

RISK *newsletter*

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June, 1987

Risk Centers Gain Support

The recent announcement that a Center for Risk Management has been established in Washington, DC, and that William D. Ruckelshaus, former administrator of the U.S. Environmental Protection Agency, is serving as chairman of its advisory council calls attention to the fact that "risk centers" are increasingly gaining not only acceptance but also funding support from government and the corporate community.

SRA Has Liaison with 15 Societies

Liaison Committee Chairman James D. Wilson reports that volunteers have agreed to act as liaisons with 15 other societies, and a cooperative program with the American Statistics Association has been scheduled for August 17. Lee Abramson of the Nuclear Regulatory Commission has arranged for a joint ASA-SRA session at the ASA annual meeting to be held in San Francisco. The session title will be "Statistics in Nuclear Risk Analysis."

The list of SRA members agreeing to perform liaison functions with other societies is as follows:

Air Pollution Control Association: Thomas McKone, Lawrence Livermore National Laboratory.

American Bar Association: Daniel Bromstein, Michigan State University.

American Chemical Society: Melvin Turetsky, International Business Machines.

American College of Toxicology: Daniel Byrd, consultant.

American Economic Association: Howard Kunreuther, Wharton School, University of Pennsylvania.

American Industrial Health Council: James D. Wilson, Monsanto Company.

American Industrial Hygiene Association: Dennis Paustenbach, Syntex Corporation.

American Psychological Association: Paul Slovic, Decision Research. see SRA Liaisons, page 4

The Washington-based center will join several others, with at least one—the CANTED Hazard Assessment Group (see box)—begun more than a decade ago. Geographically, the centers are fairly well dispersed. An Institute for Risk Research is located at the University of Waterloo in Canada, and an Environment and Policy Institute, which is currently offering a fellowship in risk assessment (see story), is part of the East-West Center in Honolulu, Hawaii. At least one center is located on the west coast, and a Risk and Decision Center is located in the Wharton School at the University of Pennsylvania.

Center for Risk Management

The purpose of the Center for Risk Management, which is located at Resources for the Future in Washington, is to "address concerns surrounding threats to health and the environment and the difficult choices that arise in trying to regulate these threats."

Threats arising from toxic substances, hazardous wastes, pesticides, air and water pollutants, and stratospheric ozone depletion will be the focus of the center's beginning activities. In addition to conducting its own research and holding conferences and workshops, the center will sponsor research at universities and other nonprofit organizations. Initially its staff will be small, but eventually will include individuals with backgrounds in biostatistics and the life sciences, law, engineering, ethics, and the social and natural sciences. see Risk Centers, page 4

PRESIDENT'S COLUMN

Midpoint Reflections

As this column is written, the society is almost exactly half way through its 1986-87 year: the 1986 annual meeting is below the horizon behind us and the 1987 meeting is not yet visible before us. With several other signal events also behind us, such as the conferences and symposia held in California, Texas, and Washington, and none on the immediate horizon ahead, it would appear that we are now sailing a sea of calm in which no forward motion can be detected.

But a steady stream of correspondence and telephone calls—the equivalent of the rumbling of a ship's engines underfoot—tells me that the work of the society is steadily under way through the activities of its committees and chapters and through the individual efforts of the council members, the Secretariat staff, and the many members who have volunteered for specific tasks.

Because work has indeed been going on, we hope to officially recognize two or even more new U.S. chapters in the near future, and a new association with Japan is becoming a real possibility, adding to the European section and the five U.S. chapters approved in the past.

Another positive trend is the continued regular publication of the society's journal *Risk Analysis* and its newsletter *Risk newsletter*. Each issue of the journal seems to be better and its scope broader than the previous one, and the newsletter contains increasingly relevant information for the membership. I understand that we are even about to solve the troublesome problem of the long delays in the publication of the proceedings of annual meetings. The 1984 proceedings have been turned over to the publisher, and the 1985 proceedings will soon follow. A good chance exists that both sets of proceedings will be available by the time of the 1987 annual meeting, and, with new arrangements that are being made for handling this onerous task, the 1986 proceedings should not be far behind. Plans for producing the 1987 proceedings have been made an integral part of the planning for the meeting itself, and so we may be assured of their timely publication.

Preparations for the 1987 annual meeting in Houston are adhering to a well-designed schedule, including arrangements that are being made for special travel fares. The extra funding needed to support the meeting is also being sought. The meeting theme, "Risk Assessment in Setting National Priorities," will allow many disciplines and viewpoints to be represented. One topic in the Call for Papers that particularly struck my eye is "Philosophical Aspects." I mentioned to Jim Bonin, the program chairman for the annual meeting, that in this category an appropriate session topic might be "Ethics and Risk Analysis and Management." To me, this is a topic of great and growing importance in managing risks in our society, yet it is seldom addressed directly.

The familiar question "When it comes to regulating risks, why is it right for members of small populations to be subjected to higher risks than members of large ones?" is an example of common ethical questions that arise in public or private efforts to manage risks. Together with the question is the implication that one may not be able to do otherwise much of the time. The question is narrow in focus and seemingly simple to answer, yet answers to it have proven to be controversial. Hearing a scholar of ethics on this question, and the broader ethical questions that surround it, would be of great interest to me personally and I would hope to others attending the meeting.

