



September 24, 2007

Mr. Stephen Johnson, Administrator  
United States Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Dear Mr. Johnson,

We are writing to urgently request your assistance in preventing the registration of methyl iodide for use as a soil fumigant. As chemists and physicians familiar with the effects of this chemical, we are concerned that pregnant women and the fetus, children, the elderly, farm workers, and other people living near application sites would be at serious risk if methyl iodide is permitted for use in agriculture (80-275 pounds per acre).

We have several concerns about a decision that would allow indiscriminate release of methyl iodide into the environment, summarized below.

Methyl iodide is a highly reactive chemical used in some industrial processes and in research laboratories for the synthesis of new molecules. Alkylating agents like methyl iodide are extraordinarily well-known cancer hazards in the chemical community because of their ability to modify the chemist's own DNA, as well as the target molecule in the flask, leading to mutations that are potentially very harmful. Because of this potential toxicity, chemists who work with this material use the smallest amounts possible and take great precautions to avoid exposure. Because of methyl iodide's high volatility and water solubility, broad use of this chemical in agriculture will guarantee substantial releases to air, surface waters and groundwater, and will result in exposures for many people. In addition to the potential for increased cancer incidence, U.S. EPA's own evaluation of the chemical also indicates that methyl iodide causes thyroid toxicity, permanent neurological damage, and fetal losses in experimental animals. EPA's exposure assessment suggests that the Agency is willing to accept exposures at levels that may cause these effects in humans up to five percent of the time near the application site.

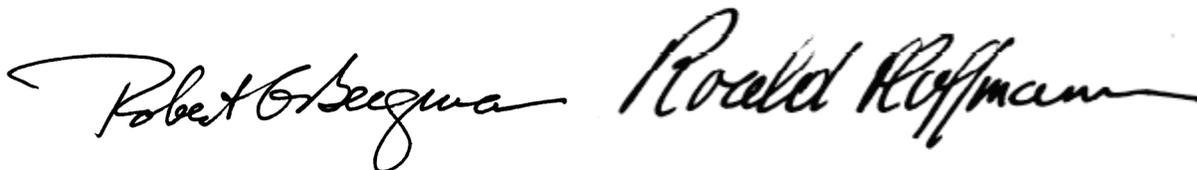
We are skeptical of U.S. EPA's conclusion that the high levels of exposure to methyl iodide that are likely to result from broadcast applications are "acceptable" risks. U.S. EPA has made many assumptions about toxicology and exposure in the risk assessment that have not been examined by independent scientific peer reviewers for adequacy or accuracy. Additionally, none of U.S. EPA's calculations account for the extra vulnerability of the unborn fetus and children to toxic insults. We know that developing organisms are generally more sensitive than adults, yet no additional safety factors were applied to account for this sensitivity, as is usual for most pesticides. In fact, based on results from a questionable model of how the pesticide is detoxified by the body, U.S. EPA has actually decreased the size of the safety factors that typically add some level of protection from exposures to pesticides.

Finally, we are perplexed that U.S. EPA would even consider the introduction of a chemical like methyl iodide into agricultural use. The Agency has spent a great deal of effort to reduce industrial toxic emissions from chemical manufacturing plants. It is astonishing then that the Office of Pesticide Programs is working to legalize broadcast releases of one of the more toxic chemicals used in manufacturing into the environment.

As members of the scientific community, we urge you to do whatever is possible to prevent this chemical from ever becoming a registered pesticide. At the very least, we ask that you delay the decision and assemble a blue-ribbon panel of independent (conflict-free) scientists such as a committee of the National Research Council to provide peer review and scientific scrutiny of U.S. EPA's safety assessment of this chemical. We would be happy to suggest panel members.

Thank you for your consideration. Please note that titles and affiliations of the signatories below are for identification only. Opinions are personal and not institutional.

