



June 6, 2007

Linda S. Adams
Secretary for Environmental Protection
California Environmental Protection Agency
1001 I Street
Sacramento, CA 96814

RE: Initial Comments on CalEPA's Green Chemistry Initiative

Dear Secretary Adams:

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry in the United States. We appreciate this opportunity to provide some preliminary comment on California EPA's (CalEPA) recently announced Green Chemistry Initiative.

ACC believes that the State's initiative has a significant potential to identify a range of policy recommendations that might be applied to reduce potential health and environmental impacts. We believe it is critically important that the process of identifying possible recommendations begin with a complete delineation of substantive problems to be addressed, and not simply the assumption that there are uncontrolled exposures to toxic chemicals and consequent health or environmental impacts. By linking the policy development process to real problems, this initiative can help foster meaningful, prioritized approaches to improved awareness, prevention, and elimination of harmful exposures to chemicals.

As you may know, ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. The Council and our members are committed to improved environmental, health and safety performance through Responsible Care[®], common sense advocacy designed to address major public policy issues, and research and testing related to chemical hazards.

The business of American chemistry is built on fundamental science. As a result, ACC members support science and risk based chemical management policies that simultaneously protect health and the environment, assure product safety and promote innovation in the marketplace. Our industry has always relied upon innovation in its development of products and processes to meet customer needs and expectations, address new regulatory requirements, and to fulfill voluntary commitments to programs that go beyond the law.



ACC member companies are leaders in green chemistry and green engineering in their operations and have been honored for their efforts. Our members view both the American Chemical Society's (ACS) Green Chemistry Principles (cited in the CalEPA website discussion of this initiative) and the ACS Green Engineering Principles as useful approaches to resource efficiency, pollution prevention and safety. These principles, however, were never intended to be applied as government mandates; prominently displayed on the home page of the Green Chemistry Institute is the statement:

Green Chemistry differs from previous approaches to many environmental issues. Rather than using regulatory restrictions, it unleashes the creativity and innovation of our scientists and engineers in designing and discovering the next generation of chemicals and materials so that they provide increased performance and increased value while meeting all goals to protect and enhance human health and the environment.

The best use of the principles may well be in highlighting the value of lifecycle approaches. Practices of green chemistry/green engineering are not new to the industry, and in fact their use has been increasing over many years.

Many of the "green chemistry" initiatives that have been recognized by CalEPA and other government agencies are in fact "green engineering" developments, and ACC recommends that you consider broadening the scope of this Initiative to explicitly include green engineering.

I. ACC Agrees with CalEPA's Stated Goals for its Green Chemistry Initiative.

ACC agrees with CalEPA's stated goals for its Green Chemistry Initiative ". . . to develop a coordinated, comprehensive strategy designed to foster the development of information on the hazards posed by chemicals, ways to reduce exposure to dangerous substances, approaches that encourage cleaner and less polluting industrial processes, and strategies to encourage manufacturers to take greater responsibility for the products they produce." In ACC's view, these broadly stated goals appropriately do not presume a regulatory outcome, but contemplate a range of possible policy options that may or may not include regulatory requirements.

More importantly, each of the objectives is consistent with ACC's Responsible Care® program. The goals are also consistent with making decisions based on risk, which is assessed based on both hazard and exposure information.

Industry is committed to identifying and gathering information on the hazards posed by chemicals in the High Production Volume (HPV) Challenge Program and the Extended HPV Program. Data is already available to California (and the public) through the HPV Information System (<http://www.epa.gov/hpvis/index.html>). In addition, industry is participating in international programs such as the ICCA Global Initiative on HPV Chemicals which will make even more information available (<http://www.cefic.org/activities/hse/mgt/hpv/hpvinit.htm>). The U.S. Environmental Protection Agency (EPA) will use the hazard information to prioritize HPV chemicals for further evaluation.

While ACC agrees with the basic concept of fostering the development of information on these four topics, the issue is how to achieve these objectives most efficiently and effectively. For example, California now has significant access to publicly available information on chemicals. One significant element of CalEPA's inquiry should focus on how best to leverage those sources of information to prevent duplication of effort and maximize information use.

Further, the discussion on the Green Chemistry Initiative should recognize that there is no simple approach to array or prioritize chemicals for review based on inherent hazard alone. Some inherently hazardous or toxic substances are absolutely necessary for product synthesis, and manufacturers go to great lengths to assure these substances do not pose appreciable risk by using manufacturing and workplace engineering controls to prevent exposures.

ACC observes that CalEPA's objectives relate to concerns about potential exposures from both manufacturing processes and products. Strategies employed to achieve these goals may differ, depending on whether the focus is on reducing emissions from manufacturing processes or on the design of products. This is consistent with the overarching philosophy emphasized in the CalEPA Green Chemistry Q and A: "identifying options to significantly reduce public health and environmental impacts, as well as costs, by affecting the redesign of product formulations and manufacturing processes." [Page 1, emphasis added].

