going to say in a couple more months we should have a better sense of the context in which we can look at the different pieces of these legislative proposals and be able to be more coordinated, as I mentioned, with Congress.

So I don't think we would be in here today in a position of saying we would oppose any legislation related to this forever and hold our peace, but to say that I want to be able to bring to you the context in which all these changes would be made. It is the fuel supply of the United States, there are a lot of moving parts, as somebody might say, and I want to be able to give you the best advice I can.

I am a little bit short on that right now in terms of the advice I am trying to get from these national experts.

Mr. PALLONE. Can we ask then that you will get back to us?

Mr. PERCIASEPE. Yes. Absolutely. Yes, of course we will get back to you.

[The following was received for the record:]

Mr. Perciasepe committed to get back to Congressman Pallone once the Agency has received recommendations from the panel of experts currently assessing issues related to the use of oxygenates in gasoline. The recommendations are expected in July, 1999.

Mr. PALLONE. You talked about the underground storage tanks as a source, and we know they are a source, of a lot of the MTBE's. I guess it has been 10 years for underground storage tanks to comply with Federal requirements, but you said they are at 80 percent compliance and heading toward 90 percent. Since it has been 10 years, I am just wondering when we are going to reach 100 percent compliance?

Mr. PERCIASEPE. I hate to answer for my colleague who is in charge of that program, but I guess one way I can just do it in my head and project it would probably be another couple years. And

if you want a more detailed answer for the record I would ask that you let me consult with my colleagues who run that program and get that to you. I am sure they have got a more technical answer than looks like a couple more years.

Mr. PALLONE. All right. If you would get back to us, with the permission of the Chair. Thank you, Mr. Chairman.

[The following was received for the record:]

EPA expects that within 2-3-years nearly 100% of active underground storage tanks (USTs) (that are federally-regulated) will have the equipment necessary to meet the 1998 deadline requirements, but there are ongoing operation and maintenance requirements that need to be followed in order to ensure full UST system compliance.

Mr. BILBRAY. The gentleman from Texas, Mr. Hall.

Mr. HALL. Thank you, Mr. Chairman. Have you provided for us to submit questions for the record to be answered?

Mr. BILBRAY. Yes.

Mr. HALL. If we will be allowed to do that, I will shorten my questions a little if we can.

Mr. BILBRAY. Especially if you are from Texas.

Mr. HALL. It is my understanding that the EPA just announced a fuel sulfur rule requiring its sulfur be reduced to 30 parts per million. In order to maintain octane, the preamble of the rules suggest that oxygenates are going to be needed. In light of this, wouldn't it be shortsighted to place some limits on MTBE?

Mr. PERCIASEPE. Well, we have provided a pretty long phase-in for reducing sulfur which, incidently, California has already done with their fuel. We basically are catching up the national fuel to the California fuel on the sulfur side. On these other things we have been talking about we catch up pretty much next year, and we have a phasedown going to 2006 and longer for smaller refineries. There are actively being tested today, at the refinery level diesel sulfurization processes that do not reduce, octane across the desulphurization process—they are catalytic processes associated with the fluid catalytic cracker system. If that continues to be a problem over the next several years as these new technologies evolve, and our hope is they will because it will reduce even beyond what we have estimated the cost of desulfurization to be, there are other options to working on the octane than just simply adding MTBE. But we hope—it is our hope, even though we explained in the preamble that there is currently an issue with this and this is only a proposal, we hope that this will not be an issue, Congressman, in the desulfurization processes.

Mr. HALL. The benefits of MTBE, one of the great ones being it is the least expensive?

Mr. PERCIASEPE. I think—it is hard to say MTBE has this and this other option A has this.

Mr. HALL. That is meeting the 2 percent requirement.

Mr. PERCIASEPE. The reason MTBE is used more than other oxygenates is not completely, but significantly associated with its cost, but it is not the only reason. It is ease of transport through the pipeline systems and other factors are involved with that. So there are a number of product side advantages from some of the other oxygenates. You can argue with them but that is what the industry has done because we don't say, in Congress's instructions

to us under the Clean Air Act or in anything we have done, which oxygenate should be used to meet those standards that are in the Clean Air Act.

Mr. HALL. Aren't there some instructions in the Clean Air Act that require technology that is not even in existence yet?

Mr. PERCIASEPE. You saying that as a general matter?

Mr. HALL. Yes. If you don't know, you can tell me you don't know. I can't point out—I was here when it was written, days and nights. I thought it was a bad act when it was written.

Mr. PERCIASEPE. There are probably some parts of it that were written in anticipation of some technology.

Mr. HALL. I will withdraw that. I don't want to hammer around on you. You have been condescending in answering the best you can on all these, but go ahead and give an answer to my question. Wouldn't it be shortsighted to place limits on MTBE under those circumstances? Just yes or no.

Mr. PERCIASEPE. If life was only that easy. I can't—

Mr. HALL. Would you recommend to place limits on MTBE, then, under those circumstances?

Mr. PERCIASEPE. Under which circumstances, sir?

Mr. HALL. That I have laid out. You want me to repeat them?

Mr. PERCIASEPE. The reasons why it is used as much as it is?

Mr. HALL. Yes.

Mr. PERCIASEPE. Let me just answer in a phrase, and that is, we need to take care in any limits we place on the way the fuel is and to not take into account the impact on price distribution and fuel supply while we are looking at the environmental issues.

Mr. HALL. Mr. Chairman, I have some other good questions to ask him but I will submit them, one of them being whether or not EPA believes MTBE to be a health threat. I would like to know about their blue ribbon panel on MTBE, the investigation of the issues that we are addressing here today and other things so I will submit those. And I thank you.

[The following was received for the record:]

Congressman Hall noted that he plans to submit questions for the record. EPA will be happy to respond to these questions as soon as they are received.

Mr. BILBRAY. The Chair would like to point out to the gentleman from Texas that H.R. 11 doesn't specifically outlaw the use of any product. Again, it is the flexibility that is the intention of legislation.

Referring to the question about the Clean Air Act requiring the use of technology that does not exist or did not exist at the time of the act, technically you can say no, it did not; but as somebody who has implemented the act, to implement the standards that are set by the act, State and local agencies have been required to implement a strategy called technology-forcing regulations. This is an interesting game of chicken with reality, in which we say as of this time, you fulfill this standard and if you don't, basically the world's going to come to an end. And I have got to say one thing as somebody who has been involved: Most of the time, industry fulfills those standards. There are some times you have to back off, but the clean fuel—the reformulated gasoline in California is one of those where you had almost every major oil refinery in the State say it was absolutely impossible to do it, until one vice president

or one oil company said we will not only do it, we will do it in 6 months. At that time, I will tell you, I wouldn't want to have the life insurance policy for that guy.

I think we have gotten some great testimony. I appreciate the fact you are here. I would only like to ask one question, because Mr. Ganske had pointed out the possibility that there could basically be backsliding in California if the mandated oxygenated content was withdrawn to any degree. In the areas of California where there is no Federal mandate to use reformulated gasoline, in those areas, is the gas used in those areas without the Federal mandate equal or better than the Federal mandate fuel?

Mr. PERCIASEPE. As I testified earlier this morning, it is at least equal or better.

Mr. BILBRAY. Thank you very much. We will excuse you at this time and call up the next panel.

Mr. PERCIASEPE. Thank you, Mr. Chairman.

Mr. BILBRAY. Thank you.

Mr. BILBRAY. Mr. Hickox, welcome to the new job, first of all. It is a new face from those of us who have worked with the State in California's environmental strategies departments. As the new director of Cal EPA, you inherit a very, very lofty position with huge responsibilities and a great tradition of leading this country in its environmental strategies challenges. We will see if you can continue that heritage into the future. You now have 5 minutes to testify, so fire away.

STATEMENT OF WINSTON H. HICKOX, SECRETARY FOR ENVIRONMENTAL PROTECTION, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Mr. HICKOX. Thank you very much. Good afternoon, Mr. Chairman and members of the subcommittee. I want to thank you for holding today's hearing on H.R. 11. I am glad to be here on behalf of Governor Gray Davis to discuss the reasons why we strongly support this important bill.

On March 25, 1999, Governor Davis ordered the elimination of the gasoline additive MTBE from California's gasoline supplies by no later than December 31, 2002, because it poses unacceptable risks to California's environment. His executive order outlines a number of steps the State will take to reduce those risks immediately.

Two California communities, Santa Monica and South Lake Tahoe, have had their municipal drinking water supplies decimated by MTBE contamination and MTBE has been found in groundwater at 4,200 leaking underground tank sites across the State.

California has the cleanest gasoline in the world and we intend to keep it that way. California's cleaner burning gasoline standards provide greater air quality benefits than Federal requirements and they also are more flexible. California allows refiners to reduce or eliminate the use of oxygenates as long as they can demonstrate the fuel provides required emissions benefits. However, the Clean Air Act requires the year-round use of oxygenated gasoline in southern California and Sacramento, which comprises about 70 percent of California's gasoline market.

When MTBE's use is discontinued in California, the only acceptable oxygenate will be ethanol. The Federal oxygen requirement will in effect be an ethanol mandate for most California gasoline. With MTBE, we have learned a painful lesson about mandates.

H.R. 11 and its sister bills in the U.S. Senate, Senate bill 266 and Senate bill 645, would exempt California from the Federal oxygen requirement. Refiners would have the flexibility to market non-oxygenated and ethanol-based gasoline statewide. California refiners have shown that they can make MTBE-free cleaner burning gasoline, but they need the exemption to provide MTBE-free gasoline with or without oxygenates as cost effectively as possible while retaining the public health benefits of cleaner air.

If the Federal oxygen requirement remains in effect, California gasoline costs could increase as much as 6 to 7 cents per gallon due to the huge increase in ethanol demand, according to the California Energy Commission and as cited this morning by Senator Feinstein.

If H.R. 11 and/or its companion bills are approved, cost increases could be only 2 to 3 cents per gallon. The Federal oxygen requirement could double the cost of removing MTBE from California gasoline without taking a single extra pound of air pollution out of the sky. That is unfair to millions of California motorists. An ethanol market is expected to develop in California even if there is no Federal oxygen requirement. And that is important for us all to know. The amount of ethanol used in California should be determined by the marketplace, not by Federal law.

Governor Davis's executive order outlines the comprehensive plan to address the risks to California's environment from MTBE, but we need your help. With the MTBE phaseout and passage of H.R. 11, we can and will have clean air and clean water. I urge the committee to take action on this legislation as soon as possible. Thank you.

[The prepared statement of Winston H. Hickox follows:]

PREPARED STATEMENT OF WINSTON H. HICKOX, SECRETARY FOR ENVIRONMENTAL PROTECTION, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Thank you, Chairman Bilirakis and members of the subcommittee for holding today's hearing on H.R. 11. I am pleased to be here on behalf of Governor Gray Davis to discuss the reasons why we strongly support this important bill.

Six weeks ago, on March 25, 1999, Governor Davis declared that the gasoline additive MTBE poses a significant risk to California's groundwater and drinking water. The Governor established a national precedent by ordering the elimination of MTBE from California's gasoline supplies by no later than December 31, 2002.

The Governor's decision was consistent with a comprehensive assessment of MTBE by the University of California, which recommended that its use be discontinued in order to protect our state's water resources. Two California communities—Santa Monica and South Lake Tahoe—have had their municipal drinking water supplies decimated by MTBE contamination, and MTBE has been found in groundwater at almost 4,200 leaking underground tank sites.

The Governor's executive order also outlined a number of other steps the state is taking to reduce the risk posed to California's environment by MTBE. The executive order calls for moving aggressively in areas such as Lake Tahoe and Santa Monica where MTBE has contaminated drinking water. The order directs state agencies to develop cleanup guidelines and to identify vulnerable water resources.

Governor Davis' order anticipates that there will be a significant increase in ethanol use in California as an alternative to MTBE. To prepare for this transition, the Governor has directed the California Environmental Protection Agency to conduct a comprehensive health and environmental assessment of ethanol. The Governor

also has directed the California Energy Commission to study the potential for the development of a California-based ethanol industry.

In addition, Governor Davis has formally asked the U.S. Environmental Protection Agency to waive the federal Clean Air Act requirement for the use of oxygenated gasoline in California. A waiver of the oxygen mandate allow us to reduce risks of future water contamination, meet California's growing demand for fuel and allow flexibility to make more economical blends of gasoline while meeting the required emission reductions.

The Governor's request has the same objective as H.R. 11 and several similar bills, such as S. 266 and S. 645 by Senator Feinstein. They will give California the flexibility it needs to phase out MTBE use in the most cost-effective manner, while retaining all the air-quality benefits that California receives from its cleaner-burning gasoline program.

While U.S. EPA can give California that flexibility at the earliest possible date by granting the Governor's waiver request, Congress must still pass H.R. 11 or its companion proposal to provide certainty that California can keep that flexibility in the long term, I would like to explain why this flexibility is so important.

California gasoline is the cleanest in the world. When our cleaner-burning gasoline was introduced in 1996, it reduced smog-forming motor vehicle emissions by 15 percent, a benefit comparable to removing 3.5 million motor vehicles from the state's roads.

California's gasoline provides about twice the air-quality benefits of Phase 1 Federal Reformulated Gasoline, and equal or greater benefits than the Phase 2 Federal Reformulated Gasoline to be introduced next year.

While California's gasoline standards are cleaner than the federal requirements, they also are more flexible. California regulations call for the use of an oxygenate such as MTBE or ethanol, but we allow refiners to reduce or eliminate the use of oxygenates as long they can demonstrate, using procedures approved by the California Air Resources Board, that their fuel produces comparable emission reductions.

The Federal Clean Air Act arbitrarily requires the year-round use of oxygenated gasoline in regions classified as being in severe or extreme non-attainment for the federal ozone standard. This requirement applies to virtually all gasoline in Southern California and the greater Sacramento area, which comprise about 70 percent of California's gasoline market.

In the San Francisco Bay Area, where the federal oxygen requirement does not apply, three refiners have produced and sold non-oxygenated gasoline that meets all California requirements.

But federal law prevents the sale of those non-oxygenated formulations in Southern California and Sacramento, even though they provide greater air-quality benefits than required by the federal government.

If the federal law remains in effect, it will make California's transition away from the use of MTBE considerably more difficult, as well as costly for California motorists.

Once MTBE is no longer used, the only acceptable oxygenate will be ethanol. The federal oxygen requirement will, in effect, be an ethanol mandate for most California gasoline.

We view the emergence of a California ethanol market as a positive development. However, we learned the hard way that it was wrong for California to become dependent on a single oxygenate, MTBE. We should not repeat the same mistake with ethanol.

H.R. 11 and its companion proposals will enable California to avoid repeating the mistakes of the past by exempting the state from the federal oxygen requirement.

Refiners would have the flexibility to produce and sell non-oxygenated gasoline, as well as ethanol-gasoline, anywhere in the state. California's gasoline regulations would ensure that both types of gasoline provide the required air-quality benefits.

Because ethanol has desirable qualities, we expect many refiners to use it whether or not there is a federal oxygen requirement. However, if the federal oxygen requirement remains in effect, California refiners will be forced to use greater amounts of ethanol than necessary to meet our state's needs. This will have an effect on gasoline costs in California.

The California Energy Commission estimates that California in 2003 will require about 75,000 barrels per day of ethanol if the federal oxygen requirement is in effect. This is comparable to the amount of ethanol currently produced in the Midwest, which is the heart of the U.S. ethanol industry.

While the Energy Commission believes that sufficient ethanol can be produced by 2003 to meet California's needs, that huge increase in production could add as much as six to seven cents per gallon to gasoline costs in California.

If the federal oxygen requirement is lifted and refiners are allowed to choose their own level of ethanol use, the cost increase could be only two to three cents per gallon, the Energy Commission estimates. A separate study conducted for Chevron and Tosco corporations makes similar findings.

In short, the federal oxygen requirement could double the cost of removing MTBE from gasoline in California, without taking a single extra pound of air pollution out of our skies. That is unfair to millions of California motorists.

I would also like to note that if the federal oxygen requirement stays in effect, other states could feel the impact as well.

The California Energy Commission estimates that ethanol prices nationally could increase about four cents per gallon as supplies are stretched to meet California's 75,000 barrel-per-day market. This may also have an effect on gas prices in states where ethanol is widely used.

By exempting California from the federal oxygen requirement, H.R. 11 and its sister proposals acknowledge what California has already proven: Cleaner-burning gasoline can be produced with or without oxygenates.

Oxygenates such as ethanol can provide benefits, but it is counterproductive to mandate them. The amount of ethanol used in California should be determined by the marketplace, not the federal government.

H.R. 11 and its sister proposals are vitally important to California in this time of transition. I urge the committee to take action on this legislation as soon as possible. Thank you.

Mr. BILBRAY. Thank you.

At this time I recognize myself for questions. Let me see on page 5 of the RFA's prepared testimony, they state that they feel that eliminating the oxygen requirement in California will result in an environmental "backsliding." Given the state of California's development as to the most stringent clean air standards in the world, these are very serious allegations. Do you feel that they are accurate?

Mr. HICKOX. No, I do not. The Governor, when he announced his decision with regard to his action with regard to MTBE flatly stated there would not be any loss in air quality benefits that have accrued to the State of California through the creation of reformulated gasoline that has dramatically reduced emissions in California. We will not give up one inch is the simple answer to that.

There are technical considerations with regard to how that would be accomplished, and I am sure additional questions will allow me to address that, at least in part. But the California Air Resources Board this year will embark upon the creation of Phase 3 gasoline in California which will go into effect in the not too distant future.

I have had meetings, extensive meetings with the oil refiners with regard to this issue. They are aware of where we are and where we are headed and what our objectives are.

Mr. BILBRAY. Since you bring that up, I guess the other issue we will be talking about, is the testimony that—you testified that you expect the ethanol market in California to expand. In other words, with H.R. 11, do you believe the use of ethanol in the State of California with H.R. 11 will increase, remain the same, or decrease?

Mr. HICKOX. Increase.

Mr. BILBRAY. Do you want to explain why?

Mr. HICKOX. In the discussions—as you may or may not know, we took office in January of this year. In February, to finish out the requirements of the Senate bill that required California State government to look at MTBE and whether or not it should be allowed to continue to be used as an oxygenate in California, we held three public hearings. I chaired those hearings, two in Sacramento

and one in southern California. We took testimony from across the spectrum of interested parties, including the oil refiners.

In our discussions with the oil refiners, two of whom are here to speak with you today, who commissioned a study, it became clear to us as well as them that flexibility is the key answer to our problem here, and that the way to deal with the need for an oxygenate in the gasoline supply in California is to have the flexibility to have an amount of ethanol or another substitute—I can't imagine what that would be—but not require 2 percent by weight.

In discussions with the Governor as he began to finalize his decision on this matter, it became clear to him that he needed to allow the time that he called for in his executive order, in order for you to act on H.R. 11, such that the refiners in California would have a clear picture of the path that they were going to have to take in order to meet our requirement that MTBE be taken out of gasoline: either a full 1-to-1 substitution which would require certain modifications to refineries and to the distribution system or no oxygenate at all, which some people think might be possible but at a cost that would probably be prohibitive or something in between. And the something in between is what is most likely in the minds of folks at the Air Resources Board, the Energy Commission in California and among the refiners as well.

Mr. BILBRAY. Previous administrations investigated this. Governor Davis walked through the front door of the Governor's office just about the time the report got dropped in his lap. And the Governor has now announced a pretty substantial move over the next few years on the MTBE issue. Is there any other State that has committed to that kind of action to this date?

Mr. HICKOX. Well, I am told that three or four other States have already taken some action. North Carolina and Alaska are two of them. And our sense is that other States are following closely what we are doing.

As you know, and to finish the picture, the legislation I referred to in California required an extensive study completed by the University of California that looked at this issue from a very carefully detailed scientific perspective and came to the conclusion that led to the Governor's decision. And I am sure others are looking at what we have done and will likely follow.

Mr. BILBRAY. Thank you. My time has expired. I would recognize Ms. Eshoo, the gentlelady from California.

Ms. ESHOO. Thank you. I want to thank our sitting-in ranking member for allowing California to keep going first, and also to salute and welcome our new director of the EPA in California. You have a very proud tradition to carry out and I think that you come to the table magnificently ready to do the job. So I wish you well. I mean, to the extent that you succeed, we all succeed, right?

Mr. HICKOX. Thank you. Yes.

Ms. ESHOO. A couple of questions. As I understand it, representatives of the ethanol industry have said that the problem in California and other States doesn't center around the presence of MTBE in gasoline but rather MTBE in water. Do you think this is an accurate assessment and, if so, why; and if not, why?

Mr. HICKOX. Well, certainly the reason that we are taking this action is because California's drinking water supply has been im-

paired as a result of MTBE being in gasoline. And let me try as briefly as possible to add something to this discussion based upon the time that I sat through earlier responses to questions this morning. One of the things that added value when we went through our deliberative process as to the action we should take is to understand the relationship between drinking water supplies, particularly groundwater, and underground storage tanks. In some instances, they are in close proximity to one another, both horizontally and vertically, if you will. In others, drinking water supplies come from very deep wells. There are differing topographies between the surface and that drinking water supply.

So while the 4,200 sites of contamination that we detected represent potential future risks to groundwater, the current groundwater risk is at about a half a percent of the drinking water supply. Obviously we want to characterize this in balanced terms so we don't create undue concern on the part of the people of California. But those underground tanks that are leaking pose a threat.

And as has been described earlier, the characteristics of MTBE, its solubility in water and the way in which it moves in water exacerbates the problem greatly. Other elements of gasoline break down more easily. They tend to float and don't mix with water so they present a lesser problem.

What it did in Lake Tahoe Basin in terms of its impact to a local constrained area really brought the picture into great clarity. So, yes, it's a problem in terms of drinking water, but it is there because it is an element of gasoline and you cannot protect groundwater ultimately.

Ms. ESHOO. Governor Davis's March order calls for the State to develop a timetable for the removal at the earliest possible date and not later than December 31, 2002. Would California achieve this mandate if we don't have a waiver? Could we? I mean, it is a devil's advocate question, but for those that question why we are pursuing what we are pursuing, I think that it deserves an answer.

Mr. HICKOX. Right. And again, as I mentioned a moment ago, when we sat down with the Governor to help him develop his determination, the important consideration was what time was necessary for the production and distribution system for gasoline in California in order to respond to this mandate if we chose to cause the removal of MTBE. There is lead time necessary to retrofit the refinery and distribution system, whichever model you take, and what we want is flexibility. Without H.R. 11, we won't have flexibility. It will be difficult to meet the requirement within the time-frame that has been set forth if there is an absolute 1-to-1 requirement of the substitution of ethanol for MTBE. There will be ethanol in California gasoline as our best projection. It is just that 2 percent by weight requirement 1-for-1 substitution is forcing a solution when we all have talked—I have heard a number of people talk today about the wisdom in allowing flexibility and letting industry figure out the best way to get there.

Ms. ESHOO. Thank you very much. Thank you, Mr. Chairman.

Mr. BILBRAY. The gentleman from Iowa.

Mr. GANSKE. Thank you, Mr. Chairman. It would be great if we had Mr. Vaughn on the same panel with Mr. Hickox. But you have

asked most of the questions that I would have asked and so I thank Mr. Hickox for coming.

Mr. BILBRAY. The gentlelady from Colorado.

Ms. DEGETTE. Thank you. Thank you, Mr. Chairman. Mr. Hickox, I was impressed by your commitment and your new Governor's commitment to maintaining the high clean air standards in California. But I guess I would like you to talk a little more specifically about how you intend to do that if you remove an oxygenate like MTBE. It sounded sort of like a great oratory statement, but how is that going to happen?

Mr. HICKOX. As you may or may not be aware, the California reformulated gasoline standards, which the Federal standards will soon approach but not quite reach, use a predictive model methodology for the refiners to offer a blending formulation for gasoline that will meet the equivalent air emission outcomes that are required by the law. As long as they prove that the formulation that they are proposing will do that, it is allowed to be produced and sold in California.

So the people at the Air Resources Board believe that it is possible to produce gasoline without an oxygenate that will meet the requirements of the Clean Air Act in California, and it is a matter of working with the refineries in California in terms of the way in which they would go about retrofitting the refinery to produce that gasoline. Some is produced now in small quantities.

Ms. DEGETTE. How is that equivalency going to be demonstrated, given the fact that the EPA doesn't use the same predictive model that California does?

Mr. HICKOX. We have the delegated authority to carry out the program in the manner in which we have and would continue to in California. In other words, we have the ability to use this predictive model and it is considered acceptable by U.S. EPA as a methodology for determining compliance with the Clean Air Act requirements.

Ms. DEGETTE. To follow up on that, one of the California studies predicted that removing MTBE from the State gasoline supply would result in a blending of 60 to 80 percent of California's gasoline with ethanol. That is what we were talking about before. Now Governor Davis's order, as you well know, calls for a study of the health risks of ethanol. What is your agency's view of the risks of ethanol leaking into the water supply versus MTBE?

Mr. HICKOX. Well, first of all, the Office of Environmental Health Hazardous Assessment, which I am responsible for, has been given the responsibility to do a portion of those studies by the end of this year and to respond to that would be premature. The way in which questions similar to that posed by the Governor were responded to was the following. The Governor was told that there is an enormous amount of information available about ethanol, what it is, how it reacts in the environment. There are some issues having to do with the byproducts of combustion with ethanol that we particularly want to look at a little more carefully. That is an air quality issue as related to a water quality issue. The focus of your question was with regard to water.

Ms. DEGETTE. Because we don't want to replace one problem with another with respect to the Santa Monica water supply, or anyplace else.

Mr. HICKOX. Right. Absolutely right.

Ms. DEGETTE. So we will know that by the end of this year?

Mr. HICKOX. End of this year.

Ms. DEGETTE. Thank you very much. I will yield back, Mr. Chairman.

Mr. BILBRAY. California is experiencing one of the—actually, the largest and fastest price increase in the history of the country, \$2 a gallon-plus. I guess that was one of the concerns that the Governor had articulated. But I would like you to specifically make reference to the fact that we have seen the recent experience with California refiners when it pertains to ethanol pricing in the Pacific Northwest, where there was a 12 to 14 percent increase just because the Governor—they thought the Governor had taken action that justified the increase.

Are you worried about California and how vulnerable it would be as a captive market without the flexibility of H.R. 11?

Mr. HICKOX. The question is absolutely. I am aware of the experience that you have referenced. One of the reasons for the phase-in of this decision and the complete elimination of MTBE by the end of the year 2002 was a recognition of the Governor's responsibility to the people of California that the appropriate amount of time be taken such that we would not affect supply and demand and the base price of gasoline to the consumer and with regard to the elements that would go into whatever solution was developed.

You are absolutely correct that too hasty a move and not having the flexibility that would be granted by H.R. 11 would create a risk in California similar to the one that you cited in Washington.

Mr. BILBRAY. Thank you. I just remember the outcry when we went to low sulfur fuel in California and the supply problems that occurred there and the nightmare. That is why I kind of came unglued with EPA when they said you "just do this, or this." If you had a room full of truck drivers with crowbars standing in the room with you, believe me they sensitize you to market demand real fast.

Any other questions from the members?

I will excuse you. Thank you very much.

Mr. HICKOX. Thank you.

Mr. BILBRAY. The next panel, please. Mr. Bordvick, you have 5 minutes.

STATEMENTS OF DUANE B. BORDVICK, VICE PRESIDENT, ENVIRONMENT AND EXTERNAL AFFAIRS, TOSCO CORPORATION; GREGORY C. KING, VICE PRESIDENT AND GENERAL COUNSEL, VALERO ENERGY CORPORATION; THOMAS L. ROBINSON, PRESIDENT, ROBINSON OIL COMPANY, INC., ON BEHALF OF SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA, NATIONAL ASSOCIATION OF CONVENIENCE STORES, AND CALIFORNIA INDEPENDENT OIL MARKETERS ASSOCIATION; ERIC VAUGHN, PRESIDENT AND CEO, RENEWABLE FUELS ASSOCIATION; AND MARK BEUHLER, DIRECTOR OF WATER QUALITY, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, ON BEHALF OF ASSOCIATION OF CALIFORNIA WATER AGENCIES

Mr. BORDVICK. Thank you very much. Thank you for this opportunity. Thank you for this subcommittee hearing on this very important subject. My name is Duane Bordvick. I am Vice President for Tosco Corporation and for Environmental and External Affairs.

Tosco strongly supports the prompt enactment of H.R. 11 which has been endorsed by Governor Davis, as you have heard, authored by Congressman Bilbray, and is co-sponsored by a bipartisan group of 52 House Members from California. H.R. 11 is also supported by the Western States Petroleum Association OF which Tosco is a member.

Tosco's four petroleum refineries in California with the combined crude capacity of 400,000 barrels per day supply California and the neighboring States of Arizona, Nevada, and Oregon. Almost all of the gasoline we produce in California meets the requirement for California cleaner burning gasoline, Federal reformulated gasoline, or both. Tosco markets our gasoline on the West Coast through more than 3,000 retail outlets under the brand Union 76 and Circle K.