I believe that the Nuclear Regulatory Commission contributed significantly in bringing ethical considerations into the area of concern of risk managers when it clarified that discussing acceptable *risks* of death is not the same as discussing acceptable *deaths* (1). But what would a trained ethicist think of this statement? And how are we to reach an ethical social consensus on how risks should be managed? Or which risks are in most need of management?

There is also the problem of risk communication and the many ethical questions associated with it. For example, the distinction between *informing* opinion and *forming* opinion, and the ethics of each, is of obvious interest.

Having been deeply involved in the everyday "how to" of risk assessment and management, I think it would help me to hear experienced ethicists having knowledge of risk assessment and management discuss the kinds of questions I have raised—or some more crucial ones. Surely others currently involved in risk assessment and management would also find themselves enriched by such discussions. And considering the theme of the 1987 annual meeting, I believe the overall program would be enhanced if a session on ethical questions were included.

In my first column as SRA president, I asked the question "Where are the philosophers and the other scholars?" Perhaps they are among us and can help us to think beyond technical fixes. Is anyone reading this column prepared to speak on these ethical questions or willing to participate in the kind of session I have suggested? The Lone Star Chapter has decided to sponsor such a session and would like to hear from those of you interested in helping them plan it. If you are interested, please get in touch with the program chairman right away. His address is: Dr. J. J. Bonin, Shell Oil Company, PO Box 4320, Houston, Texas, 77210 (Phone 713-241-1490).

Of course, the annual meeting will address many more topics, and hopefully I will be forgiven for dwelling on this one. But the midpoint of the year is a good time for reflecting, and I continue to hope that ours will be *the* society recognized for addressing *all aspects* of risk. If we keep this in mind, SRA projects and activities to appear on the horizon in the future will continue to reflect real advances in risk analysis and management.

Paul F. Deisler, Jr.
June, 1987

President's Address: 11215 Wilding Lane, Houston, TX, 77024, Phone 713-467-3080.

(1) Nuclear Regulatory Commission, "Safety Goal Development Program," *Federal Register* 48, p. 10,774 (1983).

NRC Launches Study on Risk Communication

A committee comprised of representatives from academia, private organizations, and federal agencies met in Washington, DC on May 26 to begin work on an 18- to 24-month study of risk perception and communication that is to be sponsored by the National Research Council with additional funding support from other groups.

The study will begin with a review of the growing body of practical and academic knowledge about risk perception and communication. It is also to include a major effort in developing original data and analysis, much in the form of fresh, disciplined case materials that would allow the testing of the various generalizations that are now emerging. The

committee is charged with characterizing the process of risk perception and communication with the goal of identifying practical ways that decision makers, inside and outside the government, can improve communication about technological risk.

Toward an Informed Choice

The ultimate goal of the study is, of course, to find ways of providing enough information for the public to make an informed choice on important social issues. In a pluralistic democracy this implies synthesizing information from many different sources. see NRC Study Begins, page 14

SRA Liaisons

(cont. from page 1)

American Society of Mechanical Engineers: Alan Moghissi, Institute for Regulatory Science.

American Sociological Association: William O. Roger, Oak Ridge National Laboratory.

American Statistics Association: Lee Abramson, Nuclear Regulatory Commission.

Association of Ground Water Scientists and Engineers: Nancy L. Cichowicz, Mitre Corporation.

International Association for Impact Assessment: Daniel Bronstein, Michigan State University.

Society for Epidemiological Research: Linda Erdreich, Environmental Protection Agency.

The Information Management Society: Raymond Boykin, California State University.

The Liaison Committee is still seeking volunteers to work with IEEE, the Society of Toxicology, and the Health Physics Society. If you feel that you can serve in this capacity, write to the chairman at the following address: James D. Wilson, Monsanto Company, 800 N. Lindbergh Boulevard, St. Louis, Missouri, 63167 (Phone 314-694-1000).

Awards

Charles S. Morgan and Duane D. Pearsall, retiring members of the board of advisors of Worcester Polytechnic Institute's Center for Firesafety Studies, have been presented the center's first Herrick A. Drake Commemorative Awards for leadership and service to higher education. The Drake award is named for the first chairman of the advisory board, a Harvard Law School graduate and insurance industry business executive who led the board until his sudden death in 1984.

Morgan is president emeritus of the National Fire Protection Association, having retired in 1980 as general manager, president and CEO of NFPA after 42 years with the association. Pearsall is a general partner of Columbine Venture Fund, Ltd.; he founded Statitrol Corporation in Lakewood, Colorado, which revolutionized fire detection in small residential buildings by introducing the first battery-powered home smoke detector in 1970.

Risk Centers

(cont. from page 1)

The director of the center is Paul R. Portney, and members of the advisory council are: Ruckelshaus; Robert M. White, president, National Academy of Engineering; Howard Raiffa, professor, Harvard Business School; William K. Reilly, president, World Wildlife Fund/Conservation Foundation; Richard D. Lamm, visiting professor, Dartmouth College and former governor of Colorado; David M. Roderick, chairman of the board, USX Corporation; and Roger O. McClellan, president, Inhalation Toxicology Research Institute and Lovelace Biomedical and Environmental Research Institute.

Initial funding for the center is being provided by the Environmental Protection Agency, private corporations, and private foundations.