In ACC's view, this approach must rely on risk management, not simple hazard management. It requires a realization that innovation in green chemistry and green engineering must acknowledge that there may be circumstances in which it is not possible or appropriate to implement the innovation. When the stakeholder discussions begin, CalEPA should also solicit input on how best to recognize the role of risk management and the realities of product and process efficacy and economics.

II. ACC agrees that successful development and implementation of a strategy requires a "baseline assessment" and comprehensive information resources.

ACC supports CalEPA's plan to conduct a "baseline assessment" of existing programs, expertise, and approaches related to the health and environmental effects of toxic chemicals and their sources. The results of this baseline assessment can then inform the process to systematically identify the state's options with respect to priorities while avoiding unnecessary or duplicative efforts.

ACC also believes that an understanding of the actual health and environmental effects of toxic substances is a critical tool in green chemistry and engineering. That is why we have committed significant industry resources devoted to research through ACC's Long Range Research Initiative (LRI), and our cooperative efforts with EPA in the HPV program and the Voluntary Children's Chemical Evaluation Program pilot (VCCEP).

As one of the first steps in defining the challenges faced under this initiative, California should invest in a study of available data and about how California can best access that data. This study

should address the availability of both hazard and exposure data, so that risk-based considerations can drive decisions. As part of this, CalEPA should also consider greater coordination and possible collaboration with EPA as the federal government looks to leverage its cooperative relationships with other governments, including Canada.

III. ACC strongly supports CalEPA's statement: "At its core, the strategy and policy must be governed by 'sound science.'"

ACC member companies believe that health, safety and environmental protection are integral parts of the development, manufacture, handling and use of chemical products. This is known as product stewardship. As part of their commitment to product stewardship, ACC member companies conduct systematic and rigorous evaluations of their chemical products to assure that these products deliver their intended benefits, while protecting public health and the environment. These evaluations include characterizations of any risk associated with the use of the products and a determination of risk management activities needed to address that risk. Science-based evaluations of chemicals are necessary both to determine efficacy and safety for intended uses.

It is critical that CalEPA maintain its commitment to assuring that its strategy and policy are governed by sound science. CalEPA's Green Chemistry Initiative Q and A indicates that "a different approach to restricting and regulating waste and pollution is needed to protect Californians from a number of conditions suspected of being influenced or caused by exposure to toxic substances, including asthma, neurological effects such as attention deficit . . ." [Page 2, emphasis added]. ACC strongly urges CalEPA to develop policy built on science, not supposition. Simply because there might be a link or an association doesn't mean that cause and effect exists, and that a particular policy option is therefore recommended. Core scientific approaches (like the Hill Criteria and weight of the evidence approaches) should be included as a foundation in CalEPA's discussion of the challenges to be addressed by the Initiative.

If there is scientifically sound evidence that the myriad controls in place today may need improvement to more effectively protect health and the environment, then CalEPA must consider creative approaches to address product design and manufacturing processes, each of which pose important challenges of their own. CalEPA should make clear that government cannot simply mandate "green chemistry" to occur. One-size-fits-all regulatory approaches could produce unintended consequences that might very well fail to account for product efficacy and economic considerations, for example.

ACC supports the statement: "The strategy will build on the efforts of manufacturers and designers who have successfully demonstrated the effectiveness of using a green chemistry approach." ACC believes that the Initiative should also include a means of identifying "green" approaches that have not worked, to assure that failures as well as successes inform the development of the policy options.

Some of the statements in the material describing the Green Chemistry Initiative suggest an underlying assumption that the current design of products and manufacturing processes are not adequately protective of public health and environment. Yet Americans (and Californians) are living longer, healthier and safer lives than ever before, and significant improvements have been made in public health and the environment. An extensive legal and regulatory framework, coupled with myriad voluntary programs, initiatives and innovations, has led to advances in health and the environment. It is our hope that the Green Chemistry Initiative will provide a mechanism to examine these assumptions as policy options are identified.

IV. ACC supports the open process that CalEPA has planned for soliciting input on its Green Chemistry Initiative.

The process that CalEPA outlines for the Initiative is appropriately inclusive of government agencies, industry, and affected stakeholders. We believe it particularly important to engage the industry practitioners of green chemistry and green engineering as their practical experience and perspectives can inform the identification of challenges, policy options and recommendations.

Perhaps most importantly, ACC believes that CalEPA's process provides a way to evaluate the relative merit of particular policy options, and avoids defaulting to any one approach. For example, while a general policy of "substitution" may have merit with respect to particular risks of specific chemicals or processes, it is unwieldy as a general policy approach. Similarly, the process should allow for a full discussion of the criteria or factors that influence policy options, such as product efficacy, economic costs, and government/administrative costs.

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ACC looks forward to participating in CalEPA's Green Chemistry Initiative, particularly the stakeholder dialogue anticipated on the challenges, policy options and recommendations. If I can provide any additional information on ACC's view of the Initiative, please contact me at 703 741 5167 or mike_walls@americanchemistry.com.

Sincerely,



Michael P. Walls
Managing Director
Regulatory and Technical Affairs