



November 15, 2007

Maureen F. Gorsen, Director
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Re: Green Chemistry Initiative

Dear Director Gorsen,

On behalf of Environment California Research & Policy Center, we write to thank you for your leadership on the Green Chemistry Initiative and to offer recommendations for the development of a comprehensive approach to regulating chemicals in California.

Environment California Research & Policy Center ("Environment California") is a nonprofit organization dedicated to protecting California's air, water, open spaces, and public health through research, public education, and organizing. For more than three decades,¹ we have worked to reduce exposures to toxic chemicals through a variety of local, state, and national policies. While most of our campaigns have focused on strategies to reduce such exposures in the short term, in the context of these campaigns we have always engaged in the broader discussion with policymakers on which the Green Chemistry Initiative is now focused—how to handle the large numbers of chemicals that effectively go unregulated but potentially cause considerable negative impacts to human health and the environment.

As many others have noted in their comments, chronic disease trends cannot be ignored. Childhood cancers are on the rise. Between 1973 and 1994, the national incidence of childhood brain cancer went up 40 percent. The percentage of children with acute lymphocytic leukemia increased 62 percent between 1973 and 1999. At the same time, a whole host of other obstacles to healthy development are on the rise, including childhood asthma, autism, learning disabilities, childhood obesity, and early puberty, among others. An extensive body of scientific literature links all of these diseases and conditions to chemical exposure.

The Green Chemistry Initiative has the potential to confront these health trends head on by embracing a new approach to chemicals policy. Such an approach must acknowledge the failures of the current regulatory system and the need for a robust framework for evaluating and eliminating harmful chemicals from the market. To this end, Environment California views the following principles as core to the creation of a comprehensive chemicals policy:

¹ Prior to 2003, Environment California Research & Policy Center's environment work was housed with the California Public Interest Research Group (CALPIRG) Education Fund.

1. Decisions affecting human health and the environment should be based on the intrinsic hazards of a chemical and a new approach to toxicity testing.

Most decisions regarding chemicals are made based on a complicated, time-consuming, and resource-intensive process that attempts to “assess risk” by calculating the likelihood of a health effect occurring rather than erring on the side of protecting health and preventing disease by avoiding chemical use where there is evidence of potential harm. This means that even when there is good data on the dangers of chemicals, these substances are still allowed on the market with regulators simply trying to “manage” the risk by finding “safe” levels. Such a process relies on an assessment of exposure, which only provides a snapshot into the particular time the chemical is being evaluated. Because the uses of chemicals and exposures to chemicals can and do change, the fundamental assumptions about exposures relied upon to ultimately assess and manage risk lack long term validity.

California should adopt a hazard-based approach to chemicals policy whereby policy actions to reduce or eliminate a chemical’s use should be triggered by a chemical’s intrinsic hazards and a chemical’s ability to cause biological changes that are likely to lead to diseases. Decisions affecting human health and the environment should be based on the intrinsic hazards of a chemical, such as toxicity, persistence, and bioaccumulation. Information on mutagenicity, genetic toxicity, reproductive effects, developmental toxicity, immunological effects, neurological and neurodevelopmental effects, effects on organs, respiratory effects, and endocrine disruption should guide decisions about how and whether chemicals should be used in society. Where there is uncertainty in the evidence, policies should err on the side of protecting health and the environment.

Not only is a hazard-based approach more health protective, but it is based upon the relatively easier task of testing a chemical in a laboratory once rather than demanding the much more difficult task of uncovering all of the potential routes of exposure of a chemical based on where the chemical is produced, used, discharged, and disposed of.

In addition, California should embrace a new approach to toxicity testing and invest in the development of new methods to assess and characterize chemicals. Current methods are outdated and fail to incorporate key concepts such as the timing of exposure, cumulative exposures, synergistic effects of chemicals, and low dose impacts. Decisions about chemicals should be made based on a new approach that accounts for these and other emerging concepts.

2. Chemical manufacturers should prove their products are safe.

For existing chemicals, chemical manufacturers should be required to prove their products are safe in order to allow their continued manufacture and use. By 2016, chemical manufacturers should be required to provide to the appropriate governmental body all hazard and safety information for existing chemicals for which little or inadequate data are available. Required information should include initial screening level data as well as information about the intrinsic hazards and biological consequences of a chemical, as detailed above. Such information should be required for all new chemicals before they are permitted to be manufactured.

In addition, the reliability and adequacy of the information must be validated. Through either an independent third party without a conflict of interest or the recipient governmental body, information provided by chemical manufacturers must be evaluated for its adequacy in meeting the requirements and reliability as scientific evidence.

3. Hazardous chemicals and chemicals with inadequate safety data should be phased out or restricted.

If a chemical is known to pose a hazard to human health or the environment and a safer alternative exists, it should be tracked for immediate phase out. If a chemical is known to pose a hazard to human health or the environment and a safe alternative *does not* exist, its use should be minimized and a timeline for its phase out should be established.

If a chemical has not been adequately evaluated for potential hazards and a safer alternative exists, it should be tracked for immediate phase out. If a chemical has not been adequately evaluated for potential hazards and a safer alternative *does not* exist, its use should be minimized and a timeline for its phase out should be established.

4. Industry should bear the costs associated with their chemical production or use.

Manufacturers and users of chemicals should be held responsible legally, financially, and otherwise for the costs and consequences of using hazardous or potentially hazardous chemicals. Manufacturers should bear the financial burden of testing chemicals for safety. Users should pay fees in order to use a hazardous chemical in advance of an eventual phase out of the chemical. Users of hazardous chemicals incorporating them into consumer products should be required to take back their products from consumers to ensure proper disposal.

5. Safer alternatives to hazardous chemicals should be required.

With the mandated phase out of hazardous chemicals, safer alternatives should be required. Such alternatives need to move beyond chemical-for-chemical substitution to include changing manufacturing processes, selecting alternative materials, and redesigning products. Safer alternatives must be evaluated for their intrinsic hazards and biological consequences in a similar fashion as existing chemicals, as described above.

6. The public has a right to know about chemicals in use and participate in decisions affecting the impact of these chemicals on their communities.

The public has a right to know about chemicals currently on the market, including their specific uses, potential hazards to health and the environment, and potential exposures. California should create an easily understood matrix of all chemicals currently in use with information on their hazard traits and biological consequences for use by downstream users, consumers, and other interested parties. Such a matrix would: 1) identify missing data, 2) enable businesses and consumers to compare the safety of chemicals, and 3) support the promotion of and create demand for safer alternatives.

Right to know laws also should include mandatory labeling on consumer products and disclosure regarding manufacturing processes indicating the presence of chemicals that are or may be hazardous. Until health and safety data are available for a particular chemical, there should be mandatory labeling for consumer products indicating the presence of chemicals that have not been tested for their impact on human health. The public also has a right to participate in decisions about chemicals that could affect public health or the environment.

In the interest of transparency and public participation, we strongly urge you to ensure that the Green Chemistry Initiative's Science Advisory Panel hold open meetings with an opportunity for public comment. Open meetings are critical, not just for engaging members of the public in the discussion and development of a meaningful chemicals policy, but for providing legitimacy to the Green Chemistry Initiative process.

Thank you again for your leadership on this issue and the opportunity to participate in the significant work ahead. We look forward to working with you and your staff.

Sincerely,

Rachel Gibson
Staff Attorney

Dan Jacobson
Legislative Director