

## AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

*Science* serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordingly, all articles published in *Science*—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors are affiliated.

### Editorial Board

1981: PETER BELL, BRYCE CRAWFORD, JR., E. PETER GEIDUSCHEK, EMIL W. HAURY, SALLY GREGORY KOHLSTEDT, MANCUR OLSON, PETER H. RAVEN, WILLIAM P. SLICHTER, FREDERIC G. WORDEN

1982: WILLIAM ESTES, CLEMENT L. MARKERT, JOHN R. PIERCE, BRYANT W. ROSSITER, VERA C. RUBIN, MAXINE F. SINGER, PAUL E. WAGGONER, ALEXANDER ZUCKER

### Publisher

WILLIAM D. CAREY  
Associate Publisher: ROBERT V. ORMES

### Editor

PHILIP H. ABELSON

### Editorial Staff

Assistant Managing Editor: JOHN E. RINGLE

Production Editor: ELLEN E. MURPHY

Business Manager: HANS NUSSBAUM

News Editor: BARBARA J. CULLITON

News and Comment: WILLIAM J. BROAD, LUTHER J. CARTER, CONSTANCE HOLDEN, ELIOT MARSHALL, COLIN NORMAN, R. JEFFREY SMITH, MARJORIE SUN, NICHOLAS WADE, JOHN WALSH

Research News: RICHARD A. KERR, GINA BARI KOLATA, ROGER LEWIN, JEAN L. MARX, THOMAS H. MAUGH II, ARTHUR L. ROBINSON, M. MITCHELL WALDROP

Administrative Assistant, News: SCHERRAINE MACK;  
Editorial Assistants, News: FANNIE GROOM, CASSANDRA WATTS

Senior Editors: ELEANORE BUTZ, MARY DORFMAN, RUTH KULSTAD

Associate Editors: SYLVIA EBERHART, CAITILIN GORDON, LOIS SCHMITT

Assistant Editors: MARTHA COLLINS, STEPHEN KEPPLER, EDITH MEYERS

Book Reviews: KATHERINE LIVINGSTON, Editor; LINDA HEISERMAN, JANET KEGG

Letters: CHRISTINE GILBERT

Copy Editor: ISABELLA BOULDIN

Production: NANCY HARTNAGEL, JOHN BAKER; ROSE LOWERY; HOLLY BISHOP, ELEANOR WARNER; JEAN ROCKWOOD, LEAH RYAN, SHARON RYAN, ROBIN WHYTE

Covers, Reprints, and Permissions: GRAYCE FINGER, Editor; GERALDINE CRUMP, CORRINE HARRIS

Guide to Scientific Instruments: RICHARD G. SOMMER  
Assistants to the Editors: SUSAN ELLIOTT, DIANE HOLLAND

Membership Recruitment: GWENDOLYN HUDDLE

Member and Subscription Records: ANN RAGLAND  
EDITORIAL CORRESPONDENCE: 1515 Massachusetts Ave., NW, Washington, D.C. 20005. Area code 202. General Editorial Office, 467-4350; Book Reviews, 467-4367; Guide to Scientific Instruments, 467-4480; News and Comment, 467-4430; Reprints and Permissions, 467-4483; Research News, 467-4321. Cable: Advancesci, Washington. For "Information for Contributors," write to the editorial office or see page xi, *Science*, 25 September 1981.

BUSINESS CORRESPONDENCE: Area Code 202. Membership and Subscriptions: 467-4417.

### Advertising Representatives

Director: EARL J. SCHERAGO

Production Manager: GINA REILLY

Advertising Sales Manager: RICHARD L. CHARLES

Marketing Manager: HERBERT L. BURKLUND

Sales: NEW YORK, N.Y. 10036: Steve Hamburger, 1515 Broadway (212-730-1050); SCOTCH PLAINS, N.J. 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); CHICAGO, ILL. 60611: Jack Ryan, Room 2107, 919 N. Michigan Ave. (312-337-4973); BEVERLY HILLS, CALIF. 90211: Winn Nance, 111 N. La Cienega Blvd. (213-657-2772); DORSET, VT. 05251: Fred W. Dieffenbach, Kent Hill Rd. (802-867-5581).

ADVERTISING CORRESPONDENCE: Tenth floor, 1515 Broadway, New York, N.Y. 10036. Phone: 212-730-1050.

## Transition at the EPA

A year after the elections the future of the Environmental Protection Agency (EPA) and its priorities remain unclear. However, some indications may be gleaned from impending decisions by the EPA administrator on implementation of an agencywide strategy for the control of toxic substances. The strategy was developed over the course of the past year and is designed to be both scientifically sound and economically reasonable. The outcome will be of general interest, since the direction of environmental policy and the role of science in regulatory decision-making are at stake.

The need to place a higher priority on control of toxic pollutants in the environment was recognized by the Carter Administration. At the end of his term as EPA administrator, Douglas Costle spoke of a transition in environmental policy from control of conventional to toxic pollutants; this change would provide the major challenges for the agency in the 1980's and 1990's. Shortly before the elections, and prodded by the Office of Management and Budget, EPA began to analyze the regulatory and management implications of such a shift in priorities. The new Reagan team at EPA signaled initial approval of this approach and encouraged further development of the agencywide toxics strategy. For the first time in EPA's history, a scientist-engineer was appointed to the number two command spot.

Focusing attention and resources on risks from toxic substances will move EPA more directly into the orbit of public health policy. This makes it necessary to work closely with other public health agencies of the government on assessing risks and determining the relative seriousness of exposure from different sources, such as environment, workplace, diet, and other life-style factors. Work on an EPA cancer policy, which has been under way for some time, calls for cooperation of this kind.

Internally, the agency will need to move from a medium-specific and engineering perspective to a broad scientific and public health orientation. This will be difficult, partly because of the scientific and regulatory complexities of toxics control, partly for institutional reasons. Throughout EPA's history, individual program offices, in particular those responsible for air and water, have been the real power centers. Their principal regulatory approach was based on establishing pollutant standards. By contrast, the offices for pesticides and industrial chemicals are responsible for licensing commercial products once they have been found acceptable. Both strategies will have to be used as part of an integrated toxics control program; others will need to be developed, such as control programs for entire sectors of industry or geographic regions. Toxics control must, therefore, be organized as an agencywide function, establishing priorities for action, choosing the most appropriate intervention alternative, and making decisions in light of program views but not dominated by them.

A key ingredient for a successful toxics strategy is a vastly improved linkage between policy-making and science in the agency. The Office of Research and Development oversees a large research program and plays an important role in the preparation of science and health assessments. Some program offices have relied on the Office of Research and Development for these services, others conduct their own science assessments and bypass the agency's central science advisory mechanism. The result has been considerable duplication of effort, delays, and internal conflicts. The new toxics strategy emphasizes the importance of developing consistent procedures for collecting and analyzing scientific data and for submitting science assessments to outside peer review. Much of EPA's research will need to be more directly linked to regulatory needs. Policy-makers, on their part, need to engage in more sustained substantive dialogue with the experts.

In sum, an EPA-wide toxics strategy needs more central policy direction and oversight, less program independence, more cooperation with public health agencies, less emphasis on open-ended data collection, and more policy-relevant science.—JURGEN SCHMANDT, *Professor of Public Affairs, University of Texas, Austin 78712*