Institute at East-West Center

Established in 1977, the Environment and Policy Institute at the East-West Center in Honolulu has already had a decade of experience in interdisciplinary and multinational programs. The programs focus on increasing the understanding of the inter-relationships among policies designed to meet a broad range of societal needs over time and the natural resources on which these policies depend or which they affect. In particular, the institute seeks to develop and apply concepts useful in identifying alternatives available to decision makers and assessing their implications. A spokesman of the institute, Kirk R. Smith, told *Risk newsletter* that the staff is currently applying risk assessment methods to toxic chemical and air pollution problems in developing countries of the Asia-Pacific region.

The East-West Center, situated on 21 acres adjacent to the University of Hawaii's Manoa campus, was established in 1960 by the U.S. Congress, which provides its principal funding. Support is also received from more than 20 Asian and Pacific governments, as well as private agencies and corporations. The East-West Center also includes an Institute of Culture and Communication, a Population Institute, a Resource Systems Institute, and a Pacific Islands Development Program.

Institute for Risk Research

The Institute for Risk Research at the University of Waterloo, Waterloo, Ontario, is completing its

CENTED Hazard Assessment Group—First of a Kind!

Just ask anyone—or at least anyone we contacted on the subject—and you will be told that the first real “risk center,” the predecessor of them all, is the Hazard Assessment Group in the Center for Technology, Environment, and Development (CENTED) at Clark University in Worcester, Massachusetts.

It began with the work of Robert W. Kates, a geographer at the university who pioneered in natural hazards and disaster research through the 1960s, collaborating mainly with researchers at other universities. In 1969 he was joined by Roger Kasperon, another geographer, and shortly thereafter by Christoph Hohenemser, a physicist. In 1972 the three of them and others proposed an extension of natural hazards theory to the analysis of nuclear power hazard management. This led to the formation of the Hazard Assessment Group in 1975. It also led to the establishment of CENTED, which includes two other groups, a Climate Research Group and an International Development Research Group.

The current director of the Hazard Assessment Group is Kasperon, who heads an interdisciplinary research team with expertise in the fields of chemistry, economics, geography, philosophy, physics, policy analysis, social psychology, public health, sociology and toxicology.

Has Unique Library

A unique resource for the team is its research library, begun in the mid-1970s by Jeanne X. Kasperon, a library scientist still with the group. The library is widely acknowledged to be one of the leading international collections of research materials on risk assessment and management and includes a special data base that regularly tracks relevant resource materials on over 100 hazards. It also includes the many publications of the team itself.

Works in Many Areas

The applied work of the Hazard Assessment Group addresses such issues as occupational health risks, strategies for risk communication, radioactive waste management, human exposure to toxic substances in the environment, public assessment of technology risk, risk management by large corporations, siting of hazardous facilities, hazardous waste transportation risks, and emergency planning. For the past seven years, a succession of projects funded by the National Science Foundation and the Russell Sage Foundation have addressed the scientific and social/ethical issues of risk management.

The group is also engaged in basic theoretical work on models of hazard analysis, hazard taxonomies, comparative risk analysis, risk perception and management systems.

Has Begun MA Program

The work in the group has prompted Clark University to offer a new MA program in risk analysis. The program has been in operation for a year and apparently is the only one of its kind. It provides advance work in systematic risk analysis and management for qualified practitioners and students with disciplinary training, particularly from the sciences and engineering. As the program reaches maturity, 10 to 15 graduate students are expected to be in residence at CENTED at any time.

Has Staff with Varied Interests

As is apparent from the diversity of subjects the group works in, the staff of the Hazard Assessment Group consists of a number of individuals with training in several disciplines and varied current interests. In addition to the Kasperons and Hohenemser, the current staff members and their disciplines are: Halina Szejnwald Brown, chemistry; Patrick Durr, philosophy; Jackque Emel, water resources; Robert Goble, physics; Jay Himmelstein, occupational medicine; Mary Melville, environmental affairs; Robert Cameron Mitchell, sociology; Ortwin Renn, social psychology, and Don Shakow, economics. Kathleen Rochleau, a librarian, also works with the group.

fifth year of operation. Directed by Niels C. Lind, the institute conducts fundamental research under contract and by grants and undertakes problem-oriented applied research under contract. Current projects include a study of the transport of hazardous (non-nuclear) materials by truck and rail and a study of the health risks associated with industrial operations, the latter commissioned by Labor Canada.

In addition, the institute publishes a quarterly journal, *Risk Abstracts*, which includes abstracts

of literature surveyed by the staff, as well as reviews and references. Jean R. Webster is managing editor of the journal and also assistant director of the institute. (NOTE: Subscriptions to the journal may be obtained by writing to: IRR, University of Waterloo, Waterloo, Ontario, Canada, N2L3G1. Institutional rates are \$80 Canadian and \$65 USA; individual rates are \$40 Canadian and \$30 USA.)

EDITOR'S NOTE: Risk newsletter invites other risk centers to send in information about their work, sponsorship, etc.

Chapter News

The Society for Risk Analysis, which was incorporated in the District of Columbia (U.S.A) late in 1980, now has five official chapters in the United States and two chapters that have requested formal acceptance (the Research Triangle and Southern California Chapters). Two additional chapters are currently being organized (the Philadelphia and Metropolitan Chapters) but have not yet petitioned for recognition. Recent or current activities of all these chapters are described below.