Driven by a growing concern in California over groundwater contamination, our company took the lead for our industry in advocating the removal of MTBE from gasoline. In October 1997 we wrote the California Air Resources Board proposing that, "responsible action should be taken sooner rather than later to allow the reduced use or elimination of MTBE in gasoline."

We pointed out then, as we do now, how important passage of Congressman Bilbray's bill would be to provide refiners with the flexibility needed to rationally shift away from MTBE use.

To underscore our commitment and to demonstrate the technical and commercial viability of non-MTBE fuel, Tosco launched a project in April 1998 for northern California to produce and market California cleaner burning gasoline, using ethanol instead of MTBE in both the summer and winter. We have been marketing ethanol-blended California gasoline at about 60 of our Union 76 outlets in the Bay area ever since, and we have received a very positive response from our dealers and our customers.

In addition, Tosco has demonstrated that California cleaner burning gasoline can be produced without using any oxygenate. During this past winter, we produced non-oxygenated California gasoline from our refinery in Rodeo, California, which we marketed in the San Francisco Bay area.

It is not surprising, then, that Tosco welcomed the decision of Governor Davis in March of this year to require a complete phase-out of MTBE from California by the end of the year 2002. In response to a request from Governor Davis, we have already begun supplying non-MTBE gasoline to our stations in South Lake Tahoe where concerns over water contamination, as we have heard today, are especially acute.

While we are proud of these special programs, our current ability to supply this non-MTBE gasoline is very limited because of refinery hardware limitation. It is limited because of unavoidable characteristics of California's system for transporting gasoline throughout the State, and it is limited because of the Federal oxygenate mandate affecting 70 percent of California gasoline.

The Governor's phaseout order was based in part on a study performed by the California Energy Commission by MathPro, Incorporated, which examined the supply and cost implications of removing MTBE from gasoline. Together with Chevron Products Company, Tosco sponsored an extension of the MathPro study to examine the relationship of H.R. 11 to the supply and cost implications of eliminating MTBE. A summary of the MathPro results is attached in my prepared statement and I request that the full study be included in the record of the hearing.

The MathPro study included the following three key findings:

First, enactment of H.R. 11 would reduce the cost of removing MTBE from gasoline by one half or more.

Second, enactment of H.R. 11 will create the opportunity for California refiners to optimize cleaner burning gasoline production by providing two types of gasoline, one blended with ethanol and one blended without oxygenate.

Third, this optimal production of non-MTBE gas will result in a substantial increase in the use of ethanol in California.

The study predicted that 60 to 80 percent of the California gasoline production would be blended with ethanol remaining non-oxygenated. So based on the MathPro study and our own experience, we are convinced that H.R. 11 would significantly moderate the negative economic impacts of eliminating MTBE from California gasoline without adverse effects on emission quality, and we hope that Congress will enact the bill promptly in order to facilitate this orderly and rational phaseout of MTBE.

[The prepared statement of Duane B. Bordvick follows:]

PREPARED STATEMENT OF DUANE B. BORDVICK, VICE PRESIDENT, ENVIRONMENTAL
AND EXTERNAL AFFAIRS, TOSCO CORPORATION

Mr. Chairman and Members of the Subcommittee: My name is Duane B. Bordvick, and I am Vice President of Tosco Corporation for Environmental and External Affairs. Tosco strongly supports the prompt enactment of H.R. 11, which has been endorsed by Governor Davis, is authored by Congressman Bilbray, and is co-sponsored by a bi-partisan group of 50 House members from California. H.R. 11 is also supported by the Western States Petroleum Association, of which Tosco is a member.

Tosco's four petroleum refineries in California, with a combined gasoline production capacity of about 400,000 barrels per day, supply California and the neighboring states of Arizona, Nevada, and Oregon. Approximately 75 percent of the gasoline we produce in California meets the requirements for California Cleaner Burning Gasoline ("CBG"), Federal Reformulated Gasoline ("RFG"), or both. Tosco markets gasoline on the West Coast through more than 3,000 retail outlets, primarily under our Union 76 and Circle K brands.

Driven by a growing concern in California over groundwater contamination, our company took the lead for our industry in advocating the removal of MTBE from gasoline. In October 1997, we wrote the California Air Resources Board proposing that "responsible action should be taken sooner rather than later to allow the reduced use or elimination of MTBE in gasoline." We pointed out then, as we do now, how important passage of Congressman Bilbray's bill would be to provide refiners with the flexibility needed to shift away from MTBE.

To underscore our commitment and to demonstrate the technical and commercial viability of a non-MTBE fuel, Tosco launched a project in April 1998 for Northern California to produce and market California CBG using ethanol instead of MTBE in both the summer and winter seasons. We have been marketing ethanol-blended CBG at about 60 of our Union 76 outlets in the San Francisco Bay Area ever since, and we have received a very positive response from our dealers and our customers.

In addition, Tosco has demonstrated that California CBG can be produced without using any oxygenate. During this past winter, we produced non-oxygenated CBG at our refinery at Rodeo, California, which we market in the Bay Area.

Tosco welcomed the decision of Governor Davis in March of this year to require a complete phase-out of MTBE from California by the end of the year 2002. In response to a request from Governor Davis, we have already begun supplying non-MTBE gasoline to our stations at South Lake Tahoe, where concerns over water contamination are especially acute. While we are proud of these special programs, our current ability to supply non-MTBE gasoline is very limited because of refinery hardware limitations, unavoidable characteristics of California's system for transporting gasoline throughout the state, and the federal oxygenate mandate affecting 70 percent of California gasoline.

The Governor's phase-out order was based in part on a study performed for the California Energy Commission by MathPro Inc., which examined the supply and cost implications of removing MTBE from gasoline. Together with Chevron Products Company, Tosco sponsored an extension of the MathPro study to examine the relationship of H.R. 11 to the supply and cost implications of eliminating MTBE. A summary of the MathPro study results are attached to my prepared statement, and I request that the full study be included in the record of this hearing. The MathPro study included the following three key findings:

First, enactment of H.R. 11 would reduce the cost of removing MTBE from gasoline by up to one-half, from 6.1 cents per gallon to 2.7 cents per gallon.

Second, enactment of H.R. 11 will create the opportunity for California refiners to optimize CBG production by providing two types of gasoline, one blended with ethanol and the other non-oxygenated.

Third, this optimal production of non-MTBE gasoline will result in a substantial increase in the use of ethanol in California. The Study predicted that 60 to 80 percent of California gasoline production would be blended with ethanol and the remaining gasoline, about 20 percent to 40 percent of statewide supply, would be non-oxygenated.

Based on the MathPro study and on our own experience, we are convinced that enactment of H.R. 11 would significantly moderate the negative economic impact of eliminating MTBE from California gasoline and would lead to a substantial new market for ethanol in California, with no adverse effect on the emission quality of California CBG. We hope the Congress will enact the bill promptly in order to facilitate an orderly transition away from MTBE in California.

I would be pleased to answer any questions the Committee may have.

Mr. BILBRAY. Thank you.

Mr. King.

STATEMENT OF GREGORY C. KING

Mr. KING. Mr. Chairman, members of the subcommittee, thank you for this opportunity to testify. My name is Greg King and I am Vice President and General Counsel of Valero Energy Corporation.

Valero Energy is the second largest independent refining and marketing company in the United States with five refineries in Texas, Louisiana, and New Jersey. Valero produces premium environmentally clean products such as reformulated gasoline, car gasoline and oxygenates like MTBE. Valero believes strongly that the production and use of MTBE worldwide has been a boon to air

quality by reducing gasoline's most harmful components, all in a cost-effective and uncomplicated manner.

Phase 1 of RFG has exceeded expectations, as we have heard today. It was designed to reduce air toxins by 15 percent, but actually achieved a greater than 30 percent reduction. It was supposed to reduce VOCs by 15 percent, but in reality achieved a reduction of more than 27 percent. And while having no specific requirement for NO_x, a 3 percent reduction was realized.

Some have wondered whether the same performance could be expected from fuels without oxygenates. The simple answer is no. Fuel chemistry clearly demonstrates that MTBE in particular is the most cost-effective component of pollution control when the car is still relatively cold and therefore more polluting. Without it there will be an increase in air toxins from automobiles, including benzene.

The most severe nonattainment areas in California have improved considerably over the course of the last decade. In addition, earlier this week thousands of Californians expressed their discomfort with fuel prices by staging the Internet-driven Great American Gas Out when they delayed filling up their tanks for a day. While gas prices have been volatile, we can assure the committee that fuel oxygen was not the cause, accounting for only a 2 to 4 cent increase in gas prices since 1995. As unexpected refinery fires on the West Coast diminished supply, the flexibility to use additional increments of MTBE actually extended the fuel supply in California enough to avoid shortages.

While MTBE quietly labored as the workhorse of the Clean Air Act, few in the public took notice until MTBE appeared in certain isolated water samples. Valero strongly believes that it is possible to protect water quality without sacrificing the air quality benefits attributable to MTBE. Fixing or replacing leaking tanks would solve the problem. For example, the Lake Tahoe area, served by seven local gas stations, all of which were leaking gasoline into the groundwater which eventually found its way into Lake Tahoe.

As we have heard, in December 1998, the Federal law required all underground storage tanks to be replaced with state-of-the-art upgraded tanks. This law is not being enforced. Currently 30 percent of the Nation's storage tanks continue to leak gasoline. The EPA must undertake efforts to enforce compliance or shut down these dangerous underground tanks. We urge members of this committee not to opt for the simple solution of restricting MTBE when complex water quality problems deserve a more comprehensive approach.

Given what little we know about potential alternatives to MTBE, we could be making matters worse by changing fuel formulations without fixing our deteriorating tanks. Formulations without any oxygenates will have more toxic aromatic components. Further, the effects of ethanol have not been fully studied, as even Governor Davis's executive order admitted.

MTBE is not a carcinogen listed by the International Agency for Research on Cancer. By contrast, benzene, the toxic compound that would increase in the absence of fuel oxygenates, is a known human carcinogen. The fact is, MTBE has become a convenient scapegoat, a way to avoid the reality of leaking storage tanks.

Clearly banning MTBE at either the State or the Federal level won't solve this problem.

Now, some have suggested that legislation should give California and other States the right to opt out of the fuel oxygen standard. While we believe that the case has not been made for such legislation, Valero does not oppose an open dialog in which the flexibility of the fuel oxygen standard is a part of the discussion. However, any legislation must meet the following objectives: First, such legislation must not result in diminished effectiveness at reducing air emissions from the current RFG levels of achievement. Second, such legislation must not present greater logistical problems or price fluctuations that occur in RFG. And last, such legislation must not undermine the performance of gasoline.

Should an alternative approach for the fuel oxygen standard meet this criteria, Valero believes we would have the principal basis for a dialog on the subject. Since the passage of the 1990 Clean Air Act, Valero Energy has invested hundreds of millions of dollars to produce cleaner burning fuels. We did so in good faith, responding to the government's challenge and the public's environmental needs. We urge Congress not to penalize companies that are providing environmental solutions when the more appropriate course is to fix the leaking tanks.

Thank you very much for your careful attention to this matter. And I look forward to working with you all on this subject.

[The prepared statement of Gregory C. King follows:]

PREPARED STATEMENT OF GREGORY C. KING, VICE PRESIDENT AND GENERAL COUNSEL, VALERO ENERGY CORPORATION

Mr. Chairman and members of the Subcommittee, thank you for this opportunity to testify on a matter of great environmental and economic significance to my home state and to the nation. My name is Greg King and I am the Vice President and General Counsel of Valero Energy Corporation. Valero Energy is the second largest independent refining and marketing company in the United States and is a member of the Oxygenated Fuels Association. The company owns and operates five refineries in Texas, Louisiana and New Jersey, with a combined throughput capacity of approximately 735,000 barrels per day. Valero is recognized throughout the industry as a leader in the production of premium, environmentally-clean products such as reformulated gasoline, CARB Phase II gasoline, lowsulfur diesel and oxygenates like MTBE.

Valero is proud of its record of environmental achievement, which goes beyond its commitment to produce cleaner-burning fuels and additives. Investing millions of dollars in pollution prevention and waste minimization, Valero was the first petroleum refiner ever to receive the prestigious Texas Governor's Award for Environmental Excellence and has been recognized by a national trade publication for its "outstanding environmental stewardship and leadership." Valero believes strongly that the production and use of MTBE worldwide has been a boon to air quality by reducing air toxics, volatile organic compounds, oxides of nitrogen, and greenhouse gases all in a cost-effective and uncomplicated manner.

Background of the Use of Oxygenates

The Clean Air Act divides air pollution into two broad categories: stationary sources and mobile sources. By the time of the Act's amendment in 1990, it had become clear that mobile sources presented the most intractable problem for urban air quality. Interested stakeholders together with the Congress and the Administration developed the reformulated gasoline program using state-of-the-art scientific and technical information.

Introduced to the American public on January 1, 1995, RFG is used in areas of 18 states that have the greatest ozone air quality problems and accounts for 32 percent of the gasoline market. As part of the federal requirements, RFG must have an average of 2 percent fuel oxygen by weight, and must have reduced levels of aromatics, olefins, benzene, sulfur, and controlled Reid vapor pressure. Oxygenates, for

their part, have long been used in gasoline as an octane enhancer. As the phase out of lead in gasoline got underway in 1973, it was the oxygenate MTBE that was principally used to replace the octane that lead accounted for in the fuel. And the EPA has termed the phase out of lead as one of the single most effective policy initiatives for the protection of children's health.

MTBE itself is a fuel ether largely derived from natural gas, a clean and abundant fuel source with a superior carbon profile to liquid petroleum. Regardless of other effects on fuel chemistry, therefore, gasoline with MTBE can be expected to have less greenhouse emissions and can be expected to stretch limited petroleum resources.

Effect on Air Quality

MTBE has a profound impact on automobile emissions. By using oxygenates like MTBE in gasoline, refiners have exceeded the announced expectations for the federal RFG program. For example, Phase I RFG was supposed to reduce air toxics by 15 percent, but actually achieved a greater than 22 percent reduction. It was supposed to reduce volatile organic compounds by 15 percent, but achieved a reduction of more than 27 percent. And while having no specific requirement for Nox reduction, a 3 percent reduction was realized.

Some have wondered whether the same performance could be expected from fuels without oxygenates. The simple answer is no. Oxygenates like MTBE go to work in an engine at the point where most pollution is produced: the cold cycle. For the first 3 to 4 minutes after you start your ignition, your car's engine produces the lionshare of its emissions. Because oxygenates combust at low temperatures with MTBE combusting at far lower temperatures than ethanol—fuel chemistry clearly demonstrates that MTBE is the most effective component of pollution control when the car is still relatively cold. In addition, to meet the other federal specifications, RFG without oxygenates would have to change its ratio of aromatics. The result of this change is two-fold: first, there will be a certain increase in air toxics from automobiles; and second, more byproducts from the use of aromatics may be created. In fact, if ethanol is used to replace MTBE, it is more volatile than MTBE and therefore would increase evaporative emissions.

And the potential loss of RFG's important benefits would be significant. The most severe nonattainment areas in California have improved considerably over the course of the last decade. In addition, earlier this week, thousands of Californians expressed their discomfort with fuel prices by staging the Internet-driven Great American Gas Out when they delayed filling up their tanks for a day. While gas prices have been volatile, we can assure the Committee that fuel oxygen was not the cause, accounting for only a 2 to 4 cent increase in prices since 1995. Indeed, as unexpected refinery fires on the West Coast diminished supply, the flexibility to use additional increments of MTBE actually extended the fuel supply in California enough to avoid shortages.

Alternatives to MTBE, including ethanol, are more expensive and more difficult to transport. Industry experts estimate that even under ideal circumstances, replacing MTBE with ethanol will raise prices at the pump a minimum of seven cents a gallon. But prices could rise much higher than that if shortages of ethanol and, as a result, of gasoline develop. Currently, refiners use about 250,000 barrels a day of MTBE; total ethanol capacity is only about half of that.

Impact on Water Quality

While MTBE quietly labored as the workhorse of the Clean Air Act, few in the public took notice until MTBE appeared in certain water samples taken, principally in California. Valero shares the concerns of most Americans for clean water; having made substantial investments in waste minimization and pollution prevention that protects our water resources. However, we strongly believe that it is possible to protect water quality without sacrificing the air quality benefits attributable to the use of MTBE. In most instances, MTBE found in water is traceable to leaking underground storage tanks. Fixing or replacing leaking tanks would solve the problem. For example, the Lake Tahoe area is served by 7 local gas stations. According to testimony given in the California public hearings, 7 out of 7 of these stations were leaking gasoline into the ground water which eventually found its way into Lake Tahoe. The problem that needs to be fixed is the underground storage tank itself and not the part of the fuel which does the most to prevent pollution!

In December of 1998, federal law required all underground storage tanks to be replaced with state of the art, upgraded tanks. It is not being enforced. Even the EPA has admitted that enforcement of the underground storage tank program has been lax at best. Currently, approximately 270,000 or 30 percent of the nations storage tanks continue to leak gasoline. The EPA must undertake efforts to enforce

compliance or shutdown dangerous underground tanks. Valero and other members of the oxygenates industry are willing to work on legislation or regulatory changes that would streamline storage tank repair and remediation. We are aware that such approaches take time and money. However, as H.L. Mencken once observed, "Complex problems have simple solutions...simple solutions that are usually wrong." We urge members of this Committee not to opt for the simple solution of restricting MTBE when complex water quality problems deserve a more comprehensive approach.

Indeed, given what little we know about potential alternatives to MTBE, we could be making matters worse by changing fuel formulations without fixing our deteriorating tanks. Consider that formulations without any oxygenates will undoubtedly have more toxic aromatic components. Further, the effects of ethanol and the ether ETBE have not been fully studied, as even Governor Davis' executive order admitted. And we do know that ethanol compounds tend to degrade plastics. With the most prevalent repair strategy for leaking tanks being plastic fiberglass liners, a precipitous change to ethanol could make the problems of leaks even worse! The problem could also be worse because MTBE in water is below public health thresholds and MTBE itself is not listed as a carcinogen by the International Agency for Research on Cancer. By contrast, ethanol is listed as a carcinogen, as is benzene, the toxic compound that would increase in the absence of fuel oxygenates.

MTBE actually reduces the risk of cancer. According to the California Environmental Protection Agency, the cancer risk from gasoline-powered vehicles throughout the state has been reduced by approximately 40 percent since the reformulated gasoline program began because MTBE displaces known carcinogens in gasoline. The fact is, MTBE has become a convenient scapegoat, a way to avoid the reality of leaking storage tanks. Clearly, banning MTBE won't solve this problem.

The Fuel Oxygen Standard

As we observed, federal RFG has an average content of 2 percent oxygen as required by the Clean Air Act. Some have asked that this standard be waived administratively by EPA. From our reading of the Clean Air Act, we believe that such a waiver would be illegal. Others have suggested that legislation should give California and/or other states the right to opt out of the fuel oxygen standard. While believe that the case has not been made for such legislation because oxygenates contribute significantly to air quality while other approaches should be used to maintain water quality. Valero does not oppose an open dialogue in which the flexibility of the fuel oxygen standard is a part of the discussion. However, any legislation designed to meet such objectives would not be good public policy unless it met several important criteria: first, such legislation should not result in diminished effectiveness at reducing air emissions from the current RFG specifications. Remember that the most likely candidates for increased emissions are air toxics, the most carcinogenic part of the air emissions profile. Further, as the federal RFG program becomes less effective as an air quality control initiative, states will be required to undertake other programs that may be less effective or more intrusive to the public. These alternative control strategies might force further ratcheting down on factories already hard hit with a raft of new Clean Air regulations; second, such legislation should not present greater logistical problems or price fluctuations than current RFG; and last, such legislation should not undermine the performance of gasoline. Federal RFG has been carefully studied and engineered with modern engines and pollution control devices in mind. Alternative fuel formulations have not been the result of such careful analysis. Our pollution control strategies are only as good as consumers will tolerate. If alterations in fuel without careful study result in less optimal fuels, we will all hear about it and loudly. Consumers must not only understand our reasons for changing the law; they must also accept the consequences of such changes.

Should an alternative approach to the fuel oxygen standard meet these criteria, Valero believes we would have the principled basis for a dialogue on the subject.

Since passage of the 1990 Clean Air Act amendments, Valero Energy Corporation has invested hundreds of millions of dollars to produce clean-burning fuels. We did so in good faith, responding to the government's challenge and to the public's environmental needs. We urge Congress not to penalize companies that are providing environmental solutions, when the more appropriate course is to fix leaking tanks and improve the management of our water resources. Thank you very much for your careful attention to this subject. I look forward to working with you, Mr. Chairman and the members of the Subcommittee on this issue in the future.

Mr. BILBRAY. Thank you.

Mr. Robinson.

STATEMENT OF THOMAS L. ROBINSON

Mr. ROBINSON. Good morning, Mr. Chairman. My name is Tom Robinson. I am President of Robinson Oil, San Jose, California. Our company, in partnership with another San Jose company, Coast Oil, owns and operates 28 "Rotten Robbie" retail gasoline outlets located in the San Francisco Bay area.

Thank you for inviting me to testify today. I appear before you representing the California Independent Oil Merchants Association, CIOMA, the National Association of Convenience Stores, NACS, and the Society of Independent Gasoline Marketers of America, SIGMA.

Our company is an independent unbranded marketer of gasoline. Our company does not manufacture ethanol, MTBE, or gasoline. Independent branded and unbranded marketers traditionally have been recognized as the most cost-competitive segment of the motor fuels marketing industry. But our role in this industry is dependent upon adequate supplies of gasoline. Without adequate supply, independent marketers cannot be competitive.

This is the reason I am appearing before you today. If the storm clouds I see gathering on the horizon today are not dissipated in the near future, independent marketers, who I am very concerned about, and gasoline consumers, who we both should be very concerned about, will suffer.

This hearing represents my third opportunity to present testimony before Congress. Last year I testified on H.R. 630, the predecessor legislation under consideration today. In 1996 I testified before the Senate on the reasons for increases in retail gasoline prices during the spring of 1996. My concern is that without passage of this legislation, I may receive another invitation when Congress again looks for the reasons for significant California retail price increases.

CIOMA, NACS, and SIGMA believe that H.R. 10 must pass Congress this year to avoid a pending gasoline supply crisis in California. This crisis will not be caused by California gasoline marketers but it surely will be marketers and, more importantly, consumers that will feel the brunt of this crisis if it is not averted.

Consequently, we collectively urge the members of the subcommittee to pass this legislation as soon as possible. I will not take up your time by repeating the technical arguments for H.R. 10 put forth by other witnesses. We agree that H.R. 10 must pass to give California refiners greater flexibility in producing gasoline.

California currently has the cleanest and the most expensive-to-make gasoline in the world. Governor Davis's recent decision to ban MTBE in California gasoline will increase the cost of the gasoline production and decrease the supply gasoline even if this legislation is passed. However, without the passage of this legislation, we have big problems.

The central point CIOMA, NACS, and SIGMA want to make to the subcommittee is that it ultimately will be California consumers who will suffer if H.R. 10 is not enacted.

Many of the other witnesses appearing here today have an economic stake in the components of California gasoline. Refiners make the base product and some manufacture MTBE as an additive. MTBE manufacturers want to make sure that MTBE bans do

not spread to other States. The ethanol industry is trying to secure the California market for the product. Certainly a mandate without a viable competitor situation, any business dreams about.

Companies I represent today are different. For all program purposes we are surrogates for the California consumer. In general we do not win or lose if one component or another is included in the gasoline sold in California. However, we do lose and consumers will lose if the gasoline supplies in California are not adequate to meet the demand in the future. And given the facts as I currently view them, such a disconnect will occur if some action is not taken soon.

Refiners and marketers in California are faced with an untenable situation. Seven out of every ten gallons of gasoline used in California must meet Federal RFG standards, including the mandatory oxygenate standard. MTBE currently is the oxygenate of choice in the State. Ethanol, while used in limited quantities in isolated markets, generally is not a viable alternative to MTBE because of limited supplies and tight Federal and State gasoline RVP constraints. Oxygenates are mandated. The primary oxygenate used, MTBE, will soon be banned, and ethanol may or may not be a viable substitute for MTBE.

The solution of this untenable solution is clear. The enactment of H.R. 10 will remove the oxygenate mandate for California alone. As a result, California refiners will be permitted to meet the very stringent performance standards of California Phase 2 RFG and Federal Phase 2 RFG without oxygenates if they choose to do. California Phase 2 RFG is the cleanest gasoline in the Nation, without the need for oxygenate mandate.

We submit that opposition to this legislation has nothing to do with clean air. Instead it has to do with economics and politics. If the oxygenate mandate is removed in California, then the MTBE industry is afraid it will spread to other States and the ethanol industry is afraid it will lose a golden opportunity to expand its market. Clean air is not the issue. Economics and politics are. We urge you to side with independent marketers and consumers. Consumers and marketers will win with the enactment of H.R. 10.

Again, thanks for allowing me to appear. I hope the next time I am invited to appear before Congress, it won't be because of higher gasoline prices in California caused by the failure to pass this legislation.

[The prepared statement of Thomas L. Robinson follows:]

PREPARED STATEMENT OF THOMAS L. ROBINSON, PRESIDENT, ROBINSON OIL COMPANY, INC., ON BEHALF OF CALIFORNIA INDEPENDENT OIL MARKETERS ASSOCIATION, NATIONAL ASSOCIATION OF CONVENIENCE STORES, AND SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

Good morning, Mr. Chairman. My name is Tom Robinson. I am President of Robinson Oil Company of San Jose, California. Our company, in partnership with another San Jose company, Coast Oil Company, owns and operates 28 "Rotten Robbie" retail gasoline outlets located in the San Francisco Bay Area of California.

Thank you for inviting me to testify today. I appear before you representing the California Independent Oil Marketers Association (CIOMA), the National Association of Convenience Stores (NACS), and the Society of Independent Gasoline Marketers of America (SIGMA). Together, sales to consumers by CIOMA, NACS, and SIGMA members account for a substantial majority of the gasoline sold each year in California.

Our company is an independent, unbranded marketer of gasoline. Our company does not manufacture ethanol, MTBE, or gasoline. We do not fly the flag of a major

oil company. Independent branded and unbranded marketers traditionally have been recognized as the most cost-competitive segment of the motor fuels marketing industry. But our role in this industry is dependent upon adequate supplies of gasoline. Without adequate supply, independent marketers cannot be competitive.

This is the reason I am appearing before you today. If the storm clouds I see gathering on the horizon today are not dissipated in the near future, independent marketers (who I am very concerned about), and gasoline consumers (who you should be very concerned about), will suffer in the near future.

This hearing represents my third opportunity to present testimony before Congress. Last year, this Subcommittee invited me to testify on H.R. 630, the predecessor to the legislation authored by Congressman Bilbray that is under consideration today. In 1996, I testified before the Senate Energy and Natural Resource Committee on the reasons for increases in retail gasoline prices during the Spring of 1996. While I may be becoming a veteran at this in some people's eyes, I still get very nervous before presenting testimony and take my opportunity to be a witness before this Subcommittee very seriously. I suspect that, without passage of this legislation, I may get the opportunity to visit you again in the future when Congress again looks for the reasons for significant California retail gasoline price increases.

CIOMA and SIGMA supported H.R. 630 last year before this Subcommittee. This year, NACS joins with CIOMA and SIGMA to urge your support for H.R. 10. In our collective opinion, this bill must pass Congress this year to avoid a pending gasoline supply crisis in California. This crisis will not be caused by California gasoline marketers, but it surely will be marketers, and more importantly, consumers, that will feel the brunt of this crisis if it is not averted. Consequently, we collectively urge the members of this Subcommittee to pass this legislation as soon as possible.

I will not take up this Subcommittee's time today by repeating the important and persuasive technical arguments for H.R. 10 put forth by other witnesses. I have attached to my formal statement a copy of my testimony before this Subcommittee last year. We agree that H.R. 10 must pass to give California refiners greater flexibility in producing gasoline. California currently has the cleanest, and the most expensive to make, gasoline in the world. Governor Davis' decision to ban MTBE will increase the cost of gasoline production and decrease the supply of gasoline even if this legislation is passed. However, without the passage of this legislation, we've got big problems.

The central point CIOMA, NACS, and SIGMA want to make to this Subcommittee is that it ultimately will be California consumers who will suffer if H.R. 10 is not enacted. Virtually all of the other witnesses appearing here today have an economic stake in the components of California gasoline. Refiners make the base product and some manufacture MTBE as an additive. MTBE manufacturers want to make sure that Governor Davis' decision to ban MTBE does not spread to other states. The ethanol industry is trying to secure the California market for their product. Certainly, an oxygenate mandate without another viable competitor is a situation any business dreams about.

The companies I represent today are different. For all practical purposes, we are a surrogate for the California consumer. Our primary mission is to secure adequate supplies of gasoline to sell to consumers at a competitive price. In general, we do not win or lose if one component or another is included in gasoline sold in California.

However, we do lose, and consumers will lose, if gasoline supplies in California are not adequate to meet demand in the future. And, given the facts as I currently view them, such a disconnect will occur if some action is not taken in the near future.