Sincerely yours,



Robert G. Bergman  
Gerald E. K. Branch Distinguished Professor  
University of California, Berkeley  
Member, National Academy of Sciences

Roald Hoffmann  
Nobel Laureate, Chemistry 1981  
Frank H. T. Rhodes Professor of Humane Letters  
Cornell University  
Member, National Academy of Sciences

John B. Fenn  
Virginia Commonwealth University  
Nobel Laureate, Chemistry 2002  
Member, National Academy of Sciences

Williams S. Knowles  
Nobel Laureate, Chemistry 2001  
Member, National Academy of Sciences

Richard R. Ernst  
Professor Emeritus  
ETH Zürich  
Nobel Laureate, Chemistry 1991  
Foreign Associate, National Academy of Sciences

Robert H. Grubbs  
Victor and Elizabeth Atkins Professor of Chemistry  
California Institute of Technology  
Nobel Laureate, Chemistry 2005  
Member, National Academy of Sciences

C. Bradley Moore  
Vice President for Research  
Northwestern University  
Member, National Academy of Sciences

Jerome A. Berson  
Sterling Professor Emeritus of Chemistry  
Yale University  
Member, National Academy of Sciences

Dudley Herschbach  
Baird Professor of Science, Emeritus  
Department of Chemistry  
Harvard University  
Member, National Academy of Sciences

Brian M. Hoffman  
Professor of Chemistry  
Northwestern University  
Member, National Academy of Sciences

Prof. Charles H. DePuy, Emeritus  
Department of Chemistry and Biochemistry  
University of Colorado, Boulder  
Member, National Academy of Sciences

Richard J. Saykally  
Professor of Chemistry  
University of California Berkeley  
Member, National Academy of Sciences

Clayton Heathcock  
Chief Scientist, QB3 Berkeley  
California Institute for Quantitative Biosciences  
University of California Berkeley  
Member, National Academy of Sciences

Robert J. Silbey  
Professor of Chemistry  
Massachusetts Institute of Technology  
Member, National Academy of Sciences

Peter J. Stang  
Distinguished Professor of Chemistry  
University of Utah  
Member, National Academy of Sciences

Royce W. Murray  
Kenan Professor of Chemistry  
University of North Carolina  
Member, National Academy of Sciences

Thomas C. Bruice, Research Professor in  
Chemistry & Biochemistry  
University Of California at Santa Barbara  
Member, National Academy of Sciences

Charles S. Parmenter  
Distinguished Professor of Chemistry  
Indiana University  
Member, National Academy of Sciences

Stephen J. Lippard  
Arthur Amos Noyes Professor of Chemistry  
Massachusetts Institute of Technology  
Member, National Academy of Sciences

Marvin H. Caruthers  
Distinguished Professor of Chemistry and  
Biochemistry  
University of Colorado, Boulder  
Member, National Academy of Sciences

John E. Bercaw  
Centennial Professor of Chemistry  
California Institute of Technology  
Member, National Academy of Sciences

Bruce J. Berne  
Higgins Professor of Chemistry  
Columbia University  
Member, National Academy of Sciences

John S. Waugh  
Professor of Chemistry and Institute Professor  
Emeritus  
Massachusetts Institute of Technology  
Member, National Academy of Sciences

John D. Corbett  
Professor of Chemistry  
Distinguished Professor of  
Liberal Arts and Sciences  
Iowa State University  
Member, National Academy of Sciences

John D. Roberts  
Institute Professor of Chemistry, Emeritus  
California Institute of Technology  
Member, National Academy of Sciences

K.C. Nicolaou  
Aline W. and L.S. Skaggs Professor  
of Chemical Biology, and  
Darlene Shiley Chair in Chemistry and  
Distinguished Professor of Chemistry  
University of California, San Diego  
Member, National Academy of Sciences

Laura Kiessling  
Hilldale Professor of Chemistry and Laurens  
Anderson Professor of Biochemistry  
University of Wisconsin  
Member, National Academy of Sciences