National Capital Area Chapter

The National Capital Area Chapter met on June 9 to hear Sandford A. Miller, director of the Federal Drug Administration's Center for Food Safety and Applied Nutrition, speak on "Health Risks from Foods and Food Additives: An FDA Perspective."

East Tennessee Chapter

The East Tennessee Chapter will be welcoming Milton Russell as a new member at a wine and

cheese social on June 30. Russell, former assistant administrator of the U.S. Environmental Protection Agency and now serving in a joint appointment at Oak Ridge National Laboratory and the University of Tennessee, will speak to the group on "Reflections on the Use of Risk Analysis at EPA."

The chapter is planning a half-day workshop to be held this fall on "Screening Methods in Risk Assessment." At least four speakers will be

Locations of SRA Chapters in the U.S.



discussing ways of looking at things to identify problems. The topics tentatively selected for coverage are: biomarkers (measuring quantities in the body to determine whether exposure to a chemical has occurred); relative potency approaches to toxicity (determining which substances are the most toxic); hazardous waste sites (ranking the sites for cleanup); and risk-related reactor plant operational events (selecting screening methods to identify them).

New England Chapter

At an April meeting, the New England Chapter heard Paul Anderson of the Massachusetts Department of Environmental Quality Engineering talk on "Epidemiological Studies for Carcinogens."

Beginning in September, the chapter will sponsor a series of monthly seminars focusing on one issue. The seminars will be held at Massachusetts Institute of Technology and will continue for four months. Depending on the topic selected, the seminars may be jointly sponsored by a parallel organization called the Boston Risk Assessment Group, which mainly is concerned with the assessment of health effects related to chemicals in the environment.

Northern California Chapter

The Northern California Chapter met January 7 in Palo Alto and again on June 9 in Oakland. In January, Aaron Wildavsky, who is with the University of California (Berkeley) Political Science Department, Graduate School of Public Policy, and Survey Research Center, spoke on "Searching for Safety." In June, Alan D. Pasternak, who is technical director of the California Radioactive Materials Management Forum and former commissioner of the California Energy Commission, spoke on "Low-Level Radioactive Waste Disposal: A Case Study in Risk Perception and Public Policy for Risk Management."

Lone Star Chapter

The Lone Star Chapter met on June 8 to hear Thomas Murray, professor of ethics and public policy at the University of Texas Medical Branch, Galveston, Texas, speak on "Risk Assessment: Efficiency, Liberty, and Justice."

The chapter is currently heavily involved in planning for SRA's annual meeting, which the

SRA MEMBERSHIP INSIDE U.S.A.

Alabama, 5	Montana, 0
Alaska, 0	Nebraska, 2
Arizona, 4	Nevada, 3
Arkansas, 1	New Hampshire, 4
California, 247	New Jersey, 62
Colorado, 24	New Mexico, 16
Connecticut, 21	New York, 101
Delaware, 7	North Carolina, 44
Florida, 18	North Dakota, 0
Georgia, 10	Ohio, 38
Hawaii, 3	Oklahoma, 10
Idaho, 8	Oregon, 6
Illinois, 49	Pennsylvania, 69
Indiana, 8	Rhode Island, 3
Iowa, 1	South Carolina, 3
Kansas, 6	South Dakota, 0
Kentucky, 3	Tennessee, 79
Louisiana, 5	Texas, 67
Maine, 8	Utah, 5
Maryland, 107	Vermont, 3
Massachusetts, 104	Virginia, 83
Michigan, 46	Washington, 34
Minnesota, 9	West Virginia, 5
Mississippi, 1	Wisconsin, 5
Missouri, 7	Wyoming, 0
	Washington, DC, 134

Total in U.S.A. = 1,478

SRA MEMBERSHIP OUTSIDE U.S.A

Australia, 3	Germany, 14
Austria, 7	Greece, 2
Belgium, 4	Italy, 5
Brazil, 3	Japan, 3
Canada, 45	Mexico, 2
Columbia, 1	The Netherlands, 9
Denmark, 2	Norway, 2
Dominican Republic, 1	Romania, 1
England, 21	Sweden, 8
Finland, 8	Switzerland, 2
France, 7	Turkey, 2
	Yugoslavia, 1

Total Outside U.S. = 153

Total SRA Membership = 1,631

chapter will host in Houston November 1-4. The chapter is also planning to sponsor an evening session on "Ethics and Risk Assessment" at the annual meeting.

Southern California Chapter

The Southern California Chapter, which has petitioned for formal recognition by SRA, had its first official meeting on April 27 with 66 persons attending. Howard A. Slack, past senior vice president of science and technology for the Atlantic Richfield Company and now executive director of the Hazardous Substances Control Research Center at the University of California, Los Angeles, spoke to the group on "The Hazardous Substances Problem in California."

Business conducted at the meeting included acceptance of the chapter bylaws and installation of the following officers:

President: George Apostolakis, Mechanical, Aerospace and Nuclear Engineering Department, University of California, Los Angeles.

President-Elect: Stan Kaplan, Pickard, Lowe and Garrick, Inc., Newport Beach, CA.

Treasurer: Andrew Dykes, Pickard, Lowe and Garrick, Inc.

Secretary: Brian Fagan, Pickard, Lowe and Garrick, Inc.