Seven out of every ten gallons of gasoline used in California must meet federal reformulated gasoline (RFG) requirements, including a mandatory oxygenate standard of 2.0 percent by weight. Currently, because of issues involving air quality, MTBE is the oxygenate of choice in California. Ethanol, while used in limited quantities in isolated markets, generally is not a viable alternative because of limited supplies and its impact on gasoline volatility (RVP)—which is tightly controlled under federal and California RFG specifications.

As of 2003, MTBE cannot be used in California gasoline under Governor Davis' decision. It will be extremely difficult for ethanol to replace MTBE both because of limited existing ethanol supplies, constraints in the California fuel distribution system, and current environmental regulations. Further, studies must be performed to determine if ethanol is, in fact, a viable substitute for MTBE. As a result, refiners and marketers in California are faced with an untenable situation. The federal government has mandated that we must have oxygenates in the majority of the gasoline we sell, but the most widely used oxygenate is banned and the other generally-used oxygenate will be very difficult for refiners to use because of the significant

added expense of producing gasoline that meets the RVP constraints when blended with ethanol.

The solution to this untenable situation is clear, at least to CIOMA, NACS, and SIGMA. The enactment of H.R. 10 will remove the federal RFG oxygenate mandate for California alone. As a result, California refiners will be permitted to meet the very stringent performance standards of California Phase II RFG and federal Phase II RFG without oxygenates if they choose to do so. California Phase II RFG already is the cleanest gasoline in the nation. If oxygenates are not necessary to make this clean gasoline, then the federal RFG mandate also is unnecessary, at least in California.

CIOMA, NACS, and SIGMA submit that opposition to this legislation has nothing to do with clean air. Instead, it has to do with economics and politics. If the oxygenate mandate is removed in California, then the MTBE industry is afraid it will spread to other states. If the mandate is removed in California, then the ethanol industry is afraid it will lose a golden opportunity to expand its markets.

Clean air is not the issue. Economics and politics are. If this Subcommittee must make a decision based upon economics, CIOMA, NACS, and SIGMA urge you to side with the independent marketers and consumers. Marketers and consumers will win with the enactment of H.R. 10 through increased refiner flexibility, increased supplies of gasoline, and lower retail gasoline prices.

Again, thank you for inviting me to appear today. I hope that the next time I am invited to appear before you, it will not be because of higher gasoline prices in California caused by the failure to enact H.R. 10.

I would be pleased to answer any questions you may have regarding my testimony.

Mr. BILBRAY. Thank you.

I would like to commend the staff in making sure that you were in the middle of this panel, because I think as a middleman in this issue, obviously your perception of what is going on with this legislation is very enlightened; except for one point, that it is H.R. 11. Unless we have a room full of bankers here, we better watch it.

Mr. ROBINSON. Could I hit one point which was the tank issue, because there were many comments regarding that? The comment I would like to hit is that EPA is seen as pretty flexible when they don't want to enforce environmental rules. The associations I represent have been very disappointed with EPA's lack of enforcement of the 1998 tank upgrade requirements. The statements they have made have been, I think, very irresponsible and do significant damage to compliance nationwide.

Fortunately, many States, certainly California is one, have continued to aggressively enforce these regulations, and I think that enforcement of the tank laws would go a long ways toward solving many of the leak problems.

Mr. BILBRAY. I appreciate your comments on the price issue. I think in California right now, especially southern California, we have seen what driving the little guy out of business has done to the consumer's ability to get a fair price or at least what the consumer perceives as a fair price. And I know a lot of the big guys may disagree with me on that.

Mr. BILBRAY. Mr. Vaughn, you have 5 minutes.

STATEMENT OF ERIC VAUGHN

Mr. VAUGHN. Thank you, Mr. Chairman. Once again it is a pleasure to be here with you and I appreciate the opportunity to offer testimony here on what I consider to be extremely important environmental economic policy and energy security policy legislation. I have actually brought a surprise guest, because many people in the country, certainly the Congress, believe that the ethanol industry exists in the State of Iowa. I am sorry, Congressman Ganske, it is

beginning to move around the country and we have with us today the largest single ethanol producer west of the Rocky Mountains, Neil Koehler with Peril Products. I have Neil here with me today. Unfortunately, while Neil is producing ethanol in California from agriculture waste and other biomass products, much of his ethanol has to leave the State because there is no market for it today in the great State of California. We hope to change that. With your support, with your enthusiastic interest in the renewable alternative option in California, we will see that change.

I represent the Renewable Fuels Association. We are the national trade association for the ethanol industry. We have 54 companies, manufacturing approximately 1.8 billion gallons of ethanol today and approximately 400 million new gallons of ethanol production capacity coming on line the next 18 months to 2 years. Much of that is not designed for, or destined for, focused on the developments in California. Much if not all of this ethanol production is being used throughout the Midwest in attainment areas and non-attainment areas.

When our industry looks at the reformulated gasoline program, we do not see calamity, water contamination, consumer outrage, political frustration. We see a success story. The success story is in Chicago, in Milwaukee, and in Gary, Indiana, where fully a third of the ethanol produced in the United States is used in the Federal reformulated gasoline program. It is the reformulated gasoline model for our country. It is exactly what Ed Madigan—excuse me, Congressman Ed Madigan the ranking minority member at the time, and at some of the subcommittee hearings, Chairman Henry Waxman, were trying to design when they put together the reformulated gasoline program as part of the Clean Air Act Amendments in 1990.

History is a wonderful tool to be able to make sure we don't repeat it—in terms of bad lessons and bad impacts—but history is a perfect indicator of what this Congress intended to do with this important fuel legislation. There are a range of public policy goals and objectives. Clean air is certainly at the top of the list. But the range of public policy objectives, energy security initiatives, marketplace opportunities for grain and other renewable biomass materials and moving our country away from all hydrocarbon slated fuels were among those initiatives.

The historic passage of the Clean Air Amendments in 1990 would not have been possible had it not been for the support of Republicans and Democrats alike throughout the upper Midwest. They were the deciding factor and the deciding force in the successful completion of those legislative initiatives.

The Renewable Fuels Association stands firmly in support of the reformulated gasoline program and the oxygen content requirement. However, we are not unmindful and certainly we are not insensitive to the water quality contamination concerns that have been expressed not only in California but in 11 States across the United States where legislation has been introduced to ban and/or to significantly limit the use of MTBE.

Just last Friday, the legislature of the great State of Iowa introduced and passed a ban bill on MTBE use. There is no MTBE used in Iowa, but they are afraid of the potential implications of MTBE

coming out of California and working its way up the Mississippi River. So the concern is literally coast to coast. The fact of the matter is we have a successful program and it includes the role of oxygenated fuels, and ethanol is meeting that objective today.

In Chicago we have the very best air quality in the country among the reformulated gasoline areas. We have absolutely no water contamination. And Congresswoman DeGette, I would only point out since 1985, ethanol has been used effectively and fully, and today in virtually all of the front range of Colorado's gasoline. And according to the Colorado Department of Health, never has MTBE been found more often, as it was all across that State when it was used, but ethanol is not found in any of the test sites or in any of the test analyses being done in those programs.

We applaud the work and the support and the leadership of Governor Gray Davis. We think his 11-point plan, not just a waiver of the oxygenate standard, deserves this committee's serious and thoughtful attention.

I would encourage you, Congressman Bilbray, to look at all of the initiatives that are incorporated in the Governor's plan. Just so you are fully aware, we are anxious, angry, upset at all suggestions that we are not ready to compete in the California market—we are—with available supplies today and growing supplies in the future.

And I would close with this. We look forward to the debate in California, Mr. Hickox's leadership on these issues, and I intend to fully and aggressively and hopefully effectively compete in the California and other reformulated gasoline program markets in the future.

I thank you, Congressman, for your kind invitation. I look forward to your questions.

[The prepared statement of Eric Vaughn follows:]

PREPARED STATEMENT OF ERIC VAUGHN, PRESIDENT, RENEWABLE FUELS
ASSOCIATION

Good morning Mr. Chairman and Members of the Committee. I am very pleased to be here to discuss H.R. 11, a bill introduced by Representative Brian Bilbray (R-CA) which amends the Clean Air Act to permit the exclusive application of California State regulations to federal reformulated gasoline within the State. This is an important issue with far-reaching consequences for both consumers and air quality, and I appreciate the opportunity to provide comments on behalf of the domestic ethanol industry.

The Renewable Fuels Association (RFA) is the national trade association for the domestic ethanol industry. Our membership includes a broad cross-section of ethanol producers, marketers, agricultural organizations and state agencies interested in the increased development and use of fuel ethanol. There are more than 50 ethanol producing facilities in 21 states in operation today, including a growing number of farmer-owned cooperatives that have begun production in just the past five years. The industry currently produces approximately 100,000 barrels of ethanol per day, and utilizes more than 600 million bushels of grain per year. The RFA membership represents more than 95% of all ethanol produced and sold in the United States today.

In short, the RFA opposes H.R. 11, as drafted. We understand the desire of some to reduce or eliminate the use of MTBE. But H.R. 11 does not accomplish that objective. Simply put, *the problem is MTBE in water, not oxygen in gasoline*. Governor Davis' recent decision to phase out the use of MTBE in California gasoline by 2003 addresses the problem of MTBE water contamination. Providing refiners with additional flexibility to use no oxygenate at all is unnecessary and will result in environmental backsliding. Moreover, providing this additional flexibility could increase consumer fuel costs, threatens the investments made by farmers and ethanol pro-

ducers in anticipation of oxygenate markets, and undermines the energy security and rural economic development policy objectives of the Clean Air Act Amendments of 1990.

Background

The Clean Air Act Amendments of 1990 (the Act) created several programs to help reduce emissions from automobiles. First, the Act created the oxyfuel program, which required gasoline marketers in carbon monoxide (CO) non-attainment areas to add 2.7% wt. oxygen to reduce CO emissions beginning in 1992. Because of its higher oxygen content, ethanol has been the oxygenate of choice in this market. Approximately 85% of the oxyfuel market is ethanol blended gasoline, the remainder is MTBE. The oxyfuel program has been a tremendous success, reducing ambient CO pollution approximately 14 percent. As a result, many areas have achieved attainment of the CO standard. In 1990, there were 42 CO non-attainment areas. Today, in large part because of the success of the oxyfuel program, there are only 17, and additional areas are demonstrating attainment every year.

The second fuel program created by the Act was the reformulated gasoline (RFG) program. The Act requires refiners distributing gasoline in severe ozone non-attainment areas to reduce VOC and toxic emissions by 15% (27% and 20%, respectively, in phase 2 RFG which begins January 1, 2000). A key component of this program also is the addition of oxygenates. The Act requires that RFG contain 2.0% wt. oxygen, which can be met by either 11% volume MTBE or 5.7% volume ethanol. Oxygenates were seen as a means of providing clean octane to replace components, such as aromatics, which would have to be reduced in order to meet the VOC and toxic performance standards of the Act.

From an air quality perspective, the RFG program has also been a success. EPA estimates RFG is the equivalent of taking 8 million vehicles off the road each year. Unlike the oxyfuel program, however, MTBE has become the oxygenate of choice in this market. Including areas which opted-in to the program, RFG represents about 30% of the nation's total gasoline supply, or about 35 billion gallons annually. Approximately 88% of the RFG oxygen market is met with MTBE. The remaining 12% is met by ethanol, primarily in Chicago and Milwaukee where ethanol blends are used almost exclusively.

In California, while one refiner is now using some ethanol blended fuels on a limited basis, almost all of the state's cleaner burning gasoline (CBG) has been blended with MTBE. California is the largest single market for MTBE, using approximately 100,000 barrels per day (b/d) or 1.5 billion gallons annually.

Governor Davis' Executive Order eliminating the use of MTBE addresses the problems of MTBE water contamination.

In early 1996, California state officials reported that several municipal water supplies had to be closed because of MTBE contamination, and that MTBE water contamination was becoming a larger threat. The California legislature responded by enacting legislation (S.B. 521) requiring a number of studies of the health and environmental impacts of MTBE. If the Governor, on the basis of these technical reports, concluded MTBE posed a significant threat to the health or environment of California, the legislation authorized the Governor to take whatever action necessary to protect the citizens of California.

In December, 1998, several reports were completed and forwarded to Governor Davis. Among the reports was a comprehensive analysis by the University of California-Davis, "*Health and Environmental Assessment of MTBE*" (UC Davis study) which concluded that there are "significant risks and costs associated with water contamination due to the use of MTBE." According to the UC Davis study, "if MTBE continues to be used at current levels and more sources become contaminated, the potential for regional degradation of water resources, especially groundwater basins, will increase." The report concludes, "the use of either non-oxygenated reformulated gasoline or ethanol as an oxygenate in CaRFG2 would result in a much lower risk to water supplies, lower water treatment costs in the event of a spill, and lower monitoring costs."

Based on the UC Davis assessment, the peer review comments and public hearings, and acting on the basis of S.B. 521, Governor Gray Davis on March 26, 1999 issued Executive Order D-5-99, phasing out the use of MTBE in California gasoline by 2003. Thus, we question the need for federal legislation largely designed to achieve the same end.

While there are some overlapping reporting requirements for refiners selling CBG in federal RFG areas, from a practical standpoint, the only effect of H.R. 11 is to vitiate the oxygen requirement of federal RFG, making oxygen optional in California gasolines. But as described in the state's own reports, the problem is MTBE in

water, not oxygen in gasoline. Governor Davis' Executive Order of March 26 deals with the problem—it phases out the use of MTBE.

Governor Davis' order also expresses support for federal legislation providing flexibility to refiners not to use oxygenates at all. But the only reason to provide such "flexibility" would be an assumption there is insufficient ethanol to meet the oxygenate demand. That is not the case.

There is sufficient ethanol supply to meet California oxygenate demand.

The only reason to provide refiners with the flexibility to utilize non-oxygenated gasoline in California, or elsewhere, is a presumption that ethanol supply is insufficient to meet anticipated demand. But U.S. ethanol production is adequate to meet California's oxygenate demand, particularly given the extensive phase-out of MTBE included in Governor Davis' Executive Order. Approximately 100,000 b/d of MTBE are used in California today. That includes MTBE that is currently being used in CBG not covered by federal RFG requirements. But it would not take that much ethanol to meet the same oxygenate demand. Ethanol has twice the oxygen content as MTBE. Thus, it will satisfy the same oxygen demand with only half the volume. Assuming oxygenates are not used in areas where it is not required, it is estimated that California's ethanol demand is only 40,000 b/d. With current U.S. ethanol production capacity of about 117,000 b/d, and an additional 26,000 b/d of capacity in construction or in planning, there will clearly be adequate supplies of ethanol to meet California oxygenate demand.

Another issue is whether there would be adequate transportation and storage capacity to handle increased ethanol usage in California. Again, the answer is yes. Attached is a report completed by Downstream Alternatives, Inc., "*The Use of Ethanol in California Clean Burning Gasoline: Ethanol Supply/Demand and Logistics*," which concludes;

"Based on our assessment, adequate supplies of competitively priced ethanol could be supplied to the California market almost immediately. Terminal preparation is the real variable. But even here it is clear that well over half the terminals offering gasoline could make ethanol available in six months or less. In turn, these terminals could be utilized to supply ethanol for gasoline sourced from other terminals thereby increasing the amount of ethanol blending that could be achieved in a short time frame. It is not necessary to have ethanol in all gasoline terminals to achieve 100% market penetration."

The U.S. ethanol industry invested \$2.8 billion in expanded production capacity to meet anticipated Clean Air Act oxygenate demand.

Indeed, the U.S. ethanol industry has already demonstrated its ability to respond to market forces quickly and effectively. In anticipation of significant market opportunities, the domestic ethanol industry began an unprecedented expansion in 1990, almost doubling in size from 850 million gallons of annual capacity to 1.5 billion gallons in 1995. Most of that new production capacity was by farmer-owned cooperative plants. Farmers have recognized the need for value-added processing, and understand that ethanol production offers a tremendous opportunity for rural economic growth and investment. According to the U.S. Department of Agriculture, small farmer-owned cooperative ethanol plants now represent approximately 30% of the industry's production. The industry continues to grow. Domestic ethanol production capacity today is approximately 1.8 billion gallons.

More than 40 plants were either built or expanded as a result of the 1990 clean air bill, representing about 450 million bushels of increased corn demand annually and \$2.8 billion in investment in this important value-added industry. Repealing the oxygen standard places much of that investment and rural economic growth at risk, and certainly threatens the continued development of the domestic ethanol industry.

Eliminating the use of oxygenates in California gasoline will increase consumer costs.

The California Energy Commission (CEC) recently completed an analysis, "*Supply and Cost of Alternatives to MTBE in Gasoline*." The CEC report provides an estimate of the potential costs or savings to the public in increases or decreases in retail gasoline prices for each alternative when compared to MTBE. In all cases studied (i.e., near term, medium term, long term), eliminating the use of oxygenates resulted in the largest cost increase for California consumers. For example, the report states:

"In the long term, a complete ban on all oxygenates would result in the greatest average cost increase for gasoline for this time period compared to all of the other alternatives studied...refiners would need to make significant investments to modify their facilities, totaling over \$1.1 billion. This is the primary reason for the average cost increase."

In all cases, the ethanol option was less expensive than the non-oxygenated case. Indeed, the ethanol case was shown to potentially save consumers money over the long term if adjustments to the predictive model are made recognizing the carbon monoxide and exhaust emissions benefits of ethanol which would obviate the need for refiners to secure specially tailored blendstocks for ethanol. While the report also showed that passage of legislation making oxygenates optional in California (i.e., H.R. 11, S. 645) would be the least expensive option, this conclusion is based on the assumption that ether oxygenates, including MTBE, continue to be used. Thus this option, while potentially less expensive, perpetuates the water contamination problems that have plagued the program. Moreover, the economic analysis did not include the potential costs of remediation if ether oxygenates continue and additional drinking water supplies are contaminated.

Recently, MathPro Inc. completed an analysis of the economic impact of non-oxygenated fuels in California for Chevron Products Company and the Tosco Corporation, "*Potential Economic Benefits of the Feinstein-Bilbray Bill.*" The MathPro analysis concluded that even with the flexibility to use non-oxygenated fuels, refiners in California would continue to utilize oxygenates to help meet the toxic performance standards and maintain octane. It is interesting to note that MathPro concluded, "the 'optimal' (cost minimizing) share of non-oxygenated CARB gasoline ranges from about 20 to 40 percent, depending on the time period and Predictive Model mode." But approximately 35% of California's gasoline is already exempt from the federal RFG oxygen requirement. Thus, according to the refining industry's own analysis, the most economic level of non-oxygenated fuel can already be supplied to California *without federal legislation.*

Eliminating the oxygen requirement in California will result in environmental backsliding.

The California Air Resources Board (CARB) and the oil companies maintain the oxygen standard is not necessary to meet Clean Air Act emissions standards. From a strict VOC compliance perspective, they might be right. But this perspective ignores the "real world" benefits of oxygenates that would be forfeited by passage of H.R. 11. Both state and federal emissions standards for cleaner burning gasolines use mass VOC emissions as a measure of compliance. There are many ways to reduce VOC emissions, and for some large integrated refiners it would not be necessary to use oxygenates in order to meet those standards. Modeling by the Department of Energy and others suggests refiners would likely respond to the "flexibility" for non-oxygenated fuels by increasing olefin and aromatic content, and using alkylate or other petroleum-derived products. The result would be dirtier air.

Oxygenates reduce exhaust emissions of CO and VOC's, particularly in higher-emitting vehicles. CO is a precursor to the formation of urban ozone. In fact, as VOC emissions from vehicles have been reduced, the importance of CO to ozone formation has become more critical. Recent studies indicate that exhaust CO emissions from gasoline vehicles make about as much ozone as do the exhaust VOC emissions. Neither federal RFG nor California CBG includes a CO performance standard. In the absence of the oxygen requirement then, an increasingly important contributor to the formation of urban ozone will be increased.

In addition, if reducing ozone is the objective, exhaust VOC emissions are more important than *evaporative* VOC emissions because exhaust emissions are more reactive, i.e., exhaust emissions will form ozone more quickly and readily than will evaporative emissions. In the absence of the oxygen requirement, it is very likely that exhaust emissions will increase relative to evaporative emissions. Thus, ozone will increase even if the mass-based VOC standard, which does not distinguish between exhaust and evaporative emissions, is met.

A detailed analysis of the air quality impacts associated with repealing the oxygen standard is attached. The clear conclusion, however, is that unless the emissions standards are tightened to reflect the Areal world@ benefits of oxygenates, there will be environmental backsliding caused by H.R. 11.

In addition to environmental backsliding, enacting H.R. 11 would forfeit the energy security and rural economic development benefits of the oxygen requirement.

As stated by Richard Wilson, then-EPA Acting Assistant Administrator for Air and Radiation, in testimony expressing the Agency's opposition to this legislation at last year's hearing on H.R. 630 (the predecessor to H.R. 11);

"The RFG requirements also emerged from the melding of several Congressional goals, including air quality improvements, enhanced energy security by extending gasoline supply through the use of oxygenates, and encouraging the use of renewable energy sources."

Indeed, these ancillary benefits were an integral part of the historic agreement leading to passage of the Clean Air Act Amendments of 1990. With hundreds of thousands of American troops stationed in the Persian Gulf at the time and a flagging rural economy, the Congress wanted to promote the increased use of domestically produced, renewable resources, such as ethanol, through the oxygen requirement. These policy objectives remain valid today.

The farm economy would certainly benefit from continuation of the oxygen requirement. Recently, Federal Reserve Board Chairman Alan Greenspan conceded, "farmers, rather than sharing in the general prosperity, have been experiencing disappointing exports and sharply falling prices." The potential for increased domestic value-added use of grain, such as ethanol production, could dramatically enhance rural economies. This rationale for the oxygen content requirement is perhaps more valid today than it was even in 1990.

The importance of ethanol and maintaining the oxygen standard was recently underscored by several farmer and commodity organizations in a letter to Congressional leadership. The letter states:

"The elimination of the oxygen requirement would deal a severe blow to the domestic ethanol industry which has offered one of the few growing market opportunities for American farmers in a year of economic collapse in farm country... Removing the oxygen standard now simply because there is a problem with MTBE would reverse a policy that has not only brought clean air to many American cities, but renewed economic activity in rural America."

April 22, 1999 letter to congressional leaders signed by the National Corn Growers Association, American Farm Bureau Federation, National Farmers Union, National Grain Sorghum Producers Association, American Soybean Association, American Sugar Alliance, American Sugarbeet Growers Association, Florida Sugar Cane League, Gay and Robinson, Inc. (Hawaii), Rio Grande Valley Sugar Growers, U.S. Beet Sugar Association, American Corn Growers Association, American Society of Farm Managers and Rural Appraisers, National Association of Wheat Growers, National Pork Producers Council, Women Involved in Farm Economics, National Council of Farmer Cooperatives.

In addition to the agricultural impacts, enhancing energy security at a time when the U.S. is more dependent upon imported energy than at any time in its history also remains an important policy objective. It is indeed ironic that almost 40% of the MTBE used in RFG today (1.4 billion gallons annually) is imported. If MTBE use is reduced as a result of actions taken to curtail water contamination, the energy security objective of the clean air bill may finally be realized.

Conclusion:

The domestic ethanol industry understands the strong interest in protecting water supplies. But the problem is MTBE in water, not oxygen in gasoline. By simply giving refiners the flexibility to use oxygenates, or not, H.R. 11 simply does not address the problem. Just as in Illinois and Wisconsin, where the ethanol RFG program has been an unqualified success, California can have clean air and clean water. The oxygen requirement is a critical protection against environmental backsliding. It also advances important public policy objectives of energy security and rural economic development, and promotes the increased production and use of renewable fuels, such as ethanol, which is the only transportation fuel strategy we have for reducing greenhouse gases and addressing global climate change. If MTBE must be removed from gasoline to protect public health and water quality, there is sufficient ethanol supplies to satisfy demand. If MTBE is a problem, ethanol can, and will, preserve the air quality benefits of RFG without sacrificing public support for this important program.

Thank you.

Mr. BILBRAY. Thank you. I appreciate the fact that you have at least indicated support for the State strategy at addressing these issues.

Mr. Beuhler, you have the floor for 5 minutes.

STATEMENT OF MARK BEUHLER

Mr. BEUHLER. Mr. Chairman, distinguished members, my name is Mark Beuhler. I am the Director of Water Quality for the Metropolitan Water District of Southern California. I am here on behalf of the Association of California Water Agencies, ACWA. ACWA rep-

resents over 450 water suppliers throughout the State of California and serves, in combination, about 90 percent of the water in the State. And ACWA would like to express its strong support for H.R. 11.

About 50 years ago, the pesticide DDT was introduced worldwide to control mosquitoes, and as a result, millions of lives were saved by the prevention of malaria. Then we found DDT had some unintended environmental consequences, and it had to be phased out. Similarly, MTBE clearly has helped clean up the air, but recently you have seen some of these similar unintended environmental consequences, and it is time to look at the lead California has already taken in terms of phasing it out.

MTBE is a known animal carcinogen and a potential human carcinogen. When we tell our consumers of the presence of this compound in their water—and we have to tell them now as a result of the 1996 Safe Drinking Water Act Amendments, some of which you were involved in passing that—our consumers in general don't drink the water. Instead, they turn to bottled water at the cost of maybe 500 to 1,000 times more per gallon consumed.

Also, they can taste MTBE at very low levels, about 5 parts per billion. That is about a tablespoon of MTBE in an Olympic-size pool of water. Very low concentrations. MTBE is unique. It is much more persistent than most compounds we deal with. It simply doesn't degrade well in the environment and it moves very rapidly; in our view, more rapidly than the regulators can track it.

Utilities have been impacted. You already heard of the case of Santa Monica. South Lake Tahoe is another example. In fact, South Lake Tahoe provides an interesting example of two things. One is they have both a groundwater problem and a surface water problem in the lake, as well as in south Lake Tahoe. With the contamination they have had, there has not been a single demonstrated case of a leaking underground tank. It is all due to other sources.

The University of California estimates as many as 10,000 wells throughout the State of California could be impacted. What we are really worried about is not the cases that we know, but rather the iceberg out there, the cases of MTBE contamination that we are going to find out about.

Governor Davis acted in March to ban MTBE or actually phase it out over about 3½ years, and ACWA's position is we have to have complementary Federal legislation like H.R. 11 to make the Governor's action work.

Finally, I might add the really significant impact of consumers. We have estimated—"we," actually being an interesting partnership between the oil industry and ACWA, have estimated a cost of \$40 to \$90 per family per year to clean up MTBE. And that is probably the bottom end of the cost.

In summary, we need H.R. 11. We need to phaseout MTBE, and we need to move quickly because the longer we wait, the more of our surface waters and our wells will be contaminated. Thank you.

[The prepared statement of Mark Beuhler follows:]

PREPARED STATEMENT OF MARK BEUHLER ON BEHALF OF THE ASSOCIATION OF
CALIFORNIA WATER AGENCIES

Mr. Chairman, members of the subcommittee, my name is Mark Beuhler and I am the Director of Water Quality for the Metropolitan Water District of Southern California as well as a member of the Water Quality Committee of the Association of California Water Agencies (ACWA). I am testifying today on behalf of ACWA in strong support of H.R. 11. H.R. 11, introduced by Brian Bilbray, is cosponsored by 49 members of the California congressional delegation. It is also supported by major air and water quality districts throughout California. ACWA also supports S. 266, a companion bill in the Senate sponsored by Senator Feinstein. ACWA represents over 450 public urban and agricultural water utilities throughout the State of California, which deliver more than 90 percent of the water supplied in California.

The gasoline additive MTBE is a known animal carcinogen and potential human carcinogen. Existing health studies are inadequate to determine the risk posed by MTBE in drinking water. Yet, it has become the third most common chemical manufactured in the United States. It constitutes about 11 percent of the gasoline in areas such as Los Angeles, San Diego, and Sacramento. It is unfortunate that a chemical with so little known about its health risk(s) has become so widely used.

Our consumers can taste MTBE in their water at extremely low concentrations, in the range of 5 parts per billion (this is equivalent to less than a tablespoon of MTBE in an Olympic-sized pool). If our consumers taste a chemical that is a known animal carcinogen and potential human carcinogen, they very often choose to buy bottled water at a cost of 500 to 1,000 times more than the cost of tapwater. Also, MTBE is a man-made chemical. There is no good reason why it should be present in our drinking water.

MTBE is a unique contaminant in water. It spreads into our drinking water aquifers faster than nearly all other constituents in water. It moves faster than regulatory agencies can track it and faster than water utilities can drill new wells to replace the contaminated supplies. Unlike most organic chemicals, MTBE does not biodegrade rapidly in water. Once it has leaked into our groundwater or spilled into our drinking water reservoirs, it persists.

Why do we need H.R. 11? The gasoline oxygenate requirement in federal law is not necessary to meet clean air standards. The flexibility provided by H.R. 11 will enable California to eliminate the use of MTBE. California is taking decisive action on this issue.

A recent study conducted by the University of California has recommended that use of MTBE be eliminated in California. Governor Gray Davis acting on this recommendation issued Executive Order D-5-99 to phase out the gasoline additive by December 31, 2002. However, this executive order is not on track with existing federal requirements for mandatory use of oxygenates within the Clean Air Act. H.R. 11 is needed to implement Governor Davis' executive order to accomplish the phase out.

