

Mr. Winston H. Hickox
Secretary for Environmental Protection
California EPA
555 Capitol Mall, Suite 525
Sacramento, CA 95814

Dear Mr. Hickox:

Thank you for the opportunity to review the report entitled "Health & Environmental Assessment of MTBE" by the University of California (UC). I am providing comments on certain sections of the UC report from specific individuals in the U.S. Environmental Protection Agency's (USEPA) Office of Water and the Office of Research and Development. These individuals were requested to review the report by Bill Vance of your staff. In addition, I am including comments from the Office of Air and Radiation and USEPA Region 9.

USEPA shares California's concern about drinking water contamination by fuel and fuel additives. Contamination of water supplies by any petroleum product, including MTBE, is unacceptable. At the same time, it is important to recognize that the use of reformulated gasoline (RFG) has resulted in significant air quality benefits. The use of RFG has reduced emissions of volatile organic compounds (VOC), nitrogen oxides (NO_x) and toxics, such as benzene, when compared to emissions from the use of conventional gasoline. VOCs and NO_x contribute to the formation of ozone smog which can cause respiratory ailments and aggravate asthma in the elderly, children and even healthy adults. Toxic air emissions can contribute to acute and chronic health effects--for example, benzene is a known human carcinogen.

I think it is very important that the federal and state governmental organizations involved in this issue have a full and consistent understanding of the facts before policy decisions are made. To this end, USEPA has established a panel of leading experts to focus on the issues posed by the use of MTBE and other oxygenates in gasoline. This panel will report to the Administrator, in July, on its recommendations to ensure public health protection and continued improvement in both our air and our drinking water quality. However, in the interim, USEPA will continue to work with California to address MTBE concerns.

USEPA recognizes the considerable effort that went into preparing this thorough report within a relatively short period of time. USEPA representatives met with the authors of Volume III, section 1 regarding air quality benefits, and appreciated the time the authors took to help us understand their assessment.

USEPA has three primary concerns about the conclusions of the UC report, which are discussed further in the attached comments. First, the executive summary concludes that "MTBE and other oxygenates were found to have no significant effect on exhaust emissions from advanced technology vehicles. There is no statistically significant difference in the emissions reduction of benzene between oxygenated and non-oxygenated RFGs that meet all other CaRFG2 standards. Thus, there is no significant additional air quality benefit to the use of oxygenates such as MTBE in reformulated gasoline, relative to non-oxygenated CaRFG2 formulations." Although it is possible to produce non-oxygenated fuel that meets California Phase 2 reformulated gasoline (CaRFG2) requirements, USEPA is concerned that the report does not address the role that MTBE and other oxygenates currently play in meeting reformulated gasoline requirements. Specifically, the use of oxygenates directly reduces carbon monoxide (CO) and toxics emissions. Further, the addition of oxygenates to gasoline also dilutes other fuel components and thereby reduces sulfur, olefin, aromatic, and benzene levels, regardless of whether the fuel is used in current or older technology vehicles. And, it is well established that these fuel component reductions in turn will reduce emissions of VOCs, NO_x and toxics. The removal of MTBE (or a reduction in its concentration) would result in an increase in some or all of these fuel components in gasoline, or would require substantial refinery capital investments to continue to meet CaRFG2 requirements.

Second, we are very concerned about the UC report's reliance, in the Volume V cost-benefit analysis, on toluene as a replacement for MTBE. This in fact could not happen. Using toluene instead of MTBE would increase aromatic content, increase the toxic and benzene emissions of such a fuel and cause the fuel not to meet CaRFG2 requirements. Moreover, the non-oxygenated CaRFG2 fuel described in Volume V is not the same CaRFG2 fuel analyzed in Volume III's assessment of air quality benefits. Therefore, the report does not present a realistic assessment of the cost associated with a non-oxygenated replacement fuel that maintains the air quality benefits of CaRFG2.

Third, USEPA believes the cost/benefit analysis section in Volume V inappropriately allocates to the CaRFG-MTBE fuel, remediation costs associated with past underground storage tank (UST) releases. The UC report states that "The groundwater remediation cost includes the legacy of older leaking USTs that stored gasoline with MTBE, which will cost from \$320 to \$1,030 million per year to remediate, relative to conventional gasoline leaks." USEPA agrees that remediation costs from USTs that stored gasoline containing MTBE can be higher than those that stored conventional gasoline. However, this comparison should not be used for the purposes of a cost-benefit analysis for future choices in gasoline formulation, since the remediation costs from USTs that previously stored gasoline containing MTBE are considered "sunk" costs (i.e., these costs would be equally incurred under each of the various fuel formulation options). Therefore, these remediation costs should have been assigned to all three fuel types (CaRFG2 non-oxygenated, CaRFG2 with ethanol, and CaRFG2 with MTBE) or removed from consideration altogether.

Again, we appreciate the opportunity to comment on the University of California report and I hope our respective organizations will continue to stay in touch. Please contact us if we can provide further assistance.

Sincerely,

Robert Perciasepe
Assistant Administrator

Enclosures

cc: Bill Vance, CalEPA