Councilors: Edward Gordon, DHM Associates, Laguna Hills, CA; Randy Roth, Atlantic-Richfield Company, Los Angeles, CA; Steven A. Anderson, Envirosphere Company, Santa Ana, CA; and Michael G. Stamatelatos, GA Technologies, San Diego, CA.

The chapter's executive committee met June 18 and will meet again July 22 to continue planning fall and spring activities. Tentative plans are to have a chapter meeting in September and a two-day conference at UCLA in March 1988.

Research Triangle Chapter

The Research Triangle Chapter, the second chapter currently petitioning for official status, has already had three chapter meetings and an election of officers. The organizational meeting, held December 8, was attended by about 30 persons and featured David Hoel, director of Biometry and Risk Assessment at the National Institute of Environmental Health Sciences, who spoke on "Scientific Issues in the Assessment of Cancer Risks," particularly focusing on cancer risk from radiation.

At the chapter's second meeting, held March 2, Barbara Hulka, chairman of the Department of Epidemiology, University of North Carolina at Chapel Hill, spoke on the health effects of environmental tobacco smoke, basing her remarks on a National Academy of Sciences study which she chaired. At its third meeting, June 1, the chapter heard Thomas S. Wallsten of the L. L. Thurstone Psychometric Laboratory at the University of North Carolina discuss the methodology and results of a risk assessment project to support decisions on the Environmental Protection Agency's national ambient air quality standard for lead.

Officers for the Research Triangle Chapter are as follows:

President: Harvey Richmond, U.S. Environmental Protection Agency.

President-Elect: Kenneth Brown, Environmental Monitoring Systems, Inc.

Treasurer: Mary Coffee, Environmental Monitoring Systems, Inc.

Secretary: Randy Crawford, Knowledge Modeling Corporation.

Councilors: Michael Berry, USEPA; Ila Cote, USEPA; and Josephine Mauskopf, Research Triangle Institute.

Philadelphia Chapter

The inaugural meeting of the Philadelphia Chapter, originally scheduled for February 23 but cancelled because of snow, was held on March 16 with Betty Anderson of ICF-Clement as the speaker. Approximately 50 people attended. The next meeting will be held in mid-October and will consist of an afternoon program of four or five speakers addressing the risks and benefits of biotechnology. Plans for chapter elections will also be discussed at the October meeting.

Metropolitan Chapter

The Metropolitan Chapter, whose area is not yet fixed but tentatively covers New York, Connecticut, and New Jersey, sponsored a seminar at New York University on June 18. Paul Slovic of Decision Research, Eugene, Oregon, spoke on "Forecasting the Adverse Economic Impact of a Nuclear Waste Repository: Relevance of Perceived Risk and Environmental Stigma." The chapter is also currently conducting elections.

1987 Annual Meeting Plans on Schedule

Following an all-day session of the 1987 Annual Meeting Committee in Houston on June 19, General Chairman Don Stevenson reported that approximately 150 papers will be presented at the meeting in 44 sessions, with four sessions running concurrently at all times. In general, the format will be very similar to that of the 1986 meeting in Boston; however, an attempt will be made to allow somewhat more time for the individual sessions.

The 1987 meeting, which will be held at Houston's Wyndham Hotel November 1-4 and will focus on the theme "Risk Assessment in Setting National Priorities," will include at least one session new to SRA's annual meetings: a session titled "Risks Related to Space Exploration and Space Flight." In addition, the local chapter hosting the meeting, the Lone Star Chapter, will sponsor a special evening session on "Ethics and Risk Assessment" (see President's Column).

Some of the topics to be addressed by other sessions are the regulatory policies on food, water, air, superfund sites, and transportation; the perception, social aspects, and communication of risks; cancer modeling; pharmacokinetics; and international aspects of risk assessment.

SPECIAL AIRLINE RATES

Discounts up to 60% off!

Continental Airlines and Eastern Airlines are offering special discounts for attendees of the SRA 1987 Annual Meeting. Coach and first-class fares have no minimum-stay or advanced-booking requirements and no penalty for cancellations or itinerary changes. Call early for the limited special excursion fares at even higher discounted rates. Phone number for all states except Florida is 800-468-7022; in Florida the number is 800-282-0244. Refer to SRA No. EZ11BP9.

The meeting will begin with a free mixer on Sunday evening. A business meeting open to the entire membership will be conducted 5:30-6:30 Monday evening, and a reception and banquet will be held on Tuesday evening.

ADVANCE REGISTRATION FORM

1987 Annual Meeting
SOCIETY FOR RISK ANALYSIS
November 1-4, Houston, TX

Please complete this form:

Name: _____

Mailing Address: _____

City: _____

State: _____ Zip: _____

Country: _____

Day-time telephone: (_____) - ____ - ____

Institution/Company Affiliation:

Advance Registration Fees (in parentheses, fee for registering after October 16):

- | | |
|--------------------------------------|---------------|
| <input type="checkbox"/> Member, SRA | \$150 (\$175) |
| <input type="checkbox"/> Non-member | \$188 (\$215) |
| <input type="checkbox"/> Student | \$ 50 (\$ 50) |
| <input type="checkbox"/> One-day | \$ 75/day |

Please return this form with payment of the registration fees to:

Society for Risk Analysis
8000 Westpark Drive, Suite 400
McLean, VA 22102

Journal Contents (Cont.)