Water suppliers in California have already been severely impacted by MTBE. The City of Santa Monica lost 50 percent of its well production capacity and has had to switch to more expensive imported water from Northern California. South Tahoe Public Utilities District has lost one third of its well capacity. Unfortunately, South Tahoe has no imported water to replace its lost supplies and is at risk of water shortages. Many other utilities throughout the state have shut down wells or bypassed water supply reservoirs rather than risk having the fast-moving, persistent MTBE making its way into consumers' taps.

MTBE has also impacted individuals with private wells. Residents of the City of Glenville were drinking water with MTBE levels as high as 20,000 parts per billion, which is 1,000 times greater than the California Public Health Goal of 13 parts per billion.

These documented contamination incidents are likely to be just a preview of future cases. The University of California estimated that as many as 10,000 wells may be contaminated with MTBE in California. This could have a huge impact on the state's water resources and on the cost to consumers of providing alternate drinking water supplies.

The cost of removing MTBE through treatment is very expensive. The University of California has estimated these treatment costs to range from \$340 million to \$1.5 billion in California alone. Existing treatment technologies, such as air stripping, would cost at least \$40 to \$90 per family per year. Other existing treatment processes would be even more expensive (see Figure 1).

To develop new, less expensive treatment technology, an MTBE Research Partnership was created by the Association of California Water Agencies, the Western States Petroleum Association, and the Oxygenated Fuels Association. The Partner-

ship focuses on developing new, cost-effective treatment technology to handle existing contaminated drinking water supplies and developing source protection technology, to protect uncontaminated sources. This is a cooperative step in the right direction.

ACWA has also supported all major state legislation on MTBE, including bills by Kuehl/Hayden, Sher, Mountjoy, and Cunneen. However, California MTBE legislation cannot override the federal mandate for the use of oxygenates like MTBE.

California has demonstrated that it can meet all of the health and air requirements of the Clean Air Act without the use of MTBE. H.R. 11 will provide the flexibility to implement an MTBE phase-out ordered by the Governor of California and simultaneously meet all state and federal clean air standards. With the elimination of MTBE, it will be possible to have both clean air and clean water.

About 50 years ago, the pesticide DDT came into widespread use throughout the world to control mosquitoes. It saved millions of lives by preventing Malaria. Then we found that DDT had unintended consequences on the environment and it had to be phased out. MTBE is similar. Its use has produced unintended consequences in drinking water. Trading clean air for clean water is not an acceptable tradeoff. It is time to phase out MTBE. H.R. 11 will enable California the flexibility to do that.

Mr. BILBRAY. Thank you, Mr. Beuhler. Appreciate it.

The Chair will start off the round of questioning. Mr. King, can you elaborate on why you were testifying today as a single company rather than as the Oxygenated Fuel Association which has opposed the legislation in the past two Congresses?

Mr. KING. We were invited to participate as an individual company. I never inquired as to why the OFA is not testifying. We were encouraged at the opportunity and we looked forward to coming and visiting with you.

Mr. BILBRAY. Your testimony is rather confusing. I will just be very frank. I read your testimony and it is appropriate that I am frank here because it sounded like you were testifying in opposition to Mr. Franks' bill. Your specific testimony was aimed at a proposal that MTBE might be—would be outlawed. But seeing that if you read H.R. 11, you see that it is totally content neutral, and it doesn't outlaw MTBE. Also, for the record, we have had a pretty extensive history of dialoguing over the last 4 years, 5 years, so your challenge at saying let's work together and let's talk about this issue, is it aimed at H.R. 11 or is it aimed at the movement in some parts of Congress in this country at specifically outlawing one product?

Mr. KING. Well, H.R. 11 does not seek to ban MTBE, we agree with that. But you have heard—we have heard for the last 3½ hours quite a bit of discussion about banning the product and the negative implications of MTBE, and Governor Davis's order is asking that the product be eliminated from California. Your bill facilitates the Governor's ability to phase the product out, so it really does dovetail into a phaseout of MTBE, which we obviously do not support.

Mr. BILBRAY. The question is that my bill eliminates an inflexible mandate and your concern is that that mandate is right now a defensive mechanism to avoid the elimination of a commodity that you sell.

Mr. KING. That is correct. Without your bill, the product cannot be banned in California.

Mr. BILBRAY. I have just got to say, Mr. Robinson, that I think as the testimony went on, you have proven that you are basically sitting between two agendas: one wanting a mandate to be able to defend a product, and basically one that wanted a mandate to be able to guarantee a market base.

I would ask Mr. Vaughn, I have just got to go back and say the testimony from Governor Davis and the refineries have all indicated that the market share of ethanol in the State of California will be expanded over the next few years substantially with the passage of H.R. 11.

Why would an industry oppose a bill that has been identified as basically being part of the answer? Is it transitioning from one product to another with expansion of your own market share or is it that you are looking at the fact that without H.R. 11, your market share can be huge and guaranteed, and that H.R. 11 only allows the transition to a larger market share, not a guaranteed monopoly basically in the State of California?

Mr. VAUGHN. Congressman, you asked a lot. Let me see if I can try and answer the first and then I will work my way through the questions, unless we run out of time.

Mr. BILBRAY. First, your product is going to be sold more and is going to be phased in faster and that H.R. 11 would help that. Why would you oppose H.R. 11?

Mr. VAUGHN. What I said in my prepared remarks, and I heard you in the background commenting, and you did say after my testimony you are glad I have endorsed, we have pledged to support what we consider to be bold and effective action by the Governor of California to specifically address a problem. He has an 11-point agenda that we think, if enacted in its current plan, will result in significant market development opportunities for ethanol.

Quite frankly, I think it is going to drive very specific rice straw development for ethanol in California and we are very encouraged by that. I am not certain, sir, because every single chance you get, you say your objective is to be fuel neutral or at least you are content neutral. That is not what Governor Davis is doing. Your bill works in concert with Governor Davis's plan. If your bill is a stand-alone initiative, as it is before this committee, it does not work.

Mr. BILBRAY. Reclaiming my time. Let me just clarify that this body, not just as a subcommittee but as a Congress, is not in the position to implement the Davis plan in the State of California. But we can do our part of it. But I am sitting here with two people from different industries that are having totally different reasons to oppose H.R. 11, and to be frank with you, the ban standing between you really indicates why I and a lot of people in the State of California and in this Congress feel that it needs to be passed; specifically because you two are standing here to oppose it. So I am just saying it is a clear statement. I allow my colleague—I have got to go to the ranking member, but I will allow my colleague, and we will do a second round.

Mr. KING. I was just going to add something.

Mr. BILBRAY. Go ahead.

Mr. KING. We keep referring to Mr. Robinson and the consumer. We got a letter yesterday, sent to Chairman Bilirakis from the National Consumer League, which supports the continued use of MTBE for both environmental and for economic reasons. This is a 100-year-old organization that I—

Mr. BILBRAY. Do they support mandating that it has to be used in an area that has a cleaner—basically a cleaner formula, and does a Federal mandate accomplish what we want to do with this? That is the big question.

Ms. DEGETTE. Thank you, Mr. Chairman. First let me clarify something, Mr. Vaughn, because I was disturbed by a misinterpretation you may have, as evidenced by your remarks directed toward me and the front range of Colorado.

I am certainly well aware of the benefits of ethanol in Colorado and other places. But I do think that because of what Mr. Beuhler was saying and some of the unintended results we have seen from MTBE, that before we make a wholesale shift into ethanol or anything else, we should look at all of the environmental and health impacts before we go there. So I just wanted to clarify that with you.

Mr. Beuhler, let me ask you, because I think what you are talking about in Lake Tahoe with the MTBE, they are finding in areas with no leaking underground storage tanks, is important. Do you think that that contamination is coming from two-stroke boat engines or other sources, or do you know?

Mr. BEUHLER. It is both. In fact—and I also serve on the blue ribbon panel that was referred to earlier so we have heard of cases, similar things in Maine and other parts of the country. In the case of Lake Tahoe, the lake itself has contamination from two-cycle engines. About a quarter of the fuel gets spewed out unburnt into the lake, so that is a problem with the lake itself.

The city of South Lake Tahoe, though, has its own set of municipal wells. They don't use water from the lake. They use it from their wells. And in those wells, although they have good monitoring, they have yet to see a single demonstrated case of leaking underground tanks. When they have investigated what the cause is, it is things like poor maintenance, people spilling gas on the ground.

There is one example I am aware of where a car drove away with a nozzle stuck in the tank, and it ripped off the hose and it spilled that way. So there are lots of ways that gasoline can get into the groundwater other than just leaking tanks.

Mr. SHADEGG. Do you have any sense of what the extent of contamination is from these other sources versus the leaking underground tanks?

Mr. BEUHLER. Yeah. The largest single source is clearly the leaking underground tanks—to be clear about that—and that has been demonstrated in a variety of cases. But the reason for emphasizing the non-underground tank situation is MTBE is so obnoxious at low concentrations that just a little bit goes a long ways. And so even with perfectly functioning tank systems, communities are at risk of MTBE contamination.

Ms. DEGETTE. Do you know what the percentage is?

Mr. BEUHLER. No, I don't.

Ms. DEGETTE. Is anyone working on that?

Mr. BEUHLER. No, I don't think so, probably because in general it is concluded that we have got to fix the tanks but we have also got to address a whole series of other issues, too.

Ms. DEGETTE. Mr. Bordvick, I want to ask you, there are a lot of refiners who are a lot less sophisticated than you folks are, and I am wondering if you have any information about small refiners that are ready and able to produce gasoline without any oxygenate that will meet the California standards.

Mr. BORDVICK. I don't have specific information on other refiners. We have heard certainly from other sophisticated refiners, if we can use that term, like Chevron who has made certain commitments. What I can tell you is this. We do produce today gasoline that has all the same air quality benefits, cleaner burning gasoline using ethanol, which isn't easy to do year round since summertime is a challenge, but we can do it and without any oxygenates at all. It is not magic. It is not using some science that isn't available to anyone else. It does require some hardware changes in the refinery, which we haven't made yet, in order to make the volumes that we

need to provide—supply the entire State—but it is not a technological issue.

It does take some investment, which smaller companies may have harder time than bigger companies, but it is not—it is not a huge issue. One biggest issue right now is time. It just takes some time to do that.

Ms. DEGETTE. In your testimony, you said there are really three barriers to getting this non-oxygenated fuel out. Obviously, the current law. And then you also said technology and transportation. Let's say we pass H.R. 11. Aren't you still going—may I have permission for a couple extra minutes?

Mr. BILBRAY. Yes.

Ms. DEGETTE. Thanks. We are still going to have the technology and transportation problems, I would assume. Do you think those will lessen if we pass the law and, if so, why?

Mr. BORDVICK. By passing H.R. 11, one of the benefits of passing H.R. 11 is that you will provide the opportunity for some immediate phaseout of MTBE. With the flexibility of no longer having a mandate, we can look at the distribution and transportation system in California, for example, and see where there are opportunities to perhaps dedicate specific pieces of that transportation system to a non-MTBE gasoline, similar to what we have done to Lake Tahoe. It won't provide—everywhere in the State won't have that same opportunity, but we are going to look at every opportunity we can, so one of the very significant benefits of passing this bill is the speed at which MTBE can be phased out. We still may not get a 100 percent removal under the Governor's mandate, but there is going to be a lot less MTBE in gasoline with the passage of this bill.

And if I may comment on the underground storage tank issue, which is a big issue. As I mentioned, we have 3,000 retail outlets on the West Coast. It is a significant issue for us. The person that has to pay the bill in cleaning it up is us. If I could guarantee to you that we could make an underground storage system that would absolutely not leak, I would love to do that. I cannot sit here and tell you that won't happen, either from spills, from customers, whatever; but I can guarantee you that if MTBE is not in the gasoline, it won't get in the water.

Ms. DEGETTE. Mr. King, can you comment on some of these same issues?

Mr. KING. I don't know whether Mr. Bordvick is saying that all of his tanks had not been replaced but—

Mr. BORDVICK. All of our tanks are complying with the Federal standards, and we also would wish that the EPA would uniformly enforce that because we certainly are in compliance. We don't have leaking tanks. But we have found that it is showing up in other places, and we conclude that is from fairly small customer spills. It might be from even someone in the backyard with their lawn mower, and certainly motor boats' deposition from the air. There are a lot of other sources. I can't give you a percentage, unfortunately, but there is a significant other source, other than storage tanks.

Mr. KING. Clearly the problem is storage tanks. We have talked about at least 30 percent of the country does not have their storage

tanks replaced to the new double-hold standards. We believe very strongly that that is the problem. We talk about MTBE is the problem with the leak, but there are other constituents of gasoline that are leaking as well, that are known carcinogens. And so EPA has to come out and decide on a deadline for the tanks to be remediated and get it done.

Ms. DEGETTE. Mr. Chairman, I think from our side of the aisle, if I can just ask unanimous consent that any members that had to leave could submit any questions for this panel.

Mr. BILBRAY. No objection.

Mr. Ganske.

Mr. GANSKE. Mr. Beuhler, you started out your comments with a pretty strong comparison. I mean, you basically were comparing MTBE to DDT.

Mr. BEUHLER. If I could clarify, DDT is not an MTBE or not comparable in terms of health risks. That is not the issue. I think the reason for the comparison is unintended consequences on the environment. Nobody understood when DDT was first used, there would be unintended consequences on the environment, and the same is true with MTBE. Nobody understood there would be unintended consequences on the environment, in this case water.

Mr. GANSKE. You are basically in agreement with the gentleman from the EPA that there were some unique properties about MTBE that facilitated dispersion; is that correct?

Mr. BEUHLER. Absolutely. It is one of the most difficult compounds to deal with, because it moves so fast and doesn't really break down effectively.

Mr. GANSKE. It isn't really like just regular gasoline.

Mr. BEUHLER. No.

Mr. GANSKE. It doesn't have MTBE that we have had around the country for a long time.

Mr. BEUHLER. You are correct. We don't have anywhere near the same problems like with benzene or toluene, because they biodegrade in the environment. By the time they hit our wells, they are largely gone.

Mr. GANSKE. Mr. Vaughn, earlier in the day, we had some questions or comments about the availability of ethanol and the impact on cost. Would you care to address those?

Mr. VAUGHN. Yes, sir, Mr. Ganske. The ethanol industry today has the capacity to produce approximately 1.8 billion gallons, and as I mentioned in my remarks, approximately 400 million gallons of new capacity is coming onstream. If you took a look at the entirely reformulated gasoline program in existence today, and you put those gallons of MTBE that is used today in ethanol equivalent, which means you need less ethanol to achieve the same oxygenate requirement, it is approximately a 2.1 billion gallon demand. And anyone who says that ethanol can meet all that requirement tomorrow afternoon at 5 o'clock is wrong. We couldn't.

But Governor Gray Davis has asked in an analysis completed by the end of this year, could ethanol meet approximately 650 million gallon demand, annual demand in the State of California? How much of that would be coming from California base feed stocks? Congressman, we consider all of those to be very positive economic

environmental goals and objectives that have not been talked about here today.

We would like to see those on objectives fully evaluated, fully developed, and to see the role of renewables alternatives like ethanol be fully explored and developed in the California market.

Mr. GANSKE. What would be the impact on the cost of gasoline in California if you are using ethanol instead of MTBE?

Mr. VAUGHN. Mr. Hickox, the new director of the California EPA, in his comments said that the impact on adding ethanol to gasoline in California under the current regime would increase gasoline prices approximately 7 cents. What he is referring to was if it was an immediate ban on MTBE and an immediate replacement of ethanol. Quite frankly, I think he is correct in those numbers.

The California Energy Commission analysis, the UC-Davis report, as was also pointed out here, pointed out that an ethanol-blended option in the current reformulated gasoline program marshaled in over the timeframe that the Governor has indicated, is the cheapest option in terms of the impact on consumers. But that is also, sir, taking ethanol out of the Midwest.

We are anticipating, then—the representatives of California rice growers are here for meetings this afternoon with Senators from California in the other body to promote renewable alternative development right there in Sacramento, in the valley. We are burning the equivalent of 350 million gallons a year in rice straw in California. That is a crime. We ought to stop that and we ought to produce the ethanol in California, which would drive down those consumer impact implications immediately. It would be the most consumer-friendly and the most environmentally friendly option available on the docket today.

Mr. GANSKE. Senator Feinstein, I thought, mentioned something about 4 years before you could get significant ethanol into California. Is that in line with what you are thinking, or would it be a shorter period of time?

Mr. VAUGHN. The ethanol has—and I do apologize, Congresswoman DeGette, if we have gotten off on the wrong foot with ethanol on the front range—ethanol surrounds California. We are in every major metropolitan area in the Rocky Mountain region from the Pacific Northwest to Phoenix. Denver is the most exciting program we have had for 10 years with ethanol, Reno, Las Vegas, Salt Lake City. So we are within minutes of the western part of California right now today.

We would estimate that we could respond to the entire northern California marketplace demand for oxygenates in 60 to 180 days and the transportation is available, the infrastructure for refining internally is available and the ethanol is available.

Southern California is a different story, and that is why Governor Gray Davis's 3-year plan, while some might consider it to be excessive in terms of phasing out one product, it could be a very positive way of developing in-state and national ethanol production to meet demand for cleaner burning renewable oxygenates if California.

Mr. GANSKE. Finally, one question, Mr. Beuhler. As a physician, I have looked at—worked with ethanol for a long, long time. I mean, there are probably very few people in this room that haven't

consumed it. Even though there isn't a study that is out there, it is hard for me to believe that a substance that we have in beer, other drinks, you know—is it your expectation that we would see the same type of problems with ethanol at some time in the future that you are seeing with MTBE?

Mr. BEUHLER. Well, I will defer to your medical knowledge on that. But just from the standpoint of drinking water suppliers, two things work in our favor. The first is hopefully it won't get to our water sources in the first place. It degrades very rapidly, in fact, much faster than most of the other compounds that are in gasoline. So that works in our favor.

The other question is a real good one. We don't have the answer to that yet. What do low levels of ethanol mean in drinking water? I don't think anybody knows.

Mr. GANSKE. Thank you. Thank you, Mr. Chairman.

Mr. BILBRAY. Mr. King, I wanted to come back to you because I think I was a little harsh on one side. After re-reading more of your testimony, it doesn't seem like your company is very far from H.R. 11 at all. You refer to that any legislation should have the objective that would be good for public policy and would fulfill certain criteria to protect the public health. Are you aware that the EPA has already made a determination about California reformulated gasoline pertaining to the public health protection?

Mr. KING. In what form?

Mr. BILBRAY. That it is superior to the Federal reformulated gasoline. In fact, it is superior to the Phase 2 Federal reformulated gasoline.

Mr. KING. Superior to Phase 2 with oxygenates?

Mr. BILBRAY. With or without.

Mr. KING. I am not aware of that. I guess I have been under the impression that the fuel in California with oxygen is a better product than without.

Mr. BILBRAY. But with the standard, the California standard which, granted, the great percentage of it has oxygenates in it, but the California standard, which is what my bill would refer to, are you aware that that standard that my bill would refer to has already been found by EPA to be superior to the Federal clean fuel?

Mr. KING. I know that that fuel is superior, but I don't know exactly whether it is superior to the Federal clean fuel because it has oxygenates. But, you know, we are aware that the California clean fuel is a good product, but we just believe it is better with MTBE in it, and it does help reduce the key toxic emissions that we have been talking about.

Mr. BILBRAY. My point was you were talking about the criteria to make sure there was no net degradation of the public health. That was a determination that is included right in the bill that the EPA needs to make a—would have to make that determination which they already have. The question I—that is where I am wondering where we are going with this. I understand your concern about an abolition and a substance specific. Again, this is why this bill isn't substance-specific because I have seen, through practical application and air pollution strategies, that flexibility has been the success of the Clean Air Act traditionally. It is most successful—can we all agree it is the most successful environmental strat-

egy in the history of the world? It also gives the most local flexibility of any environmental strategy there has been.

California's air right now is twice as clean right as it was in the sixties. The question is, why not build on the flexibility successes of the Clean Air Act? In other words, be outcome-based like the rest of the act is.

Mr. KING. The Federal RFG program provides benefits greater than the California cleaner burning gasoline. What we are saying is you necessarily would have a slight backslide, I think—you are still meeting the standards with California cleaner burning gasoline without oxygenates, but with the oxygenates I have talked about in my comments that we have exceeded far beyond what the expectations were. So if you go to that standard nationally, you are going to have backsliding from where we are currently today.

Mr. BILBRAY. I just wish to point out the previous testimony of the director of the California EPA that in the parts of California that are not under the Federal mandate at this time, the fuel burned there is superior to the Federal fuel and there has not been a backsliding in those areas.

Mr. KING. That is right. And here is why, I think. Because in those areas, there is 1.6 percent, on average, by weight of MTBE used as opposed to the 2 percent, by weight, in the oxygenate mandate areas. So MTBE is still being used in that gasoline.

Mr. BILBRAY. But the point is, it isn't dependent on a Federal mandate. It is based on the outcome of how important the clean fuel is. I appreciate that. I just appreciate how far you guys come in addressing this issue. And I appreciate it.

I would like to thank the panel. I think that we have had a rather open discussion. Let me just say this to the gentlemen that are testifying today. Each of you are representing your portion of the American community one way or the other. You have got people that want the water to be able to be consumed so it can be sold. You have got those who want the renewables to be able to have expanding markets as much as humanly possible. You have those who want to be able to provide a cost-effective product that is safe to the consumer. You have those who have a product that has shown air pollution benefits in the past. And you have got those who basically want to be able to have the flexibility to produce the cheapest, safest, and the most effective fuel available.

I know we can all disagree on certain issues. We come from different approaches. The challenge for Congress is to make sure that we represent no one group sitting before us but we represent the general good of the American people. And with your testimony, we hopefully will see that happen.

Mr. Robinson?

Mr. ROBINSON. Can I just clarify our support for your legislation, whatever the number is?

Mr. BILBRAY. Thank you very much. This meeting stands adjourned.

[Whereupon, at 1:35 p.m., the subcommittee was adjourned.]

[Letters in support of H.R. 11 were received from: Board of Supervisors, County of Los Angeles, dated December 16, 1998; City of Sebastopol, dated December 17, 1998; Town of Windsor, dated December 3, 1998; Water Advisory Committee of Orange County, let-

ter dated October 2, 1998; Orange County Transportation Authority, letter dated July 27, 1998; Metropolitan Water District of Southern California, letter dated October 5, 1998; and the Lake County Board of Supervisors, letter dated January 9, 1998.]

[Additional material submitted for the record follows:]

PREPARED STATEMENT OF HON. MIKE JOHANNNS, GOVERNOR OF NEBRASKA, ON
BEHALF OF THE GOVERNORS' ETHANOL COALITION

I am very pleased to submit this statement on behalf of the State of Nebraska and on behalf of the 22 members of the Governors' Ethanol Coalition regarding H.R. 11. This legislation, introduced by Representative Brian Bilbray to redress the MTBE water contamination crisis in California, amends the *Clean Air Act* to eliminate the overlap between California's cleaner burning gasoline program and the federal reformulated gasoline program by allowing California state regulations to prevail.

First of all, as a governor, let me say that I empathize with Representative Bilbray, Senator Feinstein, Governor Davis, and others who, as elected officials like myself, have a responsibility to protect the quality of life of their constituents and as such must provide viable solutions to the current water quality situation in California. However, in light of recent actions by Governor Davis, I do not believe H.R. 11 is any longer necessary, nor do I believe it would address the problems posed by MTBE.

Last month, acting on the *Health and Environmental Assessment of MTBE* prepared by the University of California-Davis, Governor Davis issued an Executive Order that phases out the use of MTBE in the state by the end of 2002. As a result, MTBE's days are numbered in California. Governor Davis's action preempts the need for federal legislation, as Representative Bilbray's goal to reduce MTBE use in the state is already being implemented.

The problem in California is MTBE in the water, not oxygen in gasoline. Allowing the California Cleaner Burning Gasoline program, which does not have an oxygen content requirement, to supercede the federal reformulated gasoline program in California will forfeit the public policy benefits of the oxygen standard.

When the federal reformulated gasoline program was established in 1990 as part of the *Clean Air Act Amendments*, an important component was the inclusion of a year-round oxygen content requirement. There are two commonly used oxygenates today: ethanol, derived from agricultural feedstocks and biomass, and MTBE, a petroleum or natural gas-derived chemical. The oxygen standard was designed to enhance air quality and provide dramatic economic benefits to agricultural America while reducing our dependence on foreign energy supplies.

In parts of the country where ethanol has been the oxygenate of choice, there is tremendous support for the oxygen standard and it is hailed as an unqualified success. The Chicago metropolitan area, Minnesota, Wisconsin, Oregon, and numerous other states have relied on ethanol as an additive to satisfy the requirements of the *Clean Air Act*. And, wherever acute health effects concerns regarding MTBE have been raised, from Alaska to Maine, the use of ethanol has preserved important pollution reduction programs. Everywhere ethanol is used, it allows compliance with the *Clean Air Act* without the problems of water pollution or negative health effects. In fact, the American Lung Association of Chicago recently released a report praising the ethanol reformulated gasoline program, stating:

"[O]xygenates like ethanol help fuels burn more completely, thereby reducing emissions of carbon monoxide, volatile organic compounds, and toxic air emissions. Furthermore, oxygenates displace benzene found in conventional gasoline, which reduces emissions of this known carcinogen as well."

In Iowa—where ethanol has been the oxygenate of choice for over 20 years—the legislature last week banned the sale of MTBE-blended gasoline in the state. Although MTBE use in Iowa is relatively insignificant, the U.S. Geological Survey did find MTBE in eight of 30 monitored Iowa water wells, two of which had MTBE concentrations high enough to warrant a potential U.S. Environmental Protection Agency health advisory. With the number of states experiencing MTBE-related water quality problems growing at an alarming rate, Iowa lawmakers took this precautionary measure to protect its citizens and the quality of their water supplies. When blended with gasoline, oxygenates such as ethanol can reduce emissions of carbon monoxide, fine particulates, toxics, nitrogen oxides and exhaust hydrocarbons that contribute to urban ozone. And because ethanol is a renewable fuel, it is the only commercially available transportation fuel that helps reduce carbon dioxide

emissions, a greenhouse gas. These benefits will be forfeited if the oxygen content requirement is eliminated.

Ethanol Supply

Some have suggested that the reformulated gasoline oxygen content requirement must be eliminated because the ethanol industry cannot meet demand currently satisfied by using MTBE. That is simply not true. Current U.S. ethanol capacity is more than twice the amount needed to fulfill California's demand. That capacity will quickly expand, including new production from California biomass feedstocks, with growing supply to replace MTBE. The California Energy Commission has concluded that as an alternative to MTBE-blended fuels, ethanol blends can be available at prices lower than non-oxygenated gasoline.

Economic Development

Speaking as the Governor of one of the nation's largest ethanol producing states, I can personally attest to the value that a homegrown ethanol industry brings to agricultural economies. Ethanol production is one of the most effective economic engines we have to stimulate increased domestic demand for grain, boost farm income, and create jobs. During the economic downturn of the early 1980s that devastated economies in agricultural states, Nebraska and similarly situated states were advised to add value to their agricultural bounty by developing new manufacturing and industrial uses for the surplus grain. In Nebraska, we heeded that advice. Hundreds of millions of dollars have been spent to develop the value-added ethanol industry in the state. Nebraska's ethanol industry has grown so that today over 30 percent of the state's corn crop is processed in the state's ethanol plants. Also, over 75 percent of the state's grain sorghum crop is used in ethanol production. Studies have shown that corn and sorghum used for ethanol production results in higher prices paid to farmers. Without the ethanol industry, the grain surpluses and low commodity prices we are experiencing today would be worse. Lastly, we have been able to create new jobs—more than 4,000 in Nebraska—in small towns where job creation is particularly difficult.

The agricultural community is suffering from low commodity prices, falling export markets, decreasing land values and plunging domestic feed use of grain. In fact, recent testimony before the House Agriculture Committee by a Cargill executive confirmed recent US Department of Agriculture findings: U.S. grain exports are dropping, but the domestic market—new uses for grains by American manufacturers and others—has grown by more than 50 percent since 1980.

In a recent speech to the Independent Bankers Association of America, Federal Reserve Board Chairman Alan Greenspan noted that while the U.S. economy as a whole continues to experience robust economic growth, the agricultural sector has been adversely affected by severe problems of many foreign economies, which have led both to reduced demand from abroad and to increased competition from imports:

"Farmers, rather than sharing in the general prosperity, have been experiencing disappointing exports and sharply falling prices. Overall, the prices received by farmers in February were about 5 percent below the level of a year earlier. In recent weeks, corn prices have been running around \$2 a bushel in the Midwest, the lowest late-winter price for that crop in a number of years."

One significant bright spot in agriculture's otherwise dismal outlook is the opportunity for increased domestic grain consumption created by new demand for ethanol. Already, ethanol is the third largest consumer of grain, behind only feed and export markets. The industry uses a portion of the grain from more than 600 million bushels to produce over 1.4 billion gallons of clean-burning, renewable ethanol, adding \$4.5 billion in farm revenue annually. The production of ethanol has sparked new capital investment and economic development in rural communities across America. Direct farmer ownership of ethanol production facilities accounts for the majority of the recent expansion within the industry. American farmers are realizing the positive impact from this important value-added market for their crops. Today, a substantial portion of U.S. ethanol production is accounted for by farmer-owned cooperatives.