R. Stephen Berry  
James Franck Distinguished Service Professor  
Emeritus  
Department of Chemistry  
The University of Chicago  
Member, National Academy of Sciences

Martin Saunders  
Professor of Chemistry  
Yale University  
Member, National Academy of Sciences

James L. Dye  
University Distinguished Professor Emeritus  
Department of Chemistry  
Michigan State University  
Member, National Academy of Sciences

Jean-Michel Saveant  
Professor of Chemistry  
University of Paris  
Foreign associate, National Academy of Sciences

Jacob Bigeleisen  
Distinguished Professor Emeritus  
State University of New York, Stony Brook  
Member, National Academy of Sciences

Charles P. Casey  
Homer B. Adkins Emeritus Professor of Chemistry  
University of Wisconsin-Madison  
Member, National Academy of Sciences

Dietmar Seyferth  
Robert T. Haslam and Bradley Dewey Professor  
Emeritus  
Department of Chemistry  
Massachusetts Institute of Technology  
Member, National Academy of Sciences

Fred W. McLafferty  
Peter J. W. Debye Professor of Chemistry,  
Emeritus  
Cornell University  
Member, National Academy of Sciences

John T. Yates, Jr.  
Professor of Chemistry  
University of Virginia  
Member, National Academy of Sciences

Robert L. Letsinger  
Hall Professor of Chemistry Emeritus  
Northwestern University  
Member, National Academy of Sciences

Maurice S. Brookhart  
W. R. Kenan, Jr. Professor of Chemistry  
University of North Carolina, Chapel Hill  
Member, National Academy of Sciences

Duilio Arigoni, Professor Emeritus  
Swiss Federal Institute of Technology  
Foreign Associate, National Academy of Sciences

Malcolm H. Chisholm  
Distinguished University Professor,  
Ohio State University  
Member, National Academy of Sciences

Richard N. Zare  
Marguerite Blake Wilbur Professor in Natural  
Science  
Stanford University  
Member, National Academy of Sciences

Allen J. Bard  
Norman Hackerman/Welch Regents' Chair in  
Chemistry  
The University of Texas at Austin  
Member, National Academy of Sciences

Harry B. Gray  
Arnold O. Beckman Professor of Chemistry  
California Institute of Technology  
Member, National Academy of Sciences

Adrian Bax  
NIH Senior Scientist  
National Institute of Diabetes and Digestive and  
Kidney Diseases  
National Institutes of Health  
Member, National Academy of Sciences

Kenneth B. Wiberg  
Professor of Chemistry, Emeritus  
Yale University  
Member, National Academy of Sciences

Jerrold Meinwald  
Goldwin Smith Professor of Chemistry, Emeritus  
Cornell University  
Member, National Academy of Sciences

Harold A. Scheraga  
Todd Professor of Chemistry Emeritus  
Cornell University  
Member, National Academy of Sciences

Stephen R. Leone  
Professor of Chemistry and Physics  
Director, Chemical Dynamics Beamline  
Lawrence Berkeley National Laboratory  
Member, National Academy of Sciences

Ted Schettler MD, MPH  
Science Director  
Science and Environmental Health Network  
Ann Arbor, MI

Peter Orris, MD, MPH  
Professor and Chief of Service  
Environmental and Occupational Medicine  
University of Illinois at Chicago Medical Center

Peter Guy Wolynes  
Professor of Chemistry and Biochemistry  
University of California San Diego  
Member, National Academy of Sciences

Edward I. Solomon  
Monroe E. Spaght Professor  
in Humanities and Sciences and SSRL Professor  
Stanford University  
Member, National Academy of Sciences

Rob S. McConnell, MD  
Professor of Preventive Medicine  
Keck School of Medicine  
University of Southern California

Peter B. Dervan  
Bren Professor of Chemistry  
California Institute of Technology  
Member, National Academy of Sciences

cc:

Speaker of the House Nancy Pelosi  
Representative Henry Waxman  
Senator Dianne Feinstein  
Senator Barbara Boxer