The table of contents of Vol. 7, No. 3 of the SRA journal *Risk Analysis* is reprinted below.

Manuscripts of articles for the journal should be submitted to: Curtis Travis, Editor, *Risk Analysis*, Bldg. 4500S, S204, Oak Ridge National Laboratory, PO Box X, Oak Ridge, TN, 37831.

Reviews of risk analysis software and software submitted for review should be mailed to: Paul D. Moskowitz, Biomedical and Environmental Assessment Division, Brookhaven National Laboratory, Upton, NY, 11973.

Vol. 7, No. 3

Author(s)	Title	Author(s)	Title
EDITORIAL			
Joseph Fiksel	The Impact of Knowledge Systems on Risk Assessment and Management	Tim O'Riordan Ray Kemp H. Michael Purdue	On Weighing Gains and Investments at the Margin of Risk Regulation
LETTERS TO THE EDITOR			
Alvin Weinberg	Informing and Educating the Public About Risk	Paul D. Moskowitz William H. Medeiros Neal L. Oden Henry C. Thode, Jr. Elizabeth A. Coveney	An Analysis of Damage to U.S. Soybean Yields from 1982 Acid Deposition Levels
Richard Wilson	Informing and Educating the Public About Risks of Daily Life		
Stephen L. Brown	Risk Assessment as a Predictive Tool	Halina Szejnwald Brown Carol Towan West Donna R. Bishop	Chemical Health Effects Assessment Methodology for Airborne Contaminants
ARTICLES			
Stan Kaplan	Estimation of Long-Term Risk from Canadian Uranium Mill Tailings		
Nan M. Laird	Thyroid Cancer Risk from Exposure to Ionizing Radiation		
William Cannell	Quantitative Safety Goals in the UK		
Luiz Fernando Seixas de Oliveria	Cost Effectiveness of Risk-Reduction Measures from a National Viewpoint: A Case Study of the Angra Nuclear Plant in Brazil		
Edson Benigno da Motta Barros			
Paulo Victor Fleming			
Luiz Pinguelli Rosa			
Jussi K. Vaurio	On Analytic Empirical Bayes Estimation of Failure Rates		
Ralph L. Kodell James J. Chen David W. Gaylor	Carcinogenic Risk from Intermittent Exposures		
Allan H. Smith	Infant Exposure Assessment for Breast Milk Dioxins and Furans Derived from Waste Incineration Emissions		
Peter K. LaGoy	Estimated Soil Ingestion Rates for Use in Risk Assessment		
SOFTWARE REVIEW			
		Paul D. Moskowitz Vasilism Fthenakis Samuel D. Morris	WHAZAN
BOOK REVIEWS			
		Robin K. White	
<h3>Annual Meeting Proceedings Nearing Publication</h3> <p>SRA Publications Chairman Lester Lave reports that the proceedings for SRA's 1984 annual meeting, which was held in Knoxville, Tennessee, will be published shortly, and the proceedings for the 1985 meeting, held in Alexandria, Virginia, will be available by October 1.</p>			

East-West Center Offers Risk Fellowship

The Environment and Policy Institute of the East-West Center in Honolulu, Hawaii (see story on risk centers) is seeking candidates for a fellowship in risk assessment. The fellow will work closely with EWC research staff to plan and implement multinational collaborative studies, as well as conduct independent research on the application of risk assessment to problems in developing countries of the Asia-Pacific region. Currently, the institute's emphasis is on two subjects: toxic chemicals and air pollution. The fellow will work in an international setting with both social and natural scientists.

Eligibility requirements are a PhD or the equivalent in a relevant discipline plus a minimum of three years of full-time post-PhD research or professional experience in risk assessment or a closely related field. Of particular interest are candidates who have an understanding of the quantitative aspects of risk assessment, as well as the ways risk management information can be translated into policy. Knowledge of environmental chemistry or engineering would be an asset, as would be experience in Asian developing countries.

The fellowship will be awarded for 6 to 12 months with a possible extension to 24 months. The starting date is flexible, but September or October 1987 is preferred. The fellow will be in residence at the EWC for the duration of the award but some travel to Asian and Pacific countries is likely.

Applications must be received by August 15. Applicants should send a letter and curriculum vita outlining current recent interests and relevant background, samples or abstracts of recent work, and names, addresses, and phone numbers of three references to: Kirk R. Smith, EAPI, EWC, 1777 East-West Road, Honolulu, Hawaii, 96848 (Phone 808-944-7519).

European Science Foundation Offers Fellowships

Research and short-term fellowships in toxicology are being offered by the European Science Foundation to scientists of any nationality *already working in a European laboratory*. The fellowships were established by ESF in 1982 in response to a recognized need for stimulating the development of toxicology in Europe and are limited to work performed in a European country.

The research fellowships, which can vary from 2 to 12 months with a possibility for renewal, are awarded annually by a committee which examines applications for a specific joint research project that has been agreed on and jointly signed by the applicant and the proposed supervisor at the laboratory where the work will be performed. In addition to describing the work, the application should include a letter of recommendation from a senior scientist familiar with the applicant's work, a letter of acceptance from the receiving institute, and reprints of publications and other documents that will help the committee assess the candidate's eligibility. This year's deadline for submitting an application is September 30, with the fellowships to begin on January 1, 1988. Both living and travel allowances are paid.