The current status of farm markets makes the availability of value-added processing that much more important to our nation's farmers and the agricultural economy. Clearly, California farmers could benefit from expanded in-state ethanol production. Today there is modest ethanol production in California, primarily from Parallel Products, a company which produces the product from waste beverage products. As the market for ethanol grows in California, new ethanol plants in the state will be built to provide local supply. These plants can convert waste products such as rice straw, forest residue and urban waste into ethanol. This will help solve vexing waste issues and create jobs as well. The rice industry has three plants currently

planned in the Sacramento valley to convert rice straw into ethanol. Ethanol is the only real alternative foreseen by the rice industry to prevent field burning which has been banned because of air pollution concerns.

Conclusion

While the oxygenate of choice for refiners in California has been MTBE, demand for ethanol to replace MTBE in the state can result in developing an in-state ethanol industry. Ethanol demand will be met by a combination of an expanded California ethanol industry and supplies from existing ethanol production facilities across the U.S.

The members of the Governors' Ethanol Coalition and I are committed to working with Congressman Bilbray and this Committee to ensure the best possible solution for California without abandoning the significant air quality, energy security, and rural economic development benefits of the oxygen content requirement in reformulated gasoline. No citizen should have to choose between clean air and clean water. With ethanol, that choice does not have to be made.

BLUEWATER NETWORK'S LEGISLATIVE RECOMMENDATION FOR METHYL TERTIARY-BUTYL ETHER

EXECUTIVE SUMMARY

The gasoline additive methyl tertiary-butyl ether (MTBE), listed as "a possible human carcinogen" by EPA, is being found in ground and surface water resources throughout the United States. Drinking water shortages, boating restrictions, litigation and remediation costs, and increased human exposure to toxins are unavoidable consequences of using MTBE. Bluewater Network contends that in order to avoid massive water contamination throughout the U.S., MTBE must be expeditiously phased out nationwide. Other ether-based additives should be banned until they are adequately studied. A realistic phaseout can be accomplished in 2-4 years.

The use of non-oxygenated ethanol-blended gasoline as a replacement for MTBE does not result in increased air emissions (assuming volatility and other existing regulations are left intact). Urban areas within Reformulated Gasoline Program areas which are required to use oxygenates, will shift to ethanol until acceptable alternatives are available. In some areas, a volatility waiver may be appropriate to better accommodate the use of ethanol provided that overall air quality is maintained as a result of the waiver. Ethanol's positive effect on carbon monoxide emissions, as well as high emitters, should be accurately weighted in the analysis.

A temporary 2-4 year moratorium from the oxygen standard of the Clean Air Act will have two primary benefits: (1) accelerating the phase-out of MTBE by allowing non-oxygenated fuels to displace MTBE-blends in previously, oxygenated areas; (2) providing a grace period to review the effectiveness of ethanol, the oxygen standard and progress towards the use of non-petroleum fuel. Until those questions are answered, Bluewater Network strongly recommends that the general requirements of the CAA are permanently protected.

Section 1: Bluewater Network supports state and federal bills calling for a ban or phase out of ether-based oxygenates, including MTBE.

MTBE and other ether-based oxygenates (e.g. ETBE) are suspected carcinogens. Although all gasoline compounds are a threat to ground and surface water resources, ether additives have the following unique characteristics:

- High water solubility (e.g. sub-surface contamination);
- High mobility in soil and water (e.g. larger and deeper plumes);
- High persistence in the environment (e.g. accumulates in boating season)
- Resistance to biodegradation (i.e. slower than other gas compounds);
- Resistance to traditional water treatment (e.g. intake/tap levels similar);
- Noxious odor and taste at extremely low concentrations (e.g. 2 ppb);
- High remediation costs (e.g. air stripping not effective).

Extensive investigation into the hazards of MTBE demonstrates that continued use of MTBE or other ethers will further jeopardize U.S. water supplies, undercut the public's right to clean drinking water, shoulder water and regulatory agencies with unprecedented liabilities and cost burdens, and seriously threaten public health. Although MTBE proponents argue that aggressive replacement of leaking underground storage tanks (USTs) and two-stroke marine engines will mitigate the MTBE problem, the most advanced USTs available have proven ineffective at preventing leaks large enough to contaminate groundwater with dangerous levels of MTBE, and two-stroke marine engines will remain in use for at least twenty years.

Two-stroke engines currently emit an estimated 8 million pounds of MTBE into U.S. waterways every year. *Containment of MTBE or other ethers is not a viable option.*¹

Section 2: Bluewater Network supports state and federal bills designed to provide increased protections from MTBE-related contamination, and/or which accelerate the phase-out of MTBE and other ethers with either of the following conditions:

- 1) any amendments to the Clean Air Act provide only a 2-4 year temporary moratorium from the oxygen requirement, and other components of the Act are not considered for amendment; or
- 2) the Clean Air Act is not amended.

Bluewater Network's top priority is protect water resources from ether-based oxygenates. Bluewater supports aggressive legislation which seeks to improve the underground storage tank system, protect drinking water reservoirs from two-stroke engine pollution, safeguard vulnerable and at-risk areas, and provide more extensive liability and clean-up programs and funds. *We agree with California Governor Gray Davis' assessment that MTBE poses a significant risk to public health and the environment, especially his emphasis on the need for continued action at the legislative level.*

Consistent with extensive research indicating that MTBE is not a unique and indispensable component of the Reformulated Gasoline Program, or the only viable oxygenate for "non-attainment" urban zones or RFG-designated areas, *Bluewater Network does not believe that banning one category of oxygenates necessitates permanently lifting the oxygen standard in the Clean Air Act.*

Although temporarily lifting the oxygen mandate may accelerate a shift away from ether-based additives in areas where a phase-out is required, *permanent changes to the Act may have the following consequences:*

- opening the Act may lead to damaging amendments;
- loss of current and potential fuel diversity through an immediate return to 100% hydrocarbon-based fuel;
- continued use of MTBE and other ethers which provide octane and regulatory benefits to refiners; and as a result, continued ground and surface water MTBE contamination;
- an increase in carbon monoxide (CO) emissions;
- an increase in ground level ozone;
- an increase in primary particulate matter (PM_{2.5}) emissions;
- loss of a dilution effect of other toxic gasoline compounds such as benzene, toluene, xylene and aromatics inherent with the use of oxygenates;
- a potential increase in the use of other toxic gasoline compounds to replace octane, such as toluene;²
- loss of progress towards renewable or alternative fuels,³ including ethanol, which offer the current or potential for less dependence on imported oil, a non-petroleum fuel source with the potential to be produced from agricultural and commercial waste, and a reduction in climate change greenhouse gases. *Promoting alternative fuels was one of the primary goals of the Clean Air Act.*

Relevance to current bills

S 645, as currently drafted, would allow the U.S. EPA to waive the 2% reformulated gasoline oxygenate requirement of the Clean Air Act in any state where use of gasoline with less than 2% oxygen, including non-oxygenated fuel, does not result in greater emissions. As discussed, although the bill may help California to accelerate the shift away from ether-based additives such as MTBE, it will not help to reduce MTBE use throughout the United States. In fact, it may actually perpetuate

¹ The current California Department of Health Services "aesthetic" standard is 5 parts per billion (ppb) for MTBE in drinking water. In April, 1999, a pinhole sized leak in the "vapor recovery line" of a new, fully compliant underground storage tank in South Lake Tahoe, CA caused MTBE groundwater contamination at levels of 100,000 ppb. In terms of two-stroke engines, a 5 ppb standard is the equivalent of a 12-ounce soda can of MTBE in 13 million gallons of drinking water (the water consumed daily by about 90,000 people). The California public health standard is roughly three times that amount. A single jet ski releases enough MTBE to exceed the "aesthetic" standard in less than 1 hour, and enough MTBE to exceed the public health standard in less than 2 hours.

² Because regulations are more stringent in California than in other states, refiners would utilize different means to produce compliant gasoline and octane needs depending upon the regulations in effect. In California, refiners may alter aromatics and paraffins to boost octane, while in New England refiners may use toluene.

³ In the short term, experts believe that refiners would continue to utilize ethanol to comply with gasoline regulations and octane needs; however, refiners would quickly begin moving away from ethanol—or other alternative or renewable products produced by outside vendors—towards their own oil-based sources.

the status quo use of MTBE and other ethers, since such additives have similar costs to ethanol while continuing to provide competitive, regulatory and octane benefits to refiners. For that reason, Bluewater Network has requested that Senator Feinstein *sponsor a companion bill* to phase-out the use of added ethers such as MTBE over a two to four year period.

S 266, as currently drafted, would allow California to apply its own clean or reformulated gasoline rules [over those stipulated by the Clean Air Act] as long as emissions reductions are equivalent or greater. As discussed, although this may be a viable and immediate short-term solution to curb MTBE use, in the long term California may be inhibiting its growth towards fuel diversity, the use of a renewables, and a reduction in climate change greenhouse gases.

Therefore, if Senator Feinstein proceeds with S 645 and S 266, we urge her to take either of the following two steps to preserve those benefits:

1. Amend the bills to incorporate a renewable content requirement for all fuels. This could start at modest levels and increase each year until achieving maximum practical, sustainable (or politically acceptable) levels. It would also provide an excellent mechanism in the future should the Congress choose to try to further reduce US carbon emissions through a fuels program.

2. Amend the bill to create a 2-4 year *temporary* moratorium from the oxygenate requirement, in order to accelerate the shift away from MTBE and other ether-based additives. The Clean Air Act would remain intact and the oxygenate requirement would be reinstated after the moratorium.

Governor Davis' support of Feinstein's oxygenate bills is consistent with his hope to provide an impetus for refiners to shift, as quickly as possible, to less dangerous fuel blends in California. Bluewater Network supports the Governor and Senator Feinstein in their pursuit of an accelerated phase-out *so long as the exemption from the Clean Air Act is exclusive and temporary, and tied to a ban on the use of ether-based additives.*

HR 1367, as currently drafted, would ban the use of MTBE nationwide within the next three years. Congressman Bob Franks (R-NJ) has proposed the only bill that will effectively end the threat of MTBE contamination. However, to prevent refiners from switching to other equally dangerous additives to replace MTBE, we have requested that the bill include language banning other ether based additives until they are adequately studied.

Questions concerning an expected increase in the use of ethanol

Production—There has been concern in California that a shift to ethanol as the primary oxygenate could not be accommodated by the ethanol industry. However, according to a recent study,⁴ the current capacity for ethanol production is more than double the amount needed to meet California's demand if MTBE use is eliminated. According to the report, this ethanol supply could be made available to the state almost immediately.

Nationally, actual production of ethanol in 1998 was approximately 1.5 billion gallons. Production capacity is expected to exceed 1.8 billion gallons in 1999. By comparison, current production of MTBE is approximately 3.5 billion gallons. According to ethanol producers, expanding ethanol use to meet demand is feasible based on 1) the diversity of potential sources of ethanol (e.g. corn, feedstock, agricultural waste, rice, etc.); 2) the potential for growth in the agricultural community; 3) the relatively short time period required for new facility construction (6 months). *Furthermore, ethanol contains more oxygen than MTBE.* Attainment of the 2% oxygen mandate requires only 7% ethanol by volume versus 11% MTBE. Therefore, compliance with the Act demands less supply of ethanol. Demand for ethanol may also stimulate the production of new ethanol facilities, including waste and cellulosic material conversion plants, especially in states where it is used. Some believe that California alone has the potential to produce 2 billion gallons of ethanol within a few years.⁵

In addition, the California Energy Commission found that "potential suppliers appear to have the production capacity and raw materials necessary to produce sufficient volumes of ethanol... under any of the various cases [of an MTBE phase-out]."

Cost to refiners and consumers—According to the California Energy Commission, "if the scope of replacing MTBE were to be broadened to include the elimination of all oxygenates from gasoline, the cost impact for consumers would be the greatest,

⁴ "The Use of Ethanol in California Clean Burning Gasoline: Ethanol Supply/Demand and Logistics," study requested by the Renewable Fuels Association in anticipation of CA Governor Davis' decision to ban MTBE, conducted by Downstream Alternatives, Inc., January/February, 1999.

⁵ Personal contact with ethanol industry business representative, April, 1999.

regardless of the length of time allowed for the transition.” The study confirms that ethanol-blended fuels are actually cheaper than non-oxygenated fuels both in the short and long term.

UC-Davis concluded that MTBE RFG was the least cost-effective gasoline using a multi-media analysis. The study confirms that both ethanol and non-oxy blends are more cost effective than MTBE, but of these two alternatives to MTBE, non-oxygenated would have the highest net cost to consumers. This is based on the anticipated cost of replacing oxygenates, which constitute 11-15% of gasoline supplies by volume, with imported oilbased alternatives.

There is also a strong argument to be made that fuel source-diversity will benefit consumers by reducing price fluctuations in the petroleum sector. This is another reason why the oil industry opposes the oxygenate mandate (i.e. it lessens their control over the market).

In sum, the cost to consumers is expected to be higher by converting to non-oxygenated RFG than ethanol RFG, with actual cost to refiners roughly equivalent between ethanol, MTBE and non-oxygenated fuel blends. However, the economic and environmental costs of MTBE are significantly higher if other factors are included such as water cleanup costs, greenhouse emissions, waste reduction and economic development.

Air Emissions—The use of ethanol in reformulated gasoline does *not* result in an increase in air pollution if no other gasoline regulations are adjusted. As confirmed by the California Energy Commission study, under the current Air Resources Board Predictive Model⁶ ethanol has comparable emissions benefits to other oxygenates including MTBE, as long as the current 7.0 pound maximum volatility requirement is maintained. Tosco's current ethanol blend, distributed in California, confirms the conclusions of the Energy Commission study.

Some experts believe that the feasibility of ethanol hinges on an increased one pound volatility (RVP) allowance, from 7.0 to 8.0 pounds. Under this waiver, refiners would *not* have to produce a base gasoline of lower volatility (roughly 6.0), at presumably higher cost, to accommodate the more volatile ethanol and remain under the current volatility requirement (7.0).⁷ Current regulations could allow refiners to produce gasoline containing 10 percent ethanol with a one pound volatility allowance, to 8.0 pounds, but CARB has not determined what the air quality costs will be under this waiver.

Some experts also believe that the air quality costs of a one pound volatility waiver will be significant—an estimated 100 tons per day HC increase in the State of California. This prediction is simple: it presumes a reversal of the estimated emissions benefits of reducing the volatility requirement from 8.0 to 7.0 a few years ago. According to the Energy Commission, the preliminary results of a vehicle test study performed by CARB show that gasoline blends of 10 percent ethanol and a maximum volatility of 8.0 appear to confirm a suspected increase in HC emissions.

However, the overall air quality costs of ethanol remain unclear. Although a volatility waiver (if necessary) may increase HC emissions by 100 tons per day, ethanol use reduces carbon monoxide emissions by an additional 10% (in comparison to MTBE). CO is critical because (a) it is treated separately by CARB's emissions analysis; (b) its role as an ozone precursor may be underestimated by CARB, and its emissions models. Ethanol proponents claim that emissions increases from volatility can be justified if CO emissions benefits were accurately weighted by CARB. Conversely, MTBE's emissions benefits are actually accommodated by CARB. The Agency acknowledges that they lowered the volatility requirement to 7.0 largely because MTBE RFG is highly accommodative of a 7.0 volatility requirement. *In other words, some fuel-blend specifications set by the cleaner burning gasoline (CBG) program are designed around a model expectant of MTBE use.*

In terms of CO emissions, one of the known benefits of requiring oxygenates during the discussions leading up to the Clean Air Act's oxygen mandate was that *oxygen-content provided CO reductions and enhanced ozone reductions for the RFG program* without the complications of trying to impose hydrocarbon-based control strategies to combat the ozone-forming potential of CO. Ethanol use will further reduce the formation of ground-level ozone from CO, as well CO concentrations in general.

⁶This excludes ethanol's additional benefits in reducing carbon monoxide emissions. Ethanol proponents criticize the current model because it fails to include the impact of carbon monoxide in general, especially on ozone production. Recent photochemical air-quality monitoring reveals that carbon monoxide is a significant and perhaps growing contributor to urban ozone formation relative to VOCs. Ethanol reduces carbon monoxide emissions by roughly 10% more than MTBE or other ethers.

⁷Tosco and other refiners currently produce gasoline with ethanol that complies with the 7.0 volatility requirement.

Concerns regarding a possible 100 ton/day increase in HC emissions may overlook the possibly crucial 800 ton/day decrease in CO emissions.⁸

Inclusion of CO emissions in an ethanol-related air quality analysis may be even more important if a recent Urban Airshed Model (UAM) accurately reveals that exhaust hydrocarbon emissions from gasoline vehicles produce about as much ozone as exhaust carbon monoxide emissions.⁹ *Under these conditions, a 10% reduction in carbon monoxide emissions may be as important to ozone reduction as a 10% hydrocarbon emissions reduction. In terms of ethanol, and irrespective of the benefits of reducing CO exclusively, a 10% CO reduction would reduce ground level ozone levels by enough to counteract the ozone effects of a 100 tons per day increase in HC emissions.*¹⁰

Air quality effects should be considered for: (a) those compounds which would replace oxygenates in non-oxy fuel; (b) older, high emitting engines, which clearly benefit from oxygenates. Although oxygenates have little effect on new model automobiles, they clearly improve CO emissions among older vehicles, and slightly improve HC emissions.

Experts also believe that non-oxy fuel will contain higher levels of aromatics, paraffins and other toxins such as toluene. Increased use of these gasoline constituents may produce higher levels of airborne benzene, olefins, peroxyacetyl nitrates (PAN), fine particulate matter (PM), nitrogen oxides (NO_x) and other harmful toxins.

PREPARED STATEMENT OF JANET HATHAWAY, SENIOR ATTORNEY, AND DAVE HAWKINS, SENIOR ATTORNEY ON BEHALF OF THE NATURAL RESOURCES DEFENSE COUNCIL (NRDC)

A. MTBE CONTAMINATION: AMERICA'S CHALLENGE TO BETTER PROTECT AIR AND WATER

Detection of MTBE in water provides us with convincing evidence that our methods of storing, transporting and using gasoline and other petroleum fuels must be substantially improved. MTBE and other gasoline constituents have been detected in California in surface and ground water as well as in other states. These findings make obvious what we should have known: gasoline endangers our water, and improper storage of gasoline will result in soil contamination that can then endanger ground water.

States also jeopardize water supplies when, as in California, they allow highly-polluting, very inefficient recreational vehicles on reservoirs—and where this happens, one finds not only MTBE but benzene, a known human carcinogen, and other gasoline toxics including toluene, xylene and ethylbenzene. Throughout the country, fuel storage tanks have been located in porous soil over shallow groundwater, and over the years many of these tanks leaked fuel. In such places, MTBE as well as a long list of gasoline constituents will be found, both in soil and in groundwater.

MTBE is not the only dangerous substance in gasoline, but it has perhaps become the most notorious. Gasoline is a cocktail of known and suspected carcinogens, neurotoxins, and reproductive toxicants. Studies of workers exposed to gasoline suggest higher rates of leukemia, kidney cancers and other cancers may be associated with exposures to gasoline or its constituents.¹ While today's science does not sug-

⁸Based on CARB's inventory of 8327 tons/day CO emissions in CA from mobile sources in 1997, and the new CARB study which concludes that ethanol reduces CO by 10% more than MTBE.

⁹Gary Whitten, "Potential Extra Air Quality Benefits From Oxygenates That Are Not Required to Meet Reformulated Gasoline Specifications," report prepared for the 9th CRC On-Road Vehicle Emissions Workshop, San Diego, CA, April 19-21, 1999.

¹⁰Based on CARB's TOG emissions inventory of 1066 tons per day. 100 tons more is equivalent to roughly a 10% increase in HC, which would be counteracted by a 10% reduction in CO based on the latest UAM research.

¹"Potential Health Effects of Gasoline and Its Constituents: A Review of Current Literature (1990-1997) on Toxicological Data". *Environ. Health Perspect.* 1998 Mar; 106(3):115-125; McKee RH, Plutnick RT Exxon Biomedical Sciences, Inc., East Millstone, New Jersey 08875-2350, "Carcinogenic potential of gasoline and diesel engine oils," *Fundam. Appl. Toxicol.* 1989 Oct; 13(3):545-553; Raaschou-Nielsen O, Lohse C, Thomsen BL, Skov H, Olsen JH Division for Cancer Epidemiology, Danish Cancer Society, Copenhagen, Denmark. ole@cancer.dk, "Ambient air levels and the exposure of children to benzene, toluene, and xylenes in Denmark," *Environ Res*, 1997 Nov; 75(2):149-159; Infante PF Health Standards Program, Occupational Safety and Health Administration, Washington, DC 20210, "State of the science on the carcinogenicity of gasoline with particular reference to cohort mortality study results," *Environ Health Perspect* 1993 Dec; 101 Suppl 6:105-109; Hadnagy W, Seemayer NH Medizinisches Institut für Umwelthygiene, Universität Düsseldorf, FRG.; "Genotoxicity of particulate emissions from gasoline-powered engines evaluated by short-term bioassays." *Exp Pathol* 1989; 37(1-4):43-50; *Environ Health Perspect* 1985

gest that MTBE is among the most dangerous substances in gasoline, the fact that sensitive people detect a foul taste at concentrations of MTBE as low as a few parts per billion makes it impossible to ignore. Perhaps there is a silver lining in our inability to ignore this problem. We should ignore neither MTBE contamination nor any other of the pervasive gasoline spills and leaks endangering our environment.

If the nation responds to the evidence of gasoline contamination merely by banning MTBE, the larger environmental problem represented by thousands of leaking tanks and recurrent gasoline spills will remain. Will we simply repeat today's scenario a few years hence with a different chemical "culprit"—another ether or another gasoline constituent? That would be most unfortunate. Instead, let us use what we've learned about the dangers gasoline contamination poses to the environment to better protect air, water and soil.

The challenge is to preserve the air quality benefits that have resulted from reformulated gasoline (RFG)—which will increase with Phase II of the federal RFG program beginning in December of this year—while taking action to improve protection of our reservoirs, ground water and surface water.

Various bills have been introduced in this and the previous Congress to address concerns about contamination of groundwater. NRDC supports giving states flexibility to limit or even eliminate their oxygenate use *so long as the states preserve the air quality benefits of reformulated gasoline* (RFG). Different legislative approaches could achieve that end.

One approach would simply eliminate the minimum oxygen content requirement currently in the Clean Air Act. NRDC would support such legislation if it includes an express requirement to preserve all existing and anticipated RFG air quality benefits. We understand that Senator Chafee is proposing legislation which has that objective. The Clean Air Act and regulatory performance standards mandating reductions of air toxics and ozone precursors, however, would remain in place. With some needed drafting changes to clarify the critical requirement to preserve all current and anticipated RFG benefits, the Chafee bill would be a positive step.

Another approach is embodied in legislation before this committee. H.R. 11 (introduced by Mr. Bilbray of California, with a companion Senate bill introduced by Senator Feinstein) allows any state which adopts especially stringent vehicle standards because of serious air pollution and which EPA determines to have a reformulated fuels program at least as effective as the federal program ("achieving equivalent or greater emissions reductions") to apply state fuel standards instead of the federal program specifications. This approach would effectively eliminate the specification of oxygen content but would require equivalent reductions of toxic emissions and ozone precursors. This approach also is meritorious in providing flexibility to states to ensure air quality protection without requiring a specified percentage of oxygenates in fuels.

Both of these approaches are good first steps toward improving fuels in ways that better protect our water supplies.

But it is important that such bills be accompanied by two additional initiatives: concerted efforts to identify funds for remedial action at sites contaminated by fuel leaks and spills; and a revamping of programs to minimize future leaks from tanks and reservoir contamination. If we have learned from the legacy of gasoline spills and leaks, we will establish a coordinated program of better fuel storage regulation, clear liability for those owning or operating leaking tanks or pipelines, better enforcement against those responsible for fuel spills and leaking tanks, and better financial resources to address abandoned sites.

Elimination of the minimum oxygen requirement for reformulated gasoline unquestionably moves fuel policy in the proper direction. While this alone will not eliminate spills and leaks of fuels and oxygenates, it is a necessary prerequisite to

Oct;62:303-312 "Epidemiologic evidence for an association between gasoline and kidney cancer." Enterline PE, Viren J; Lynge E, Andersen A, Nilsson R, Barlow L, Pukkala E, Nordlinder R, Boffetta P, Grandjean P, Heikkila P, Horte LG, Jakobsson R, Lundberg I, Moen B, Partanen T, Riise T Danish Cancer Society, Copenhagen, Denmark., "Risk of cancer and exposure to gasoline vapors," *Am J Epidemiol* 1997 Mar 1;145(5):449-458; Hotz P, Lauwerys RR Unit of Industrial Toxicology and Occupational Medicine, Catholic University of Louvain, Brussels, Belgium, "Hematopoietic and lymphatic malignancies in vehicle mechanics," *Crit Rev Toxicol* 1997 Sep;27(5):443-494; Enterline PE Graduate School of Public Health, University of Pittsburgh, PA 15261, "Review of new evidence regarding the relationship of gasoline exposure to kidney cancer and leukemia.," *Environ Health Perspect* 1993 Dec;101 Suppl 6:101-103; Caprino L, Togna GI, Institute of Medical Pharmacology, University of Rome "La Sapienza," Rome, Italy, *Potential Health Effects of Gasoline and Its Constituents: A Review of Current Literature (1990-1997) on Toxicological Data*; Guldberg PH Tech Environmental, Inc., Waltham, MA 02154. "Gasoline and vapor exposures in service station and leaking underground storage tank scenarios.," *J Expo Anal Environ Epidemiol* 1992 Jan;2(1):97-107.

state, regional, and national action to reduce oxygenates in gasoline and to reduce threats to water.

B. CONGRESSIONAL ACTION SHOULD NOT REDUCE AIR QUALITY BENEFITS OF REFORMULATED GASOLINE.

1. *Air Quality Benefits of RFG and RFG Phase II Should be Preserved.*

Absolutely fundamental to NRDC is the preservation of air quality benefits achieved through reformulated fuels. These benefits cannot be allowed to decline in any manner. If the mandate for 2% by weight oxygen in gasoline is eliminated, fuels are still required to meet the performance standards for RFG established by EPA in 1994.² This does ensure that certain fuel parameters specified in the Clean Air Act will not be violated, but these specifications do not provide sufficient detail to ensure all air quality benefits will be retained. Without further regulatory action, reductions in oxygenates could cause some regions to experience increases of olefins in gasoline, which in turn would increase atmospheric levels of 1,3-butadiene, a potent carcinogen. EPA should commence rule-making to ensure that the nation's fuels will reduce aromatics, toxics, and volatile organics, as required by the Clean Air Act, without increases in nitrogen oxides, and without increases of other toxics in the new fuel. EPA must also ensure that areas with conventional (i.e., non-reformulated) gasoline will not suffer a decline in fuel quality and increasing air pollution as refiners shift cleaner fuel to the RFG areas.

Some confusing news reports have suggested that oxygenates have no air quality benefits. This is not true. While air quality has improved from the use of oxygenates, these benefits need not be forfeited from future formulations using lower concentrations of oxygenates or even no oxygenates at all. However, this does not mean that making a transition to low- or no-oxygenate fuel can be immediate or without cost.

A fair part of the confusion on this issue has resulted from a report from University of California researchers stating that fuels could provide equivalent benefits without using oxygenates.

The California legislature requested the University of California to quantify the benefits attributable to MTBE from California's reformulated, oxygenated fuel.³ Unfortunately, this request was not one that could directly be met. On the one hand, the UC did estimate the benefit of reformulated gasoline and found it to be substantial. Ca RFG with about 11% MTBE reduced emissions of ozone precursors (volatile organic compounds and nitrogen oxides) from gasoline vehicles by about 15 percent (300 tons per day), reduced CO emissions by about 11 percent (1300 tons per day), and reduced sulfur dioxide (SO₂) emissions by about 80 percent (30 tons per day).⁴ Ca RFG with MTBE at about 11% reduces the use of aromatics (such as benzene) in gasoline by about 25%.⁵ These are enormous benefits, essential for attainment of health-protective air quality standards for ozone, CO and particulate matter. ARB analysis of air monitoring data suggest that the Ca RFG program may have reduced ozone levels in Southern California and Sacramento by 10 percent and 12 percent, respectively.⁶

But UC Berkeley report representatives noted they could not simply compare CA RFG with MTBE and CA RFG without MTBE, and attribute differences to MTBE.⁷ The reason is that there is no way to remove only the oxygenates from the fuel but still meet the state's mandatory gasoline performance standards. In other words, oxygenates are an integral part of the current formulation, and one cannot simply remove oxygenates and still have a gasoline meeting the RFG standards. However, according to oil company representatives from Tosco and Chevron⁸, if oxygenates

² Environmental Protection Agency, "Regulation of Fuels and Fuel Additives: Standards for Reformulated and Conventional Gasoline," Federal Register, February 16, 1994.