The short-term visiting fellowships, for up to one month's duration, are reserved for technical research missions of an urgent nature. The applications should contain all the same information required for the research fellowships, but should also include adequate evidence of the urgency of the mission. Applications for these fellowships can be submitted at any time and will be evaluated upon receipt.

Application forms may be obtained from: ESF Research Fellowships in Toxicology (PGT), Mrs. Caroline Schneider, European Science Foundation, 1, quai Lezay-Marnésia, F-67000 Strasbourg, France (Telephone, 88 35 30 63; Telex, 890440).

WPI Opens New Fire Sciences Laboratory

Worcester Polytechnic Institute, which offers the only graduate degree fire protection engineering program in North America, has formally opened its new Fire Sciences Laboratory. Partially funded with a \$50,000 donation from Aetna Life and Casualty Company, the laboratory is specially equipped to support small- and medium-scale fire experiments involving fire phenomena and fire protection methods. Experiments planned will investigate the characteristics of fire, the burning properties of materials, and the examination of such phenomena as ignition caused by radiant heat, flame spread, and smoke production.

David A. Lucht is director of WPI's Center for Firesafety Studies and Craig L. Beyler is director of the new laboratory. WPI is located in Worcester, Massachusetts.

Two SRA Risk Courses Scheduled for 1988

Because of the favorable response to SRA's course, "Carcinogen Risk Assessment," held at the National Academy of Sciences in Washington, DC, April 6-8, the society will offer the course both on the east coast and on the west coast in 1988. The first course will be in Washington in April and the second in San Francisco in October. In addition, a textbook on carcinogen risk assessment is being produced by the society for use in next year's courses.

The course, which was also held in 1986, provides an introductory overview to the methodologies, assumptions, and new research in cancer risk assessment. Approximately 55 persons attended the 1987 course, welcoming the opportunity to interact with and ask questions of leaders in the field of risk analysis. The lecturers were Betty Anderson, Roy Albert, Aparna Koppikar, Elizabeth Weisburger, Tim Fennell, Angelo Teturro, Milton Russell, Suresh Moolgavkar, Frederica Perera, Gail Charnley, Curtis Travis, Lester Lave and Chris Whipple.

First Bugby Fire Safety Scholarship Awarded

Christopher P. Hanuska of New Hope, Minnesota, a student in Worcester Polytechnic Institute's graduate program in fire protection engineering, has won the first annual Percy Bugby Scholarship provided by the National Fire Protection Association. The award was established by NFPA in honor of its long-time chief executive officer in recognition of his contributions to fire protection engineering during his 48-year career. Bugby is now honorary chairman of NFPA's board.

Hanuska, who has a BS degree in chemical engineering from the University of Minnesota, is currently working on a master's thesis on the suppression of vapors from flammable liquids with stabilized foam.

Conference on Radionuclides in Food in Austria

A conference titled "Radionuclides in the Food Chain" will be held at the conference center of Laxenburg, Austria (near Vienna) November 2-5, 1987. Designed for an international audience from all relevant disciplines, including those working in the food industry, the conference will bring together scientists, industrial managers and policy makers from the East and West to discuss various factors involved in the analysis and management of radionuclides in the food chain. A book entitled *Radionuclides in the Food Chain* will be based on the proceedings.

Sponsored by the International Life Sciences Institute in association with the International Institute for Applied Systems Analysis, the conference sessions will include the biological effects of ionizing radiation; sources of radioactive contamination; critical environmental pathways; risk assessment; comparative aspects of radioactive and chemical toxicity; methodology of surveillance procedures; regulatory and control programs; impact of psychological, institution and cultural factors on response and management of radioactive contamination; and guidelines for safety evaluation of food and water.

ASME Task Force Urges EPA Flexibility

While commending the U.S. Environmental Protection Agency for its October 1986 draft "Methodology for the Assessment of Health Risks Associated with Multiple Pathway Exposure to Municipal Waste Combustors Emissions," a task force of the Dioxin Committee of the American Society of Mechanical Engineers urged EPA to keep the methodology a "living document" by emphasizing the uncertainties in many assumptions and by encouraging professionals to improve on the proposed procedures. Anthony Licata, chairman of ASME's Dioxin Committee, wrote that "it must be made clearer that what is proposed should not be regarded as the last word in health risk assessment."

The task force, led by Carolyn S. Konheim, an environmental consultant, submitted a detailed 32-page critique to Robert Kellam, Chief of the Policy and Technology Section of EPA's Office of Air Quality Planning and Standards. ASME was invited by EPA to critique the document, and according to David Cleverly, principal author of the methodology, EPA planned to revise the document in June.

Recommendations Outlined

In addition to pushing for a living document, ASME said the methodology should use the proposed assumptions of exposure only as a conservative screening; incorporate a range of uncertainty for the assumptions used; define procedures for developing a statistically representative emissions data base for the technology being assessed; use the California Air Resources Board deposition model to simulate the settling of particles of different weights; encourage field tests of predicted impacts of point sources; report results of risk assessments for both the average and most exposed individuals; permit assessors flexibility in predicting both maximum individual risk and a population-weighted risk; and provide guidance on communicating risk results to reflect the underlying uncertainties, the concept of probability, and a framework for comparison.