³ Keller et al., UC MTBE Report, Executive Summary and Recommendations, *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, November 12, 1998, p. 11. UC MTBE Report Internet web site <http://www.tsrtf.ucdavis.edu/mtberpt>.

⁴ California Environmental Protection Agency, MTBE (Methyl tertiary butyl ether) Briefing Paper, updated September 3, 1998, p. 7-8.

⁵ Oxygenated Fuels Association, "A Critical Review of the University of California's Report on the Health and Environmental Assessment of MTBE," December 1998, p. 14.

⁶ California Air Resources Board, "Cleaner-Burning Gasoline: An Assessment of Its Impact on Ozone Air Quality in California," October 1997.

⁷ U.C. Berkeley presentation before the U.S. EPA Blue Ribbon Panel on Oxygenates, Sacramento, CA, March 25, 1999.

⁸ Tosco and Chevron presentations before the U.S. EPA Blue Ribbon Panel on Oxygenates, Sacramento, CA, March 26, 1999.

are reduced or removed and other fuel parameters are changed in very precise ways, the resulting fuel may meet the stringent California RFG standards,

Oxygenates have useful qualities that induced oil companies to use them in fuels. They function in gasoline to provide octane enhancement, allow dilution and reduction of aromatics (resulting in lower toxics both from evaporation and combustion), and provide available oxygen to reduce CO formation from engines. The ethers like MTBE and ETBE, unlike ethanol, can be stored and transported with existing infrastructure and do not increase vapor pressure. Nevertheless, the oxygenates definitely pose environmental problems when they spill or leak, because they move relatively rapidly through soil and the ethers resist degradation.

The UC Report attempted to answer the confusing question, "What air quality benefits come from using MTBE?" by saying that though there are substantial air quality benefits from CA reformulated gasoline, these benefits are not uniquely attributable to MTBE. Although reformulated gasoline with oxygenates provided real and substantial benefits, and though MTBE is an integral part of much of the current RFG, those benefits can be obtained through other fuel formulations.

There is a danger that some people may mistakenly infer from the finding that oxygenates are not "essential" the conclusion that eliminating all oxygenates immediately and completely is without risk. That inference is not warranted. Especially for federal reformulated gasoline, with its higher aromatics, higher vapor pressure and much higher sulfur levels, taking MTBE out without establishing careful standards for the new fuel formulation could result in increased air toxics and more smog.

2. *The Clean Air Act Establishes Air Quality Performance Standards for Reformulated Gasoline: Fuels Using Minimal Oxygenates Can Reduce Threats of Water Contamination.*

An Auto/Oil study of 1995 and subsequent oil industry pronouncements confirm that refiners can provide large supplies of non-oxygenated fuels. In late 1997, as debate about MTBE intensified, a variety of oil industry representatives stated that they have manufactured fuels with the air quality benefits of RFG and greatly reduced levels of oxygenates.

Fortunately for the federal RFG program, the EPA's model already evaluates the air quality benefits of different formulations of RFG with specific consideration of the properties of different oxygenates which may be used. Because that model is already a number of years old and does not reflect the newest health and environmental studies, and because that model did not take into account the volatility effects that occur when different oxygenates are mixed (this "commingling" effect is especially significant when ethanol blends are mixed with non-ethanol blends), US EPA needs to further improve its model to ensure that changes in fuels, including modifying oxygenate amounts and types, do not lead to any diminution in air quality. Furthermore, it will be important for US EPA to ensure that conventional gasoline is not adversely affected by refiners' efforts to supply cleaner fuel to RFG areas.

US EPA should evaluate the need for stringent parameters ("cap limits") for individual toxics in gasoline. If this is not done before fuels are modified, the known human cancer-causing substances in gasoline fumes or tailpipe emissions, such as benzene and 1,3-butadiene, may well increase. The Clean Air Act wisely establishes performance standards to be achieved by the fuel, including limits on total toxics and aromatics. But EPA must make further careful evaluations to ensure that overall risk is not increased, even while total mass emissions of toxics may remain stable. EPA must also consider potential trade-offs posed by different fuel formulations, such as increasing potential risks through other exposure routes, such as skin absorption, as well as ensuring that the fuel meets RFG performance criteria. This evaluation must include full consideration of potential risks to water supplies and aquatic life from new fuel formulations.

EPA can, and should, prevent increases of the concentrations of toxics and known carcinogens by further restrictions on aromatics and olefin content or by specific cap limits. Acetaldehyde and formaldehyde, both carcinogens which are already present at risky levels in urban air from gasoline combustion, must be carefully limited. Hazards from fuel evaporation, combustion emissions, and the chemical transformation of these substances in the atmosphere must all be carefully considered to ensure no backsliding in environmental progress.⁹

⁹While MTBE increases atmospheric levels of formaldehyde, ethanol and ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), significantly increase acetaldehyde.

C. OTHER OXYGENATES SHOULD BE STUDIED FOR HEALTH AND ENVIRONMENTAL EFFECTS.

Federal law currently requires the use of oxygenates. Many have suggested repealing this requirement, in order to reduce oxygenate use throughout the country. This committee has legislation before it with substantially the same effect.

The United States Environmental Protection Agency warned, "It should not be inferred that the only oxygenate warranting attention is MTBE or, for that matter, that the issues identified here are necessarily unique to oxyfuels."¹⁰ With new scientific data and practical experience, the U.S. EPA must carefully modify fuel regulations to protect the environment and human health.

As a policy matter, NRDC recommends resisting pleas that fuel constituents be mandated or that recipes of the fuel be defined by law. The risks of MTBE contamination should not be reduced in ways that simply increase other less-studied risks. To avoid a repetition of fuel contamination problems of recent years, full environmental and health impacts of alternatives to MTBE should be evaluated before they are used in gasoline.¹¹

Even if the federal minimum requirement for oxygenates were repealed, it is likely that some use of oxygenates, whether ethanol, other alcohols¹² or ethers¹³, would persist. The simple reason is that these substances boost octane in gasoline. The phase-out of lead, a dangerous neurotoxin, has required refiners to find alternatives for enhancing octane levels in gasoline.¹⁴ Without further environmental and health studies on the other oxygenates, it is impossible to know if substitution alternative oxygenates for MTBE will affect public health adversely.

1. *Alternative Ethers May Not Reduce Groundwater Contamination.*

Dr. John Froines and other University of California physicians and health scientists warn against assuming that MTBE is the only oxygenate posing environmental and health risks. "Introduction of these compounds [alternative ethers, including ETBE, TAME, and DIPE] as a substitute for MTBE is not advisable at this point in time given the paucity of data on their health effects."¹⁵

MTBE has been extensively studied for both acute and chronic effects in animals and, to some extent, in humans. Some aquatic toxicity studies have been conducted for the alternative ethers, but essentially nothing is known about chronic health and environmental impacts of alternative ethers, including ETBE and TAME.¹⁶ "The information on the health effects and toxicology of the other substitutes, ETBE, TAME and DIPE is extremely limited."¹⁷ What is known is that none of these oxygenates are without risk. All of the oxygenates can move swiftly through soil if spilled or leaked. There is no reason to believe other ethers would reduce toxicity relative to MTBE, and they, like MTBE, may make water unpalatable at extremely low concentrations.

2. *Ethanol Use May Increase Air Toxics and Pose Additional Health Risks.*

Ethanol is a familiar product, but it also poses health concerns. The UC Report on Health Effects states, "Use of ethanol would result in increased atmospheric con-

¹⁰Office of Research and Development, United States Environmental Protection Agency, *Oxygenates in Water: Critical Information and Research Needs*, EPA/600/R-98/048, December 1998, p. 5.

¹¹"Selection of an alternative to MTBE should not occur without adequate health effects and exposure assessment, and that is an important consideration in evaluating the potential efficacy of ethanol as an MTBE substitute." Froines, et al, "An Evaluation of the Scientific Peer-Reviewed Research and Literature on the Human Health Effects of MTBE, its Metabolites, Combustion Products and Substitute Compounds," *Report to the Legislature of the State of California*, Volume II, Human Health Effects, November 1998, p. 179.

¹²Other alcohols which may be used as oxygenates include methanol and tertiary butanol (TBA).

¹³Other ethers which may be used as oxygenates include ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary amyl ethyl ether (TAEE), diisopropyl ether (DIPE) and dimethyl ether (DME). Only the first two have been used in significant quantities to date.

¹⁴The choices for octane enhancement have been properly limited by restrictions on toxic aromatics and neurotoxic metals such as lead and manganese compounds (e.g., MMT).

¹⁵Froines, et al. *Report to the Legislature of the State of California*, Volume II, Human Health Effects, November 1998, pp. 179-180.

¹⁶US EPA has required manufacturers to study the effects of chronic exposure to ETBE and TAME. The results will not be available for at least another year. See ORD, United States Environmental Protection Agency, *Oxygenates in Water: Critical Information and Research Needs*, EPA/600/R-98/048, December 1998, p. 24.

¹⁷Froines, et al, "An Evaluation of the Scientific Peer-Reviewed Research and Literature on the Human Health Effects of MTBE, its Metabolites, Combustion Products and Substitute Compounds," *Report to the Legislature of the State of California*, Volume II, Human Health Effects, November 1998, p. 179.

centrations of acetaldehyde and peroxyacetylnitrate (PAN). Acetaldehyde has been listed as a Toxic Air Contaminant in California based on evidence of carcinogenicity and while PAN has not been tested for carcinogenicity, it is genotoxic [causes genetic damage] and produces respiratory and eye irritation and may produce lung damage."¹⁸ In a separate section these scientists reiterate, "The formation of formaldehyde, acetaldehyde and PAN in the atmosphere [from ethanol use] are matters of considerable concern and represent one of our highest recommendations for future research."¹⁹

Studies of high level exposures to ethanol (virtually all studies of ingestion rather than inhalation) demonstrate that ethanol increases a variety of adverse human health effects, ranging from developmental toxicity, central nervous system dysfunction, teratogenicity (birth defects), reproductive disorders and cancer²⁰. Pregnant women are generally advised to avoid ethanol exposure by avoiding alcoholic beverages, because chronic ingestion is known to cause fetal alcohol syndrome, a profound birth defect including major neurological dysfunction. Some data suggest developmental toxicity even at low doses.²¹ Today pregnant women can effectively avoid ethanol exposure. But if gasoline blends contain ethanol, pregnant women may find it impossible to avoid ethanol exposure through air when they refuel their vehicle. Today, no one knows if such exposures could be harmful to the developing fetus.

Before expanding the use of ethanol in gasoline, policy makers and the public should better understand the health impacts. Combustion products of ethanol include both formaldehyde and acetaldehyde, both known carcinogens. Likely subpopulations with special sensitivity to ethanol exposure include pregnant women and people with a specific genetic trait affecting their metabolism of ethanol.²² This genetic trait, a trait which a majority of Asian populations share, experience much higher blood levels of acetaldehyde and an increased potential for allergic reactions after ethanol exposure.²³ Without further research, we are merely gambling that low-level, long-term ethanol exposure will not increase health hazards.

D. LEAKING FUEL TANKS ARE MAJOR SOURCES OF MTBE CONTAMINATION.

The experience in California is that the overwhelming source of MTBE in groundwater is leaking fuel tanks, and the predominant source of MTBE in surface water is recreational boating. But it is impossible to say that these factors are important or even significant in all regions of the country. Because every area has its own unique geology, and California's soils may be more permeable to petroleum spills and oxygenates than soils with greater organic content, the California experience may be instructive only for areas with similar, permeable soils and/or shallow groundwater supplies used for drinking water.

California has long had a huge number of underground storage tanks, most of which store petroleum products. An inventory in the 1984 revealed over 100,000 underground tanks. The State estimates it has now has over 50,000 operating underground storage tanks—about 6% of the nation's total.²⁴

California began efforts to regulate underground tanks in the early 1980s to protect the state's groundwater from solvents and fuels. Since then regulations have required tank owners to obtain permits, test tanks for leaks, and upgrade tanks with new containment and monitoring technology. In 1989 California also established a fund to help underground storage tank owners address leaking tanks²⁵ by imposing a mill fee on each gallon of petroleum tank owners put in to underground

¹⁸ Froines et al, "An Evaluation of the Scientific Peer-Reviewed Research and Literature on the Human Health Effects of MTBE, its Metabolites, Combustion Products and Substitute Compounds," *Report to the Legislature of the State of California*, Volume II, Human Health Effects, November 1998, p. xix.

¹⁹ Froines et al, 1998, p. 179.

²⁰ Froines et al, "An Evaluation of the Scientific Peer-Reviewed Research and Literature on the Human Health Effects of MTBE, its Metabolites, Combustion Products and Substitute Compounds," *Report to the Legislature of the State of California*, Volume II, Human Health Effects, November 1998, pp. 144-153, 179., Health Effects Institute. The Potential Health Effects of Oxygenates Added to Gasoline, A Review of the Current Literature. A Special Report of the Institute's Oxygenates Evaluation Committee. April 1996.

²¹ Froines, op cit. p. 150-151.

²² Froines, op cit., p. 145-146.

²³ Froines, op cit, p. 145-148.

²⁴ Fogg et al, "Impacts of MTBE on Groundwater," *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume IV: Ground & Surface Water, November 1998, p. 14.

²⁵ Underground Storage Tank Cleanup Trust Fund Act, SB 299, Keene, 1989.

storage.²⁶ The fee has been increased by subsequent legislation, but in light of the new demands on the fund for more costly clean-ups, further increases may be necessary.

As of June 1998, at least 32,779 sites in California were identified as leaking chemical compounds.²⁷ Ninety percent (90%)—more than twenty-nine thousand leaking California tanks—held petroleum products. In December of 1998 more stringent federal underground storage tanks requirements took effect, which required old and deteriorated tanks to be replaced. The State believes most of the worst leaking tanks were taken out of service. Nevertheless, of the thousands of corroded tanks which contaminated soil nearby, only a small percentage were actively treated to remove contaminants. In most sites involving petroleum products, the chosen remedy was “natural attenuation”—essentially waiting for soil microorganisms to biodegrade the harmful compounds.²⁸

As of 1998, 3,486 groundwater sites have been identified with MTBE contamination.²⁹ Not surprisingly, “MTBE impacts to drinking water wells were similar to benzene impacts given current regulatory action levels.”³⁰ Fortunately, a small percentage of these sites involve high concentrations.

More leaks may threaten ground water, since many “closed sites”—leaking sites no longer under investigation—were not tested for MTBE and were not actively remediated.³¹ Leaking underground fuel storage tanks are believed to be the primary source of acute groundwater contamination of MTBE (levels above 20ug/l) in California.³² Experts say old tank removal may reduce the rate of tank failures in the near future.

But if gasoline contains oxygenates, future gasoline tank leaks involving MTBE appear inevitable. Even new tanks will eventually fail through material aging, operator error, and accident. There are also some reports of MTBE + gasoline groundwater contamination from pipeline leaks, above ground fuel tanks failures, and gasoline tanker truck accidents, and these will continue as long as oxygenate use continues.³³

E. CALIFORNIA, AND THE NATION, MUST SWIFTLY ADDRESS GASOLINE CONTAMINATION SITES.

Chemical properties of oxygenates tend to make gasoline leaks and spills more problematic when they include oxygenates. Ethers and alcohols are highly water soluble and only weakly adsorbed by soil, so these oxygenates move through soil essentially as rapidly as groundwater once they leak or spill. Ethers are resistant to decontamination by soil microorganisms. Alcohols, however, are preferentially consumed by soil microbes relative to conventional gasoline compounds. The consequence, in either case, may be a more persistent, rapidly migrating plume of contaminants, requiring more complex intervention.

Probably at least as problematic as rapid soil migration is the very low odor and taste threshold of ethers, which make water with even minute (parts per billion)

²⁶ Wiley, Kip, Senate Office of Research, California Legislature, “Clean Air vs. Clean Water Does California Need MTBE?,” February 1998.

²⁷ Fogg, et al, “Impacts of MTBE on Groundwater,” *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume IV: Ground & Surface Water, November 1998, p. 6.

²⁸ Fogg, et al, “Impacts of MTBE on Groundwater,” *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume IV: Ground & Surface Water, November 1998, p. 57.

²⁹ Fogg, et al, “Impacts of MTBE on Groundwater,” *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume IV: Ground & Surface Water, November 1998, p. 23.

³⁰ Happel et al, Lawrence Livermore National Laboratory, *An Evaluation of MTBE Impacts to California Groundwater Resources*, report submitted to the California State Water Resources Control Board Underground Storage Tank Program, June 11, 1998, p. 32. Also see Keller et al, stating that the benzene, toluene, xylene and ethylbenzene components of gasoline were found at approximately 50% of leaking fuel sites and MTBE was found at about 49%, “Cost and Performance Evaluation for MTBE-contaminated Water,” *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume V, November 1998, p.49.

³¹ Fogg et al, in “Impacts of MTBE on Groundwater,” *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume IV: Ground & Surface Water, November 1998, p. 28, state that 169 of 186 closed gasoline contaminated sites in Los Angeles had detectable concentrations of MTBE, as did 38 of 65 closed gasoline sites in the Central Valley.

³² Fogg, op cit., p. 7.

³³ Fogg, op cit., pp. 31-34.

quantities of MTBE or other ethers objectionable to most consumers.³⁴ The positive side of this characteristic is that people will not be inadvertently exposed to drinking water contaminated with even extremely small levels of MTBE contamination—the foul taste will warn anyone away from drinking such water. But this ability to detect trace contamination increases pressure on water agencies concerned about providing acceptable water and worried about treatment costs of reducing any contamination to extremely low levels.

Cleanup of gasoline spills including any oxygenate must be designed to respond to the specific constituents and conditions at the site. Oxygenates may increase the cost of cleanup, with estimates of MTBE clean-up costs vary from 25% to 80% higher than comparable gasoline spills without oxygenates.^{35,36} MTBE and other ethers are persistent in the soil as compared to benzene and other typical gasoline constituents, and recent evidence about the effectiveness of biodegradation is equivocal.³⁷

Early fears that MTBE-contaminated sites could not be remediated now appear excessively pessimistic.³⁸ However, it appears likely that many MTBE-contaminated sites will persist and migrate with ground water unless active intervention occurs. Although prevention of gasoline spills and leaks must be a national priority, once leaks are identified, remedial action should be swift and complete.

F. CONGRESS CAN HELP REDUCE CONTAMINATION BY ALLOWING REDUCED OXYGENATE USE.

In the last Congress and again in this Congress, Representative Brian Bilbray of San Diego and California Senator Dianne Feinstein introduced bills to allow states to reduce or eliminate oxygenates under certain conditions providing the fuel achieves equivalent or greater emission reductions. This legislation, or legislation which simply eliminates the requirement for minimum percentage of oxygenate in fuels, would be a sound first step at addressing contamination from gasoline spills containing oxygenates, if it were revised to include clear requirements assuring that the air quality benefits of the oxygenate mandate are not lost. Of course, the legislation should also promote more effective gasoline containment and better enforcement of current storage or cleanup requirements. It is however, not realistic to expect any legislative action to eliminate water contamination problems from past or future spills or leaks.

While supporting the goal of minimization of oxygenate use, NRDC has been reluctant to encourage any amendments to the Clean Air Act, and will resist any broad opening of this landmark statute. If the Bilbray / Feinstein bills, or similar bills designed only to remove the required oxygenate minimum while preserving RFG air quality benefits, can be enacted, we believe this would begin to remedy a serious environmental threat, especially for parts of the country with shallow surface water or highly permeable soils. The problem posed by gasoline spills should trigger further examination and strengthening of federal authority to protect and clean water supplies contaminated with petroleum products. But NRDC will continue to vigorously oppose opening the Clean Air Act beyond this narrow issue.

H. NRDC'S RECOMMENDATIONS FOR ADDRESSING AIR AND WATER QUALITY CONCERNS ARISING FROM OXYGENATE USE:

1. The Federal Reformulated Gasoline Program must preserve all air quality benefits, including the air toxics, ozone precursor, and aromatic reductions, which were required by the Clean Air Act. EPA should ensure that any future changes

³⁴Office of Research and Development, United States Environmental Protection Agency, *Oxygenates in Water: Critical Information and Research Needs*, EPA/600/R-98/048, December 1998, p. 20. EPA cites recent studies suggesting that taste and odor thresholds may be even lower for ETBE and TAME than for MTBE.

³⁵Kavanaugh, M., Malcolm Pirnie, Inc., "Brief Review of MTBE Fate, Transport, and Remediation," presentation of February 4, 1999, p. 10-11, estimates a 25% increase in treatment costs.

³⁶Keller, et al, Cost and Performance Evaluation of Treatment Technologies for MTBE—Contaminated Water, *Health and Environmental Assessment of MTBE, Report to the Legislature of the State of California*, Volume III, November 1998, p. 30 offer an estimated cost increase for treatment of MTBE-contaminated water of from 40% to 80% over treatment of water contaminated with conventional, non-oxygenated gasoline.

³⁷Office of Research and Development, United States Environmental Protection Agency, *Oxygenates in Water: Critical Information and Research Needs*, EPA/600/R-98/048, December 1998, p. 10-12

³⁸Office of Research and Development, United States Environmental Protection Agency, *Oxygenates in Water: Critical Information and Research Needs*, EPA/600/R-98/048, December 1998, pp. 30-37. Also see Kavanaugh, Malcolm Pirnie, Inc. "Review of the UC SB521 Study: Water Treatment and Remediation Costs," December 1998.

- in RFG (such as changing or reducing oxygenates) do not increase levels of toxics or ozone precursors either in areas using RFG or in the rest of the country using conventional gasoline.
2. Congress can reduce the risk to water supplies from petroleum spills by elimination of the minimum oxygen content requirement in federal reformulated gasoline coupled with clear requirements to fully preserve RFG air quality benefits, including those benefits that flow from the existing oxygenate mandate.
 3. Remediation should occur swiftly at sites where gasoline has spilled or leaked. Passively awaiting microbiological degradation of gasoline contaminants should not be assumed appropriate for fuel spills or leaks, particularly those threatening water resources. Costs for the cleanup should be recovered from parties responsible for the spills or leaks.
 4. Protection of surface water depends on careful regulation of boating (and restrictions on the use of jet skis or other inefficient 2-stroke gasoline engines). Restrictions on numbers of boats, engine types and fueling methods can help to reduce water contamination, and appear necessary regardless of future oxygenate policy.
 5. The country needs improved fuel storage tank regulations, including improving siting and monitoring restrictions. Furthermore, enforcement must be strict to ensure recovery of cleanup costs from those responsible for spilling or improperly storing fuel.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DIAMOND BAR, CA
May 4, 1999

The Honorable BRIAN BILBRAY
U.S. House of Representatives
Longworth House Office Building Suite 1530
Independence and New Jersey Avenue SE
Washington, DC 20515

H.R. 11—California Reformulated Gas Rules

I am pleased to inform you that the South Coast Air Quality Management District (AQMD) supports your H.R. 11, which would amend the Clean Air Act to allow California's cleaner-burning gasoline regulations to apply in California, in lieu of existing federal regulations, when California regulations achieve equivalent or greater reductions in emissions of ozone-forming compounds and toxic contaminants.

California has some of the worst air pollution in the nation. Since the introduction of reformulated gasoline in 1996, the South Coast Air Basin has experienced some of its best air quality in years. However, when the U.S. EPA was directed to adopt a federal reformulated gas program, only specified properties were mandated for use. This limited flexibility among refiners in producing cleaner-burning gasoline. H.R. 11, along with California actions, provides refiners much greater flexibility in the formulation of cleaner-burning gasoline.

Reformulated gasoline is a critical measure in California's State Implementation Plan. With this measure we can look forward to increasing the health of our residents in California and the South Coast Air Basin. We appreciate your efforts in this area and fully support H.R. 11.

Sincerely,

BARRY R. WALLERSTEIN, D.ENV.
Executive Officer

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD
Sacramento, CA 95812-2815
July 31, 1996

The Honorable THOMAS BLILEY
Chairman, House Committee on Commerce
U.S. House of Representatives
Washington, DC 20515

DEAR MR. CHAIRMAN: I am pleased to express the support of the California Air Resources Board (ARB) for H.R. 3518, which was introduced by Congressman Brian Bilbray on May 23, 1996. Under this bill, California cleaner burning gasoline regulations will apply in California in lieu of existing federal reformulated gasoline regulations as long as the California regulations achieve equivalent or greater reductions

in emissions of ozone-forming compounds and toxic air contaminants than now result from the federal regulations.

California has historically faced the most challenging and intractable air pollution problems in the nation. Because of our unique needs, for more than 25 years California has been the only state allowed by the federal Clean Air Act to develop and administer its own motor vehicle emission standards. As long as they are at least as protective as the federal standards and meet other criteria, our California motor vehicle emission standards can be substituted for the federal standards. California is also the only state given unconditional authority under the Clean Air Act to adopt its own emission control standards for gasoline and other motor vehicle fuels. In the case of fuels standards, however, both the California and federal standards are now applied in California.

The 1990 Clean Air Act Amendments directed the U.S. Environmental Protection Agency (U.S. EPA) to adopt a federal reformulated gasoline program for urban areas with the most serious smog problems. The amendments mandated that federal reformulated gasoline contain various specified properties, and imposed limitations on the level of flexibility that the U.S. EPA could build into the program. The federal reformulated gasoline regulations were promulgated in early 1994 and became applicable in December 1994. In California, the federal regulations now apply in the greater Los Angeles, San Diego, and Sacramento areas.

In the meantime, the ARB was developing a comprehensive program for cleaner cars and cleaner fuels. We adopted the California cleaner burning gasoline regulations in 1991, and they became applicable in the spring of this year. This program established the most stringent and comprehensive gasoline standards in the world. It contains specifications for eight different properties that affect emissions of ozone-forming compounds and toxic pollutants. The regulations also feature a "predictive model" that is based on the analysis of a large number of vehicle emission test studies. Instead of meeting the specifications set forth in the regulations, refiners have the option of producing gasoline subject to an alternative set of specifications that the predictive model shows will achieve equivalent emission reductions. California refiners are using the predictive model approach for much of the gasoline now being produced in the state.

Unfortunately, the overlapping applicability of the state and federal reformulated gasoline regulations substantially reduces the extent to which refiners can take advantage of the flexibility built into the California program. Refiners are required to comply with the federal Act even though the California predictive model shows that a different formulation will achieve equivalent or greater air quality benefits. Refiners are also required to meet complicated federal reporting and recordkeeping requirements that are not necessary for compliance with the state program. Although we are pleased that U.S. EPA exempted California refiners from a number of the federal enforcement requirements, a refiner can lose that exemption as a result of even a single violation of the California regulations.

Now that the California and federal reformulated gasoline regulations both are in place, we believe that it makes best sense for the more effective state regulations to apply in lieu of the federal regulations, as is the case with California's motor vehicle emission standards. Enactment of H.R. 3518 is necessary so that refiners can fully use the flexibility built into the California program, and can avoid needless paperwork requirements. This will reduce the costs of producing California gasoline, and should lead to lower prices at the pump.

H.R. 3518 is carefully crafted to assure that, without establishing new federal mandates, Californians enjoy all of the health benefits of reformulated gasoline. The California regulations will apply in lieu of the federal regulations only if they will achieve equivalent or greater emission reductions. Further, the California gasoline regulations have been approved by U.S. EPA as part of our State Implementation Plan, and are thus federally enforceable.

For these reasons, the ARB fully supports and urges the committee to act favorably upon H.R. 3518. Please let me know if there is anything I can do to assist in its passage.

Sincerely,

JOHN D. DUNLAP, III
Chairman

cc: Honorable Barbara Boxer
Honorable Dianne Feinstein
Honorable Brian Bilbray
Honorable Christopher Cox
Honorable Anna Eshoo
Honorable Carlos Moorhead
Honorable Henry Waxman

AMERICAN METHANOL INSTITUTE
 OXYGENATED FUELS ASSOCIATION
 RENEWABLE FUELS ASSOCIATION
September 10, 1996

The Honorable THOMAS BLILEY
Chairman
Committee on Commerce
U.S. House of Representatives
Washington, D.C. 20515

DEAR MR. CHAIRMAN: On behalf of the entire U.S. oxygenate industry, we would like to express our serious reservations regarding H.R. 3518, a bill introduced by Representative Bilbray to exempt certain states from federal reformulated gasoline (RFG) standards. We believe this bill is unnecessary and we strongly suggest the need for a thorough hearing and dialogue if the Committee should contemplate taking any action on this legislation.

Proponents of H.R. 3518 have failed to make a compelling argument that the legislation is needed. When introducing the bill in May, Congressman Bilbray argued that H.R. 3518 would ease the rising costs of gasoline. Time and the benefit of hindsight, of course, have demonstrated that the causes for the increases in gasoline prices this past spring had virtually nothing to do with Clean Air Act compliance costs, and everything to do with temporary supply shortages caused by a colder-than-normal winter and the decrease in inventories at refineries. As the market adjusted and gasoline prices were reduced, the need to provide legislative relief to lower refiner costs was proven to be unnecessary.

Exempting states from federal RFG standards would have little impact on the price of gasoline in any event. Market prices have shown that federal RFG costs only slightly more than conventional gasoline (2-3cts per gallon) and actually less than California RFG, the only state with its own RFG program. The reason California RFG is more expensive is the cost associated with reducing sulfur content capping aromatic content, capping olefin content and reducing distillation specifications that reduce the amount of gasoline that can be extracted from a barrel of crude oil. These requirements are far more stringent than federal RFG and far outweigh the nominal cost of oxygenates, which is the only additional specification of the federal fuel.

Advocates of H.R. 3518 also argue that the bill will allow refiners to take advantage of the flexibility built into the California program. But similar flexibility is built into the federal RFG program. Refiners utilizing EPA's complex model for RFG have great latitude to adjust fuel parameters to maximize efficiency and lower cost. Therefore, the argument that H.R. 3518 is needed to promote flexibility is specious.

Proponents of H.R. 3518 maintain it would only apply to California. But the legislation clearly allows "any such state" which has been granted an EPA waiver to develop its own RFG regulations which do not meet the federal RFG standards. This could create a patchwork of fuel requirements across the country that would severely burden the fuel production and distribution system.

The legislation, as drafted, has significant enforcement problems. The bill provides no mechanism to verify that gasolines indeed meet equivalent or greater reductions in emissions than required by federal RFG. While proponents have argued that the State Implementation Plan process allows for such a determination to be made, the means by which an appropriate evaluation and comparison would be made remains unspecified.

Presumably, proponents of H.R. 3518 believe the predictive model developed by the California Air Resources Board (CARB) could be used by refiners to demonstrate that fuels subject to an alternative set of specifications could achieve emissions reductions equivalent to fuels meeting the federal standards. But the CARB predictive model has shown significant differences from the complex model developed by EPA.¹ A comparison of the two models suggests that the predictive model underestimates the benefits of oxygenates by, among other factors, failing to properly account for the impact of high emitters. Certainly, until the differences between the two models are more thoroughly understood and corrected, it makes no sense to legislate a change to the Clean Air Act establishing an alternative compliance mechanism.

We understand that EPA has dealt effectively with virtually all of the problems caused by the overlapping applicability of state and federal gasoline regulations. Thus, the only practical consequence of H.R. 3518 is to exempt refiners in Califor-

¹ It is important to note that the complex model was developed with input from refiners, oxygenate producers, auto manufacturers, consumer groups and state environmental officials (including CARB).

nia, and possibly other states, from the oxygen requirement of § 211(k) of the Clean Air Act. Such relief is unnecessary, and could potentially undermine the air quality benefits of the RFG program. If the bill only impacts California, as proponents suggest, and the goal is to provide consistency in the California market, legislation is not necessary. Refiners could simply add the required oxygenate amounts to California RFG. The air would be cleaner and the state would have one gasoline.

Oxygenates play a critical role in assuring that the air quality and public health benefits of RFG are realized. Oxygenates provide significant reductions in exhaust VOC emissions. Without the oxygen standard, refiners would likely meet the VOC reduction requirements through evaporative VOC emissions reductions alone, thereby forfeiting significant ozone reduction benefits.² In addition, oxygenates are the most cost-effective means of reducing benzene and other toxic emissions from gasoline. When refiners utilize the octane value of oxygenates, the toxic reductions realized often exceed those required by either California or federal RFG. Analysis of gasoline quality surveys done by the American Automobile Manufacturers Association indicate that 1995 reformulated gasolines had a reduction of approximately 25% in toxic emissions while their minimum requirement was only 15%. In the absence of the oxygen standard, those additional toxic reductions would be forfeited.

In summary, H.R. 3518 will have no beneficial impact on gasoline prices, is not needed to provide refiners with the flexibility to effectively meet clean air regulations, creates unnecessary implementation and enforcement problems, and could undermine the air quality benefits of the RFG program. Again, we strongly advise against Committee action on H.R. 3518.

Thank you for your consideration of these views.

Sincerely,

ERIC VAUGHN
Renewable Fuels Association
FRED CRAFT
Oxygenated Fuels Association
RAY LEWIS
American Methanol Institute

cc: Honorable Michael Bilirakis
Honorable John Dingell
Honorable Henry Waxman
Honorable Brian Bilbray

CAPCOA
CAMERON PARK, CA 95682-9206
March 4, 1999

The HONORABLE BRIAN BILBRAY
United States House of Representatives
1530 Longworth House Office Building
Washington, DC 20515

DEAR REPRESENTATIVE BILBRAY: The California Air Pollution Control Officers Association (CAPCOA) consists of thirty-five local air quality agencies throughout California. Our Association supports both your bill, H.R. 11, and Senator Feinstein's bill, S. 266. These bills would provide California greater authority over its clean air program by allowing California's cleaner-burning gasoline regulation to apply in lieu of federal reformulated gasoline regulations as long as these regulations achieve equivalent or greater emission reductions of ozone-forming compounds and toxic air contaminants.

The Clean Air Act currently requires the use of at least 2% by weight oxygenates in reformulated gas. Congress mandated, in the Clean Air Act, the use of reformulated gasoline in 1990 in those areas of the country with the worst smog problems, primarily here in California. This requirement results in 11% of MTBE in each gallon of gas—MTBE being the oxygenate/additive used in California to reduce fuel emissions. Although gasoline manufacturers claim it is feasible to produce cleaner-burning gas without MTBE, the 2% federal requirement prohibits them from doing so in many areas of the State.

H.R. 11 and S. 266 give California the flexibility to implement more stringent standards without having to meet the federal regulations requiring oxygenates, like

² Exhaust VOC emissions are known to be more reactive than evaporative VOC emissions, meaning that they will form ozone more quickly. Therefore, the exhaust VOC reduction benefits of oxygenates are critical to the ozone reduction goal of the RFG program.

MTBE, in gasoline. This legislation permits California to meet an "outcome" based reformulated gasoline standard without requiring an additive that poses a serious ground-water pollution problem such as MTBE. We strongly believe that achieving cleaner air should not come at the expense of water quality.

For these reasons, CAPCOA fully supports H.R. 11 and S. 266. Should you have any questions, please contact our Legislative Committee Chairman Larry Greene at (530) 757-3656.

Sincerely,

DOUGLAS W. ALLARD
CAPCOA President

c: CAPCOA Legislative Committee

CHEVRON PRODUCTS COMPANY
SAN FRANCISCO, CA 94105
May 4, 1999

Mr. ERIC VAUGHAN
President
Renewable Fuels Association
One Massachusetts Ave., N.W.
Suite 820
Washington, D.C. 20001

DEAR MR. VAUGHAN, It was with some disappointment that we read your April 9 letter to Chevron Products Company President, Pat Woertz. As you know, we have spent countless hours in meetings with you, your staff, and key representatives of your industry over the past year trying to come up with a way to work together to achieve the common goal of eliminating MTBE from our California gasoline. Our objective in these meetings was to explain the obstacles faced by Chevron in hopes that we could convince your industry that providing California with the flexibility to depart from the federal reformulated gasoline oxygen mandate would allow us to remove MTBE with minimal inconvenience to our gasoline-buying customers. We also hoped your industry would understand that ethanol, though used scantily in California gasoline now, would be used in large quantities if MTBE were eventually phased out.

Your April 9 letter suggests that we failed in this endeavor. With your personal encouragement and with encouragement from at least one of your member companies, we thought at one point that we were close to agreement. But given the unqualified statement that you will "steadfastly oppose legislative efforts to remove the oxygen content requirement," we wonder whether the time we spent on the set of common principals we jointly drafted was well spent.

We also apparently failed to communicate the importance of flexibility in the manufacture and distribution of petroleum products. Chevron and TOSCO sponsored the report done by MathPro to show that if California refiners were allowed to optimize their production and distribution of gasoline—while meeting all emissions performance requirements—costs would be significantly reduced overall and ethanol, due to its advantageous octane, dilution, and distillation properties would still be used. It is disappointing that you should use those results to justify *maintaining* the current oxygen mandate for California when, in fact, MathPro's key conclusion supports just the opposite:

By allowing refiners to produce non-oxygenated CARB gasoline, the Feinstein-Bilbray bill likely would: (1) reduce the cost of producing CARB gasoline; (2) reduce California's draw on limited supplies of mid-western ethanol; and (3) moderate possible increases in the price of ethanol or shortfalls in the supply of ethanol.

The federal oxygenate mandate interferes with flexibility by requiring in *specific* areas at *specific* times of the year in *specific* quantities. We are not surprised that MathPro showed only modest overall reductions in ethanol that would be used compared to the federal mandate. However, we are also not surprised that cost estimates were substantially reduced since lifting the mandate has an enormous impact on flexibility.

The implication in your letter that using ethanol in the winter in Los Angeles is a simple matter indicates we also were unable to communicate the existence of considerable logistical barriers involved. Seasonal switching between ethanol- and MTBE-blended gasoline is unavoidable in the near term because, under the mandate, oxygen is required in summertime gasoline and capital expenditures that could take four or more years to make are required to accommodate ethanol at mandated levels. Thus, for now, we will have to use MTBE in the summer. Seasonal

switching is very difficult since the federal government does not allow mixing of ethanol-blended gasolines with non-ethanol blended gasolines anywhere in the distribution system and because summertime gasoline is subject to stringent vapor pressure (RVP) control. The RVP increase that comes from mixing an ethanol-blended gasoline with any other is underappreciated outside our industry including the authors of the Downstream Alternatives, Inc., study you cited. Specific to Chevron, of course, the Downstream Alternatives study indicated that we have a long way to go before our terminals are capable of blending ethanol at any time of the year.

The so-called "real world environmental benefits" of oxygenates, as described in your letter, are at best an accidental byproduct of the oxygen mandate. It is also possible that they are fictional. These ancillary benefits have never undergone a real analysis using the normal process of genuine scientific inquiry. Should these ancillary benefits be compelling but achievable less expensively, then appropriate performance standards should be adopted rather than maintaining the prescriptive oxygen mandate. In our view, 700 million gallons of non-oxygenated gasoline produced at our Richmond refinery that met or exceeded the California Air Resources Board performance standards is sufficient proof that the imposition of the oxygen mandate is not necessary to maintain the air quality benefits of the Clean Air Act Amendments.

Curiously, your letter fails to mention the big "real world" *detriment* that ethanol produces, that of RVP increase when added to gasoline. It is this unalterable characteristic of ethanol, more than any other factor, that has limited its use in California reformulated gasoline. RVP increases drive volatile hydrocarbons into the atmosphere where under the summer sun they react with oxides of nitrogen to form ozone, precisely the opposite of what the Clean Air Act intended for reformulated gasoline.

Finally, we find your discussion of certainty interesting because while we have endeavored to keep the public policy debate focused on concerns about MTBE in California gasoline, you suggest that our support for the Feinstein/Bilbray bill has caused uncertainty. At the same time, your letter openly injects new and unrelated issues into the legislative arena. Perhaps we differ on which uncertainties are relevant to this issue. When we talk of it, we mean the need for legal and regulatory certainty that enables us to plan for the future, i.e., obtain necessary permits, configure our refineries and other facilities, and serve our customers. For the ethanol industry, the certainty you seek appears to be market certainty—mandates for the use of your product, supported by subsidies to make your product economical. If we have missed the mark in our understanding and legal certainty is in fact a goal you share with us, we invite you to support Feinstein/Bilbray or similar bills and to keep the discussion focused on the matter at hand and demonstrate your concern for the California consumer.

As you know, we have taken no exception to your contention that a reasonable amount of ethanol can be supplied (at a cost) to California. The uncertainty lies in whether the amount actually required is reasonable given the combination of mandated levels, the need to meet other California gasoline specifications, and octane demands. The Downstream Alternatives report suggests that far larger quantities may be needed than what you cite in your letter. By working against the flexibility our industry needs, your industry risks the backlash of California's drivers who, as we have learned from painful experience, don't want obstacles to their access to low cost and abundant motor fuel.

As committed as you are to maintaining the federal oxygen mandate nationwide, we are committed to supplying our customers with products that they want. Our California customers are telling us that they want MTBE out. Our ability to satisfy them is hindered by the oxygen mandate as it applies in California, we will continue to support efforts to remove it here or in other places where our customers say the same. At any time that you feel it would be productive, we are ready to renew discussions.

Sincerely

AL JESSEL

cc: Governor Gray Davis
 Senator Dianne Feinstein
 Congressman Brian Bilbray

RENEWABLE FUELS ASSOCIATION
WASHINGTON, DC 20001
April 9, 1999

PATRICIA WOERTZ
President
Chevron Products Company
575 Market Street
San Francisco, California 94105

DEAR MS. WOERTZ: The domestic ethanol industry has followed with great interest Chevron's efforts to promote federal passage of H.R. 11 and/or S. 645 as a means of accelerating the ban on MTBE from California gasolines. Given the conclusion of the University of California-Davis report regarding the environmental risks posed by the continued use of MTBE, your effort to facilitate the expeditious removal of MTBE is laudable. But the problem is MTBE in water, not oxygen in gasoline. So your advocacy of a solution eliminating the oxygen standard appears to us to be misplaced.

I understand from press reports that Chevron believes a combination of ethanol blended gasolines and non-oxygenated fuels will likely replace MTBE. And I have reviewed the MathPro Inc. report prepared for Chevron and Tosco Corporation which concludes "the 'optimal' (cost-minimizing) share of non-oxygenated CARB gasoline ranges from about 20 to 40 percent, depending on the time period and Predictive Model mode." But as CARB gasoline, which as you know does not require the addition of oxygen, currently accounts for about 35% of the state's total gasoline supply, it seems refiners would be able to produce the "optimal" amount of non-oxygenated gasoline today. Moreover, if accelerating the replacement of MTBE with ethanol is a goal, and as there are no volatility constraints to ethanol use during the winter months, refiners could certainly achieve 100% non-MTBE fuel use during the winter months far sooner than envisioned by either Governor Davis' Executive Order or your proposed accelerated schedule.

Your marketing staff should clearly be able to advise you that ethanol supply is not a problem. There is more than enough ethanol to meet California demand. In fact, as ethanol has twice the oxygen content of MTBE, and can satisfy the oxygen standard for RFG with less than half the volume of MTBE, we estimate the total amount of ethanol needed to meet California RFG demand would be about 35,000 barrels per day, or less than 30% of existing U.S. ethanol production capacity. Enclosed is an analysis completed by Downstream Alternatives, Inc. which, after surveying every gasoline terminal in the state, concluded: *"adequate supplies of competitively priced ethanol could be supplied to the California market almost immediately . . . it is clear that well over half the terminals offering gasoline could make ethanol available in six months or less."*

One of your stated goals has been environmental equivalency. We agree. There should be absolutely no backsliding of the air quality benefits from RFG as MTBE is phased out. But while you have stated refiners can meet the required VOC performance standards without oxygen, you must also recognize that the "real world" environmental benefits of oxygenates are not reflected in the VOC reduction models. These "real world" benefits include reductions in combustion chamber deposits, which assure greater emissions reductions over the life of the vehicle; improved performance from higher emitting vehicles which benefit from the reduced exhaust emissions attributable to oxygen content; and, the reduced reactivity of exhaust emissions from oxygenated fuels. At the very least, we should be able to agree that eliminating the oxygen standard in carbon monoxide non-attainment areas such as Lake Tahoe would represent environmental backsliding.

You should also know that to the extent ethanol fuels are used, there are the additional "real world" benefits of reduced greenhouse gas emissions, enhanced energy security and tremendous rural economic development which were all important policy objectives considered by the Congress when the RFG oxygen standard was enacted.

Another key goal of the refining industry is certainty. Again, we agree. Companies need to know as soon as possible what the rules will be and make plans accordingly. In this case, the oxygen content standard was agreed to in the Clean Air Act Amendments of 1990. The rules governing oxygenates and RFG were made certain in 1994. But passage of Feinstein/Bilbray legislation is far from certain. And whether Feinstein/Bilbray remains focused on just the oxygen content provision or turns to other issues such as sulfur levels, olefin content, driveability index or greenhouse gases is even more uncertain. Thus, your advocacy of Feinstein/Bilbray only adds uncertainty to this process and thwarts your stated goal of accelerating MTBE's removal from gasoline.

The U.S. ethanol industry sees Chevron Products Company and other refiners in California as partners in the effort to provide high-quality, clean-burning, MTBE-free gasolines as quickly as possible. But we will steadfastly oppose legislative efforts to remove the oxygen content requirement in federal RFG. We believe the oxygen standard is critical to maintaining the air quality goals of the Clean Air Act, and that attempts to remove it are unnecessary and counter-productive to expediting the removal of MTBE fuels in California.

Again, I applaud your objective of providing non-MTBE fuels to California consumers and I look forward to working with you and others to realize that objective as quickly as possible.

With best regards, I am

Sincerely,

ERIC VAUGHN
President

Attachment

cc: Governor Gray Davis
Senator Dianne Feinstein
Congressman Brian Bilbray

CHEVRON PRODUCTS COMPANY
SAN FRANCISCO, CA 94105
April 29, 1999

The HONORABLE DIANNE FEINSTEIN
United States Senate
Hart Building, Room 331
2nd & C Streets, NE
Washington, DC 20510-0504

DEAR SENATOR FEINSTEIN: It has been reported in the trade press that Senator Daschle is considering offering, among a number of prescriptive fuel specifications, a renewable fuels proposal that would greatly expand the mandate for ethanol use in motor fuels. The proposal, as reported, raises a number of public policy and operational concerns. I have had members of my staff put together the attached paper that highlights these issues in more detail.

In summary, rather than providing refiners flexibility as long as they meet emission performance standards (as your legislation does), the proposal would continue the policy of providing government "recipes" for gasoline. The adverse consequences of MTBE use were not foreseen in 1990, the last time Congress tried to write a mandated "recipe" for reformulated gasoline. Congress should not make the same mistake again by mandating the use of ethanol, particularly in light of the known and recognized air quality concerns it would create. The proposal would likely have very significant adverse air quality impacts, by raising evaporative emissions of gasoline around the country, at a time when areas are struggling to find ways to meet air quality requirements. Additionally, the proposal would greatly expand the ethanol mandate, to all motor fuels—conventional and reformulated gasoline, and likely to diesel fuel as well. The current oxygen mandate applies just to federal reformulated gasoline. Our analysis shows the proposed mandate would result in a six-fold increase in ethanol use, increase the cost of refining, and decrease competition because refiners would have no other option (they could no longer make non-oxygenated gasoline). Finally the proposal would also result in billions of dollars of lost revenues from federal taxes, since ethanol enjoys a substantial federal subsidy.

Because of all the adverse public policy concerns, and the negative operational effects this proposal would have, we would be strongly opposed to this renewable fuels mandate. We hope that you will continue to pursue your legislation, which we believe is based on sound public policy, and protects air quality, while providing refiners greater flexibility. We also will support the bill that we understand that Senator Chafee plans to introduce (and which we understand you will cosponsor) that would allow governors to opt-out of the oxygen requirement. It is important for California to have a solution as soon as possible. We're hopeful that working with Senator Chafee and other Senators, you will be able to craft a workable solution in the U.S. Senate. We would be happy to discuss with you or your staff in greater detail the concerns that the renewable fuels proposal raises.

Sincerely,

PATRICIA A. WOERTZ
President

Attachment

cc: The Honorable Gray Davis

The Honorable Brian Bilbray
 Mr. Winston Hickox, Secretary, California Environmental Protection Agency
 Mr. Ken Derr, Chairman, Chevron Corporation

CONCERNS—RENEWABLE FUELS PROPOSAL

It has been reported that Senator Daschle has proposed that beginning in 2001, 1% of all vehicle motor fuel sold in the U.S. shall be produced from renewable sources (i.e., other than petroleum, natural gas, coal, or peat), increasing to 2.5% in 2005, and 5% in 2010. *Misleadingly labeled* as a “renewable performance standard”, it is *in fact an ethanol mandate*, which raises numerous concerns. These include:

- Continuing a bad policy of providing ‘recipes’ rather than ‘performance standards’
- Degrading air quality and increasing gasoline manufacturing costs
- Mandating an unprecedented six-fold increase in ethanol use over next 10 years
- Decreasing competition—creating a monopoly for ethanol use in gasoline
- Increasing the ethanol subsidy by \$10 billion over next 10 years; a subsidy that will have to be offset by a tax increase on some sector of the economy.
- Causing an unprecedented change in the ethanol distribution and transportation system throughout the United States.

The proposal would continue the bad precedent established in the 1990 Clean Air Act Amendments of government establishing gasoline recipes, rather than establishing performance standards.

The adverse consequences of MTBE use were not foreseen in 1990, the last time Congress tried to write a mandated “recipe” for the reformulated gasoline program for the worst ozone areas in the country. Congress should not make the same mistake again by mandating the use of yet another additive in gasoline, ethanol, particularly in light of the known and recognized air quality problems it creates. The MTBE experience teaches that Congress should rely on emission performance standards, rather than mandating oxygen content—the way the California program does. Refiners can make gasoline that meets the emission reduction performance standard with or without adding oxygen. Government requirements for gasoline recipes only add to the cost, limit flexibility, and risk adverse unintended consequences. The California state program, which is performance based—establishes emission limits without dictating to refiners how they must make the gasoline. *The renewable fuels proposal just makes a bad situation worse.*

The proposal could result in significant air quality degradation throughout the United States. Adding ethanol raises the vapor pressure of gasoline—increasing air emissions.

The ethanol mandate could result in significant degradation of air quality throughout the United States, unless other costly modifications are made to producing gasoline. It is well known that introducing ethanol as a gasoline blendstock increases the vapor pressure of gasoline (about 1 psi or ~ 15% and, hence, the evaporative emissions of volatile organic compounds, or VOCs. VOCs lead to increased ozone formation, and can lead to increases in fine particulate. The new ozone and particulate standards will result in hundreds of new areas around the country being designated as non-attainment. Those areas will be looking to reduce VOC emissions, not increase them. Rather than helping improve air quality, adding ethanol, without making other changes to gasoline, only makes air quality worse. [Note: Ethanol is allowed a 1 psi waiver under the Clean Air Act for conventional gasoline even though these increased emissions adversely impact air quality.] *From a public policy standpoint, it is hard to understand why Congress would greatly expand the mandate for ethanol use nationwide, and risk serious air quality degradation.*

Costly modifications are necessary to offset ethanol's vapor pressure effect.

In order to meet the ethanol mandate proposal, without adversely impacting air quality, vapor pressure would have to be held constant. Refiners would have to remove about the same volume of *current gasoline component (pentanes) as ethanol is added* to keep the vapor pressure of gasoline down. Refiners would have to modify their refineries to (1) take out those blendstocks by adding new processing equipment, (2) build new pressurized tanks to hold those high volatility blendstocks, and (3) find new markets which don't exist today to dispose of those blendstocks. *Where would these components go? What would be their use? Massive dislocation in use and transport of very volatile gasoline blendstocks, even when done safely, will have a significant impact on producing gasoline. All of which adds significantly to the cost nationwide of producing gasoline, with absolutely no commensurate air quality benefit,*

The bottom line: Air quality can be degraded and gasoline manufacturing costs will be increased—a lose-lose situation.

The proposal would result in a significant expansion of required ethanol use. Significant new ethanol production capacity would need to be constructed.

There is roughly 8 million barrels of gasoline sold per day in the United States, which equates to 120 billion gallons per year. Diesel fuel sales amount to roughly 30 billion gallons per year (on road diesel). If 1% needed to come from renewable sources (ethanol mandate) that would require roughly 1.5 billion gallons of ethanol, increasing to 9 billion gallons by the year 2010, when the ethanol mandate would increase to 5%. The current ethanol use in the United States is roughly **1.4 billion gallons per year** (per the RFA website). *The ethanol mandate would require a six-fold increase in domestic ethanol use or an additional growth of about 20% per year for the next 10 years of ethanol used in motor fuels.*

The proposal would hold refiners and the consumer hostage to ethanol prices.

Currently, in areas where the oxygen mandate applies, refiners can choose which oxygenate (MTBE or ethanol) to add to gasoline—thus promoting pricing competition for oxygenates. In areas not covered by the oxygen mandate, non-oxygenated gasoline competes as well. By expanding the mandate to all motor fuels nationwide, and limiting it to renewable sources—an ethanol mandate—would in fact limit refiners' flexibility and reduce competition. Ethanol production in the U.S. is dominated by one company which has ~ 50% of the domestic ethanol capacity. This would hold refiners (and ultimately consumers) hostage to whatever prices the ethanol industry wanted to charge.

The proposal would result in significant loss of tax revenues to the United States government.

Nearly every gallon of ethanol sold in the United States gets a \$0.54/gallon subsidy today from the United States Treasury, through an equivalent reduction in either motor fuel tax revenue collected under the federal excise tax or through income taxes collected by blenders of ethanol. Therefore, current ethanol use (roughly 1.4 billion gallons/year) results in a loss of federal tax revenue's of ~ \$750,000,000/year. Expanding the ethanol mandate by a factor of five in the year 2010 (to 5%, or 9 billion gallons/year) would result in a loss of almost \$4,000,000,000/year in tax revenues. *Over the next decade, this would result in a loss of over \$10 billion that the federal tax revenues, most of which goes to states to spend on roads, highways, and other uses.*

The chart below shows the loss in revenue, assuming motor vehicle fuel (gasoline and on-road diesel, or mogas) continue to grow at ~ 2%/year, and that ethanol baseline growth is also at the same ~ 2%/year.

	mogas Billion Gal/Yr	ethanol, baseline Billion Gal/Yr	Daschle Proposal Billion Gal/Yr	Subsidy \$MM Gal/Yr	Delta Taxes \$MM Gal/Yr
2000	150	1.50	1.50	\$810	\$0
2001	153	1.53	1.53	\$811	\$0
2002	156	1.56	1.56	\$827	\$0
2003	159	1.59	1.59	\$827	\$0
2004	162	1.62	1.62	\$842	\$0
2005	166	1.66	4.15	\$2,117	\$1,270
2006	169	1.69	4.23	\$2,157	\$1,295
2007	172	1.72	4.30	\$2,193	\$1,316
2008	176	1.76	4.40	\$2,244	\$1,346
2009	179	1.79	4.48	\$2,285	\$1,372
2010	183	1.83	9.15	\$4,667	\$3,733
Sum Total					\$10,333

The proposal would stretch the transportation system to the limit.

Ethanol would have to be moved from the Midwest where it is produced, to every corner of the US, to every gasoline terminal no matter how remote. Since ethanol cannot be pipelined, ethanol cannot be blended at the refinery—like other oxygenates are. This will result in significant investment at marketing terminals around the country, in urban and remote locations, in order to blend and store ethanol. Ethanol would have to be brought in by railroad and truck causing increased highway traffic and further stressing our rail infrastructure that, recently, has dem-

onstrated an inability to deliver on time. This proposal would greatly exacerbate the nation's transportation system, risking run outs and gas lines at retail stations if ethanol cannot be delivered in a timely manner.

STATE CAPITOL
SACRAMENTO, CALIFORNIA
April 14, 1999

The HONORABLE BRIAN BILBRAY
United States House of Representatives
Washington, D.C. 20515

DEAR REPRESENTATIVE BILBRAY: I am writing to convey my strong support for legislation introduced in the House (H.R. 11) and in the Senate (S. 266 and S. 645) that would enable California to phase out the use of the gasoline oxygenate methyl tertiary butyl ether (MTBE) from California reformulated gasoline.

As you know, MTBE has led to the degradation and contamination of drinking water sources in communities such as Santa Monica, Santa Clara, Sacramento and Lake Tahoe. According to the Lawrence Livermore National Laboratory, MTBE has been detected at over 4,600 leaking underground fuel tank sites after inspecting only half the known sites. Furthermore, MTBE is known to cause cancer in animals and has been identified by several major scientific bodies as having the potential to cause cancer in humans.

On March 25, 1999, I issued Executive Order D-5-99 where I found that the use of MTBE in gasoline poses a significant risk to California's environment. Required by State law, this determination was based on a study by the University of California, peer review comments of that study by the U.S. Geological Survey and the Agency for Toxic Substance and Disease Registry, and testimony from three days of public hearings conducted by the California Environmental Protection Agency.

As a result of that determination, I have directed the appropriate state regulatory agencies to devise and carry out a plan to begin an immediate phase-out of MTBE from California gasoline, with 100% removal to be achieved no later than December 31, 2002.

However, in order for California to achieve this necessary goal without a major disruption of our fuel supply, it is imperative that Congress provide flexibility to California to meet federal Clean Air Act emission standards without mandatory use of oxygenates. Both the House bill (H.R. 11) as well as the Senate bills (S. 266 and S. 645) provide exactly the flexibility California needs without weakening air quality regulations.

The California Energy Commission and the University of California study have warned that an immediate ban or precipitous phase-out of MTBE would result in catastrophic price increases with a heavy impact on the economy. Most California refineries and terminals are not equipped to handle ethanol, the only viable alternative oxygenate, at this time. The re-tooling necessary to shift to an alternate such as ethanol would take a period of years and a multi-billion dollar capital investment by the oil and gas industry. The amount of ethanol California would need to import from other states and countries to cover an immediate ban on MTBE would amount to half of all the ethanol produced in the United States last year.

Finally, I take seriously the admonition by the UC study that California learn from its mistake with MTBE and research the environmental impacts of any alternative before mandating its widespread use. Therefore, I have ordered the California Air Resources Board and the State Water Resources Control Board to conduct an analysis of ethanol and any other alternative oxygenate in air, surface water, and ground water. I am also directing the Office of Environmental Health Hazard Assessment to prepare an analysis of the health risks of ethanol in gasoline, including the products of incomplete combustion.

Ethanol may very well play a large role in California's future fuel supply. But if California, or any state, can meet the emission standards of the Clean Air Act—with or without the use of oxygenates—we should be permitted to do so.

Having that flexibility now will allow us to stop any further contamination of our drinking water while we transition away from MTBE. But the legislation outlined above is critical to California's ability to invest in a long-term solution. One that protects our water, keeps us on the road to clean air, and ensures an uninterrupted, afforded fuel supply.

I look forward to working with you to promote the passage of this much-needed legislation.

Sincerely,

GRAY DAVIS
Governor

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT
February 24, 1999

The HONORABLE BRIAN BILBRAY
United States House of Representatives
1530 Longworth House Office Building
Washington, DC 20515

DEAR REPRESENTATIVE BILBRAY: The Sacramento Metropolitan Air Quality Management District supports both your bill, H.R. 11, and Senator Feinstein's bill, S. 266. These bills would provide California greater authority over its clean air program by allowing California's cleaner-burning gasoline regulation to apply in lieu of federal reformulated gasoline regulations as long as these regulations achieve equivalent or greater emission reductions of ozone-forming compounds and toxic air contaminants.

The Clean Air Act currently requires the use of at least 2% by weight oxygenates in reformulated gas. Congress mandated, in the Clean Air Act the use of reformulated gasoline in 1990 in those areas of the country with the worst smog problems, primarily Los Angeles, San Diego, and here in Sacramento. This requirement results in 11% of MTBE in each gallon of gas—MTBE being the oxygenate/additive used in California to reduce fuel emissions. Although gasoline manufacturers claim it is feasible to produce clean-burning gas without MTBE, the 2% federal requirement prohibits them from doing so in many areas of the State.

H.R. 11 and S. 266 give California the flexibility to implement more stringent standards without having to meet the federal regulations requiring oxygenates, like MTBE, in gasoline. This legislation permits California to meet an "outcome" based reformulated gasoline standard without requiring an additive that poses a serious ground-water pollution problem such as MTBE. We strongly believe that achieving cleaner air should not come at the expense of water quality.

For these reasons, the Sacramento Metropolitan Air Quality Management District fully supports H.R. 11 and S. 266. Please let us know if there is anything I or the Air District can do to assist in its passage. Should you have any questions, please contact our Legislative Liaison, Larry Robinson, at (916) 386-6645.

Sincerely,

NORM COVELL
Pollution Control Officer

c: Stewart Wilson, Secretariat, California Air Pollution Control Officers' Association

February 22, 1999

The HONORABLE BRIAN BILBRAY
U.S. House of Representatives
1503 Longworth House Office Building
Washington, DC 20515-0549

DEAR CONGRESSMAN BILBRAY: We the undersigned would like to express our strong support for H.R. 11. It would eliminate superfluous federal requirements for gasoline marketed in California, as long as California Reformulated Gasoline (RFG) has equivalent or better emission reduction performance relative to federal RFG.

California has had a long history of regulating fuels in the state to improve air quality, predating the adoption of the federal RFG program under the 1990 amendments to the Clean Air Act. Today, refiners and marketers of fuels in California find themselves having to comply with conflicting and duplicative federal and state requirements. This adds complexity and cost to producing California RFG, with absolutely no commensurate benefit to the environment.

H.R. 11 would eliminate the overlap in California between the state and federal programs. It would also provide greater flexibility in formulating and producing California RFG, while still assuring that the high standards for reducing emissions are retained. These state requirements are mandated by California RFG regulations which are federally enforceable as part of California's State Implementation Plan. We applaud your leadership in introducing this important legislation and urge Congress to enact this bill into law.

Douglas F. Henderson, Executive Director, Western States Petroleum Association; Evelyn Gibson, Government Relations Director, California Independent Oil Marketers Association; Arleen Alexander, Director Legislative Affairs, National Association of Convenience Stores; Philip T. Cavanaugh, Vice President, Federal Relations, Chevron Corporation; Steve Ward, Vice President, Government Affairs, Shell Oil Company; Ann Farner Miller, Vice President, Government Relations, Tosco Corporation; R. Timothy Columbus, Counsel for Society of Independent Gasoline Marketers of America; James C. Pruitt, Federal Government Affairs, Texaco, Inc.; Sandra G. Swirski, Manager, Federal Government Relations, Mobil Corporation; James J. Rouse, Vice President, Washington Office, Exxon Corporation; and Robert L. Healy, Vice President, Federal Government Relations, Arco Corporation.

CONTRA COSTA WATER DISTRICT
CONCORD, CA
February 23, 1999

The HONORABLE BRIAN BILBRAY
U.S. House of Representatives
Longworth House Office Building
New Jersey & Independence Ave. SE
Washington, DC 20515

RE: H.R. 11

DEAR CONGRESSMAN BILBRAY: I am pleased to inform you that the Contra Costa Water District (CCWD) Board of Directors has adopted the position of **Favor** for H.R. 11.

CCWD provides treated and untreated water to a population of 400,000 in central and east Contra Costa County. The District recently built the 100,000-acre-foot Los Vaqueros Reservoir near Brentwood. Gas-powered vehicles will be not be allowed on Los Vaqueros, or any of the District's reservoirs, which shows the District's commitment to protecting water quality. Because of its interest in protecting water quality, the District favors legislation that will phase out and/or eliminate MTBE from gasoline.

Thank you for your efforts on behalf of this important public health matter.

Sincerely,

JOSEPH L. CAMPBELL
President

cc: CCWD Board of Directors

CALIFORNIA BUSINESS ALLIANCE
SACRAMENTO, CA
February 22, 1999

The HONORABLE DIANNE FEINSTEIN,
United States Senator,
331 Hart Senate Office Building,
Washington D.C. 20515-0504

Sub: Support of S. 266

DEAR SENATOR FEINSTEIN, few regulatory issues are more frustrating to the business community than conflicting rules at the local, state and federal levels. One such situation is the federal mandate that reformulated gasoline contain oxygenates, such as MTBE, which are not required under California's cleaner-burning gasoline rules.

As you are aware, the California state legislature is considering a total or partial ban on MTBE in response to concerns about its impact on *water quality*. But the current conflicting federal makes any such action difficult if not impossible.

That is why CBA strongly support your bill S. 266 and Congressman Bilbray's bill H.R. 11. This legislation would allow California's cleaner-burning gasoline regulations to apply in lieu of federal reformulated gasoline rules, as long as California regulations achieve greater or equivalent emissions reductions. Since our state's standards call for greater emissions reductions than those required under federal law, your bill would protect California's air quality while allowing us the flexibility to address growing concerns about MTBE.

The California Business Alliance represents small businesses throughout California. Our membership advocates regulatory flexibility to achieve reasonable air and

water quality standards using the most cost effective and efficient means available. S. 266 and H.R. 11 provide such flexibility.

Once again, we support S. 266 and H.R. 11, and hope that they will be the first of many bipartisan efforts to reduce regulatory contradictions and increase flexibility for the business community.

Sincerely,

T. JACOB MATHEW

cc. Congressman Brian Bilbray
Governor Gray Davis

CALIFORNIA MANUFACTURERS ASSOCIATION
February 19, 1999

The HONORABLE DIANNE FEINSTEIN
United States Senate
331 Hart Building
Washington, D.C. 20510

DEAR SENATOR FEINSTEIN: The California Manufacturers Association extends its support for your S. 266, which will provide reasonable flexibility to California in obtaining cleaner air standards.

Federal law requires a strict gasoline recipe which mandates adding oxygenates such as MTBE and ethanol to gasoline sold in California. Without passage of S. 266, 70% of California's gasoline must still contain oxygenates. The state Legislature is currently considering a ban on MTBE. S. 266 would provide refiners with the flexibility to make gasoline without MTBE as long as they meet the state's cleaner-burning gasoline standards, which are the strictest in the country.

Under existing rules, refiners must simultaneously implement California's cleaner-burning gasoline regulations and different federal regulations for reformulated gasoline. These inconsistent regulatory requirements result in duplication, overlap and unnecessary higher costs without any additional air quality benefits.

California is considered a model for implementing the most stringent regulations to maintain quality environmental resources, including the protection of air quality. The flexibility provided in S. 266 will allow California to establish procedures for maintaining cleaner air quality that is best suited and effective for California.

Thank you for your efforts in establishing a common-sense approach to this issue. Again, CMA would like to state its support for your S. 266.

Sincerely,

JACK M. STEWART
President

cc: Congressman Brian Bilbray
Governor Gray Davis

CALIFORNIA CHAMBER OF COMMERCE
February 18, 1999

The HONORABLE BRIAN BILBRAY
U.S. House of Representatives
1530 Longworth House Office Building
Washington, D.C. 20515

Subject: **H.R. 11 (Bilbray) Reformulated Fuel: Flexibility Support**

DEAR CONGRESSMAN BILBRAY: The California Chamber of Commerce strongly **supports** your bill **H.R. 11**, which would allow California to use its cleaner burning gasoline regulations in lieu of federal reformulated gasoline rules, as long as California rules achieve greater or equivalent emissions reductions.

Current law requires California refiners to comply with both state and federal cleaner-burning gasoline rules. Unfortunately, state and federal requirements differ as federal law requires California refiners to comply with a federal mandated recipe by adding oxygenates such as MTBE in their reformulated fuels, whereas state law only requires the use of oxygenates during the winter months. These inconsistent regulatory requirements result in unnecessary higher costs without any additional air quality benefits.

Recently, there have been several reports about MTBE contamination in certain parts of California's water supply. The state Legislature is currently considering a ban on MTBE to address this problem. However, recent government studies have concluded that an immediate ban would have dire consequences on California's

economy. California refiners would have to import huge quantities of other oxygenates from other states, which would require a significant new infrastructure.

The most logical solution to solving the MTBE dilemma without disrupting California's economy is to provide greater flexibility at the federal level by removing the federal mandate. **H.R. 11** would permit non-oxygenated gasoline throughout the state while still meeting California's cleaner-burning gasoline standards, which are the strictest in the nation. The performance-based emissions reduction standards called for in **H.R. 11** would eliminate existing regulatory confusion, while giving refiners flexibility to produce the cleanest gasoline safely and cost-effectively.

For these reasons, we **SUPPORT H.R. 11** as a common sense approach to air quality improvement.

Sincerely,

ALLAN ZAREMBERG
President

cc: Members of the California Congressional Delegation
Governor Gray Davis
Members of the California Legislature

ARCO
LOS ANGELES, CALIFORNIA
February 18, 1999

The HONORABLE BRIAN BILBRAY
1530 Longworth House Office Building
Washington, DC 20515

DEAR REPRESENTATIVE BILBRAY: I am writing to let you know that ARCO strongly supports your legislation (H.R. 11) that would provide refiners with the flexibility to produce clean-burning gasoline in California without the use of a minimum level of oxygenates.

Enactment of this legislation would allow ARCO and other refiners to eliminate the use of MTBE in our gasolines. The use of MTBE has been extremely effective in reducing pollution from automobiles and producing cleaner air while maintaining adequate gasoline supplies at reasonable prices. Unfortunately, MTBE also has disadvantages—it dissolves easily in water, and has a disagreeable taste and odor that can be detected in water at very low concentrations.

As you know, Governor Gray Davis is expected to make a decision soon regarding the fate of MTBE in California fuel. In addition, state legislation has been introduced that would ban or phase-out the use of MTBE. The phase-out of MTBE appears likely. If MTBE is phased-out and the federal oxygenate mandate remains, ethanol is the only feasible alternative oxygenate. If ethanol were the only option, refineries would have to be modified at substantial cost to deal with increased vapor pressure resulting from ethanol in the entire gasoline pool. Most of that investment would be wasted if at a later date the mandate disappeared. Therefore, if MTBE is phased-out, flexibility to produce gasoline without the federal oxygenate mandate becomes critical.

ARCO has nothing against the use of ethanol in gasoline. In fact, we currently use it in some gasoline we sell in other states. There would be new opportunities for expanded use of ethanol in California if MTBE were phased out and the oxygen requirement was eliminated. We think this is the right solution, and the one that will best serve all interests—including the environment, motorists, and oxygenate and fuel producers.

Thank you for your leadership on this important issue to the State of California. We are working hard in California and Washington, D.C. to help you enact this bill into law.

Sincerely,

MIKE R. BOWLIN
Chairman and CEO

EAST BAY MUNICIPAL UTILITY DISTRICT
February 16, 1999

HONORABLE BRIAN BILBRAY
United States House of Representatives
1530 Longworth House Office Building
Washington, D.C. 20515

DEAR REPRESENTATIVE BILBRAY: On behalf of the East Bay Municipal Utility District (EBMUD), I am pleased to inform you that we support your H.R. 11, which would provide that California's cleaner burning gasoline regulations would apply in California in lieu of existing federal regulations as long as equivalent or greater reductions in emissions of ozone-forming compounds and toxic air contaminants are achieved.

We believe your H.R. 11 would improve flexibility in the formulation of gasoline while preserving the stringent minimum emission standards in the Clean Air Act, so that gasoline refiners would have alternatives to the use of methyl tertiary butyl ether (MTBE). Your measure would strike an important balance in ensuring high standards of air quality while moving forward on alternative fuel formulations which may be less threatening to human health and drinking water quality.

As you know, existing law results in overlapping application of the state and federal reformulated gasoline regulations. This creates a substantially reduced opportunity for gasoline refiners to take advantage of the flexibility in the California program's reformulation rules without falling out of compliance with federal regulations. As a result, compliance with the federal regulations is still required, despite the fact that the California standards have demonstrated achievement of equal or superior air quality benefits. Although the federal law and regulations do not require the use of MTBE specifically, the federal regulations do require the use of a fuel oxygenate. MTBE has become the oxygenate of choice because of its high octane rating, low production cost, and ability to readily mix with other gasoline components.

We very much appreciate your leadership on this issue. Ensuring that gasoline consumed in California is formulated in such a way that there are minimized threats to drinking water quality and continued protection of air quality is an important public health and environmental protection effort.

Randele Kanouse, Special Assistant to the General Manager, is available to answer any questions you may have concerning EBMUD's position on H.R. 11. Mr. Kanouse may be reached at (916) 443-6948.

Sincerely,

DENNIS M. DIEMER
General Manager

ARCO
LOS ANGELES, CALIFORNIA
February 17, 1999

The HONORABLE TOM DASCHLE
509 Hart Senate Office Building
Washington, DC 20510

DEAR SENATOR DASCHLE: Thank you for your recent letter on oxygenated fuels issues in California. I am pleased that you have underscored the importance of moving to resolution on the issues associated with the use of MTBE and the federal oxygenates requirement as applied to California. I am particularly encouraged that you are determined to work with all interested parties to find a resolution that will work in this state. Your leadership will surely make a difference.

Based on your letter and the discussion that my staff had with your Legislative Director, it appears that we are close to a possible solution. ARCO was an originator of clean-burning gasoline and remains a strong supporter of the California and federal clean-burning gasoline programs. These programs have been remarkably effective in improving the air quality in California's urban areas and other urban areas across the nation.

Your suggestion that Congress establish an advisory committee to conduct a thorough evaluation of the use of MTBE and alternative oxygenates in gasoline is sound and we agree. The California Energy Commission and the University of California have recently concluded an evaluation of the economic and health issues related to MTBE use in California. It would be very useful to conduct a more exhaustive study on the economic, health and environmental impacts of the use of oxygenates in the

rest of the U.S. We suggest that the study be referred to a panel established under the aegis of the National Academy of Sciences.

We also support your proposal that the State of California be allowed to waive the fuel oxygen requirement provided no deterioration in air quality occurs. As you may know, there is no risk to air quality in the event of a waiver since California's gasoline performance rules are as stringent as or more stringent than the federal counterparts.

We would like to further discuss your proposal for a two-year waiver of the oxygenate requirement since it would not produce any significant changes in MTBE use. To substantially reduce the use of MTBE, refiners like ARCO must make modifications to refineries. Based on our experience, the time to get permits, design and construct the modifications of this sort would consume more than two years. But the real difficulty would be that we would not know which of the two alternative futures we would face: permanent repeal or reinstitution of the oxygenate mandate.

Each path requires substantial modifications to refineries and capital outlays, but the two paths differ greatly.

Next month Governor Gray Davis is expected to make a decision regarding the fate of MTBE in California fuel. Due to media and political pressures, the phase-out of MTBE appears likely. If MTBE is phased-out and the federal oxygenate mandate remains, ethanol is the only feasible alternative oxygenate. At first blush, this would appear to be a great boon to ethanol suppliers. However, we are concerned that an effective mandate for the use of ethanol in California on the same scale as the current use of MTBE would potentially cause a number of difficulties.

There are several reasons for our concerns. First, ethanol shares some of the same physical characteristics as MTBE. It is extremely soluble in water—more so than MTBE—and is difficult to remove from water. Although it has a much higher taste and odor threshold than MTBE, water providers would likely have a similar response to its presence in drinking water supplies if MTBE is to be phased out, we clearly need a very thorough study to ensure that we are not exchanging one set of oxygenate issues for another.

Second, large-scale, short-term demand for ethanol in California could produce supply shortages and price spikes. Gasoline and ethanol prices could rise substantially.

Third, as noted above, if ethanol were the only option, refineries would have to be modified at substantial cost to deal with increased vapor pressure resulting from ethanol in the entire gasoline pool. Most of that investment would be wasted if at a later date the mandate disappeared.

There would be new opportunities for expanded use of ethanol in California if MTBE were phased out and the oxygen requirement was eliminated. We think this is the right solution, and the one that will best serve all interests—including the environment, motorists, and oxygenate and fuel producers.

We are very pleased that you have made the California MTBE issues a priority for the 106th Congress. We look forward to continuing this dialogue with you to find a cooperative solution.

Sincerely,

MIKE R. BOWLIN
Chairman and Chief Executive Officer

cc: The Honorable Brian Bilbray
The Honorable Dianne Feinstein

CHEVRON
SAN FRANCISCO, CA
February 10, 1999

THE HONORABLE TOM DASCHLE
*United States Senate
Hart Building, Room 509
Washington, DC 20510-0504*

DEAR SENATOR DASCHLE:

Thank you for your letter dated February 2, 1999 on the MTBE issue in California and your willingness to consider changes in gasoline specifications as possible solutions. As you are aware, this issue has been growing in intensity in California over the last several years. In December 1997, in response to our customers concerns, we publicly stated that we would work toward significantly reducing our use of MTBE in gasolines we make for California. Since that time, we have produced some gasoline with reduced MTBE content and have eliminated it entirely in some batches, for areas of the state where the overlapping federal oxygenate mandate

does not apply (outside of the Los Angeles, San Diego, and Sacramento ozone non-attainment areas). We could do more immediately should the legislation sponsored by Senator Feinstein (S. 266) and Congressman Bilbray (H.R. 11) become effective. As we testified before Congress last year, we believe this legislation will make it easier for both ethanol-blended gasolines and non-oxygenated gasolines to compete in the marketplace.

I would like to respond to several issues you raised in your letter:

First, you have suggested that California be allowed to waive the federal oxygenate content mandate for a certain period of time, by granting refiners the flexibility to sell either federal RFG or CARB II gasoline throughout California. We certainly support the flexibility to replace the federal RFG requirements with the CARB RFG requirements.¹ This, in fact is exactly what the Feinstein/Bilbray bills do. As we testified last year, CARB RFG outperforms federal RFG in reducing vehicle emissions, and the CARB program is performance-based in one important respect where federal RFG isn't, the oxygen content. We continue to believe that this is the best approach for government to take, rather than mandating specific formulas.

However, limiting the time period to two years for refiners to take advantage of an oxygenate waiver provides little reason to change gasoline manufacturing practices by the industry. The modifications needed to refining, blending, and marketing operations to significantly reduce or eliminate MTBE would involve substantial investments that a short-term moratorium would not justify. In short a moratorium would only serve to postpone the tough decisions that must be made and further frustrate the people of California who are telling us and the political leadership of the state that they want action now.

Second, you mentioned in return for this flexibility, no oxygenates would be phased out or banned. While we cannot respond for the state, we suspect the pressure will grow to phaseout MTBE in California. The issue is more complex than leaking tanks and two-stroke engines. MTBE, while a good gasoline blendstock, behaves differently from other gasoline components in the environment. It is highly water soluble, slow to degrade, and causes drinking water to smell and taste bad at extremely low concentrations. This means that even small discharges, such as spills by consumers, tank overfills, and vehicle accidents can result in MTBE contamination, which is more difficult to clean up and more likely to impact groundwater.

Third, you discussed the idea of establishing a National Oxygenates Policy Advisory Commission (NOPAC) to conduct an intensive two-year evaluation of the use of MTBE and other oxygenates in gasoline. We would support additional steps which would further our collective understanding of this issue, since we believe issues will continue to arise regarding the national mandate.

Finally, you mentioned you were hopeful there would be new opportunities for the expanded use of ethanol. As I mentioned earlier, we believe that gasoline with MTBE will be replaced with a combination of ethanol-blended and non-oxygenated gasolines in the marketplace. For one thing, oxygenates will continue to be needed in Los Angeles even if Senator Feinstein's bill were to become law, due to the need for carbon monoxide reductions in the winter. Ethanol will also be used voluntarily where its high octane and other favorable blending attributes make economic sense.

I hope you will support the legislation sponsored by both Senator Feinstein and Congressman Bilbray, which has broad bipartisan support from the California delegation. The President of Chevron Products Company, Ms. Patricia Woertz, will be visiting Washington in the next few months, and would like to discuss this with you further, if your schedule permits. Thank you again for your letter, and your consideration of our thoughts on this issue.

Sincerely,

K.T. DERR
Chairman of the Board

cc: The Honorable Dianne Feinstein
The Honorable Gray Davis
The Honorable Brian Bilbray

¹ Although your letter indicates that either federal RFG or CARB II gasoline could be sold in California during the waiver period, we don't believe that was your specific intent. Gasoline that only meets federal RFG requirements would not be as clean burning as CARB gasoline—and thus would be unacceptable backsliding.

UNITED STATES SENATE
OFFICE OF THE DEMOCRATIC LEADER
Washington, DC 20510-7020
February 2, 1999

Mr. MIKE BOWLIN
Chairman
ARCO Corporation
Los Angeles, CA 90071

DEAR MR. BOWLIN: One of my priorities for the 106th Congress is responding quickly to the existence of MTBE in groundwater in California. The potential ramifications of this problem for both the environment and the future of the RFG program are immense, and I am determined to work with all interested parties to fashion a response that allows California to address its immediate contamination concerns while preserving the long-term benefits associated with the use of oxygenates in gasoline.

I view discussions with California's elected officials, the EPA and industry as essential to the realization of this goal. Therefore, I particularly appreciated the time that a representative of your company took recently to discuss the California situation with my Legislative Director, Eric Washburn. I am hopeful that that meeting marked the beginning of a constructive dialogue on the issue of MTBE and oxygenates use in gasoline.

While I appreciate ARCO's desire to eliminate the oxygenate requirement for gasoline sold in California, I remain a strong believer in the oxygenate standard's contribution to a cleaner environment, a stronger economy and greater security. There should be no mistake about my commitment to the maintenance of the minimum oxygen standard over the long-term in cleaner burning gasoline.

Last year, I actively opposed bills to waive the oxygen standard permanently, because I felt that they do not address the root cause of what I agree is a very serious environmental problem in California, and because they would have sacrificed the many benefits associated with using oxygenates. It is my understanding that the primary sources of contamination in California groundwater are leaking underground storage tanks and two-cycle boat engines. Any long-term solution to this problem should focus on these sources.

Senators Feinstein and Boxer have reintroduced legislation in the 106th Congress to allow California to utilize non-oxygenated gasoline in RFG areas. I am sympathetic to their assessment of the urgency of the environmental threat posed by contaminated groundwater in their state and have suggested an alternative approach that will address this problem immediately while preserving the benefits of oxygenated fuels.

Last fall, the EPA announced a series of steps designed to eliminate the pollution of water supplies by all constituents of gasoline, including MTBE. Since it will take time to fully implement those initiatives, I propose that the State of California be allowed to waive the oxygen requirement under certain prescribed conditions for a finite period of time. This interim approach will address the immediate environmental problem and allow us to reach the point where gasoline can be used without fear of water contamination.

This compromise would, for a two year period (from date of enactment), grant to refiners the flexibility to sell either federal RFG or CARB II gasoline in California. No backsliding would be allowed, and no deterioration in California air quality would be permitted. In return for this grant of flexibility, no oxygenates would be phased out, or banned. In fact, I am hopeful that, in this environment, new opportunities would be found for the expanded use of ethanol.

Given your concerns and the concerns of others regarding the continued use of MTBE, I also suggest that Congress establish a National Oxygenates Policy Advisory Commission (NOPAC) to conduct an intensive two-year evaluation of the use of MTBE and other oxygenates in gasoline. This panel would evaluate the effectiveness of oxygenates in cleaner burning gasoline, progress that has been made in leaking underground storage tank prevention, improvements in the efficiency of two-cycle engines, MTBE bio-remediation, the relative safety, cost and availability of alternatives to oxygenates, and other relevant issues. It would then make recommendations to the Congress prior to the reinstatement of the oxygen requirement in California in two years.

The efficacy of RFG with oxygenates is undeniable. The EPA has called the RFG program one of the most successful air pollution reduction programs in history, and early claims that RFG would cost 25 cents per gallon more than conventional gasoline have proven totally unfounded. RFG costs have averaged from 1 to 3 cents per gallon nationwide, much of the credit for which must go to companies like ARCO

that have worked hard to provide cost-effective RFG to the American people. Today, four years after implementation of RFG, program supporters range from automakers to the American Lung Association. It is my intent to ensure that our economy and environment continue to enjoy the benefits of the minimum oxygen standard in cleaner burning gasoline for years to come.

Again, thank you for your interest in this issue. I look forward to continuing this dialogue and finding a cooperative solution to the groundwater problem in California.

Sincerely,

TOM DASCHLE

ARCO PRODUCTS COMPANY
LOS ANGELES, CALIFORNIA
May 5, 1999

The Honorable BRIAN BILBRAY
Chairman, Subcommittee on Health and Environment
United States House of Representatives
Washington, DC 20515

Re: H.R. 11

DEAR REPRESENTATIVE BILBRAY: As you know, on May 6, the Health & Environment Subcommittee will hold a hearing on H.R. 11, your legislation that would allow California's reformulated gasoline (RFG) rules to preempt federal requirements if the state's rules achieve equal or greater emissions reductions. I am writing letters to all members of the subcommittee to encourage them to support H.R. 11 and to urge Subcommittee Chairman Bilirakis and Committee Chairman Bliley to move it through the Commerce Committee as quickly as possible and then urge Speaker Hastert to move it through the House of Representatives shortly thereafter.

On March 25, 1999, Governor Davis signed an Executive Order phasing out the use of MTBE in California no later than December 31, 2002. Therefore, California urgently needs relief from the 2%-by-weight federal oxygenate requirement. Without relief, ARCO and other California refiners would have no choice but to use ethanol to meet the oxygenate requirement. While we do use ethanol in our gasolines in many areas during the winter, we could not use it in most of our gasoline in California without investing tens of millions of dollars to retool our California refinery. We are very reluctant to invest that capital for several reasons: (1) there are no air quality benefits associated with this expenditure, (2) gasoline vapor pressure limits in California make it exceedingly difficult to use ethanol in summertime gasoline even with refinery modifications, and (3) the oxygenate requirement may be eliminated soon after we make the investment. Instead, we would purchase gasoline and gasoline components on the open market to meet our customer's demands. Under this scenario, if we did not spend the money to optimize our CARB gasoline production with 2 weight percent ethanol, our gasoline output would decline by 15% to 30% during the summer. Since ARCO supplies about 20% of the gasoline in the state, California gasoline production would decline by 3% to 6%.

California's most recent gasoline supply shortfall once again demonstrated that it is time-consuming and expensive to replace lost gasoline production from California refiners due to California's unique gasoline requirements and its geographic isolation from other major refining centers. The requirement to use a certain percentage of ethanol would further complicate California's gasoline supply infrastructure, since the ethanol necessary to meet the federal mandate would be transported to California primarily by rail cars from the Midwest.

The ethanol industry will in fact make major gains in the California gasoline market without an oxygenate mandate. It has been estimated that about 44,000 barrels per day of ethanol would be used in California after MTBE is phased out. This represents about one-half of the total fuel ethanol currently produced in the entire U.S. and over a 100-fold increase in ethanol usage in California today. ARCO expects to use about 9,000 to 10,000 barrels per day of ethanol, assuming reasonable price and contract terms, even without a federal oxygenate requirement.

Enclosed is a paper that provides further detail on why California needs urgent relief from the oxygenate requirement.

Thank you very much for your continued hard work to get H.R. 11 enacted into law.

Sincerely,

ROGER E. TRUITT
President