Comings & Goings

Joyce C. McCann, an environmental scientist in the fields of mutagenicity and carcinogenicity, has joined ICF/Clement Associates, Inc., as principal science adviser for Western Operations. Formerly with Berkeley Laboratory in Berkeley, California, she will be attached to the firm's San Francisco office. She will perform risk studies for hazardous waste sites and help establish and interpret health policy standards for federal and state



agencies. She will also teach a graduate course on science and public policy at the University of California at Berkeley.

John J. Morris has been named regional manager of a newly established East Coast Regional Office of Yates & Auberle, Ltd., a consulting firm which is based in Oak Brook, Illinois, and provides technical service in environmental engineering and management, industrial hygiene, and risk management. The new office is located in Rutherford, New Jersey.

Paul R. Portney is the first director of the new Center for Risk Management recently announced by Resources for the Future (see story in this newsletter). He has been with RFF since 1972, except for a three-year period (1977-80) in which he was a visiting professor at the Graduate School of Public Policy at the University of California, Berkeley, and then senior staff economist at the Council on Environmental Quality for President Carter. Before being appointed director of the Center, he was director of RFF's Quality of the Environment Division.

NATO Conference Focuses on Organism Releases

A NATO conference held in Rome June 6-11 and attended by several SRA members focused on risk analysis approaches for environmental releases of genetically engineered organisms. Approximately 30 attendees discussed the issues related to deliberate releases of genetically engineered organisms, current regulatory approaches, existing data bases for risk assessment, risk assessment methodologies, biological methods for identification and control of microorganisms, and risk communication.

Countries represented at the conference were The Netherlands, Scotland, Denmark, Sweden, Italy, the United States, Canada, and Japan. One goal of the conference—a goal that was accomplished according to one U.S. attendee—was to bring together and summarize the various ongoing activities on this topic in NATO countries.

NRC Study Begins

(cont. from page 3)

The committee must both assess scientific hypotheses and understand the “working hypotheses” of those actually communicating risks. These might include, for example, the belief that government minimizes uncertainty, that the media oversimplifies, or that the public overreacts to small risks.

The committee is expected to work through three mechanisms: the individual members will share their own understandings of the current state of knowledge; they will assess the available literature, including a forthcoming National Science Foundation monograph reviewing the National Conference on Risk Communication held in January 1986; and they will obtain the perspectives of those in relevant organizations (federal agencies, interest groups, news organizations, etc.) through a series of invited briefings.

Case Study Data

The committee will also oversee collection of a set of case studies covering a range of risks. At a minimum, the cases selected will cover the actions of a variety of agencies concerning hazardous materials and products and the siting of facilities. Examples of both successful and less successful

cases will be sought in order to help discern what works and what doesn't, although it is not yet clear that criteria exist for scaling the success of particular episodes.

Oversight of Study

Oversight of the study will be carried out by a group made up of members of the NRC Commission on Behavioral and Social Sciences and Education and the Commission on Physical Sciences, Mathematics, and Resources. The oversight group will approve the membership of the study committee, the report review plan, and any major alterations in the project. In addition, NRC will provide a professional staff for the study.

In addition to NRC, which will supply about one-half of the funds for the project, a consortium of federal agencies and private organizations has agreed to help underwrite the study.

Calendar of Events

—August 4-7. SIXTH INTERNATIONAL CONFERENCE ON MATHEMATICAL MODELING, Adam's Mark Hotel, St. Louis, Missouri. Sponsored by International Association for Mathematical Modeling and Washington University in St. Louis. To provide an interdisciplinary, integrative forum on mathematical modeling for researchers and educators in engineering, economics, biological, medical, environmental, social and other sciences. Contact: Ervin Y. Rodin, Dept. of Systems Science and Mathematics, Washington University, Box 1040, St. Louis, Missouri 63130 (Phone 314-889-5806).

—August 10-14. 22nd INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE, Wyndham Franklin Plaza, Philadelphia, Pennsylvania. Sponsored by 11 technical societies. To promote the determination of viable national energy goals and the plans necessary to economically achieve them. Contact: B. R. Hodsdon, ACS, 1155 16th St., NW, Washington, DC, 20036 (Phone 202-872-4396).

—August 24-25. SEMINAR ON ACCIDENT SEQUENCE MODELING: HUMAN ACTIONS, SYSTEM RESPONSE, INTELLIGENT DECISION AIDS, Munich, F. R. Germany. (See March 1987 newsletter.) Contacts: G. Apostolakis, 5532 Boelter Hall, UCLA, Los Angeles, CA 90024 (Phone 213-825-1300); P. Kafka, Gesellschaft für Reaktorsicherheit (GRS) mbH, 8046 Garching, Germany (Phone 089-32004175); G. Mancini, Systems Engineering and Reliability Division, JRC Ispra, 21020 Ispra, Italy (Phone 332-789-714).

—August 30—September 4. INTERNATIONAL TOPICAL MEETING ON PROBABILISTIC SAFETY ASSESSMENT AND RISK MANAGEMENT, Swiss Federal Institute of Technology, Zurich Switzerland. (See June 1986 newsletter.) SRA contact: Chris Whipple (Phone 415-855-2443). European contact: PSA '87 Meeting Secretariat, ENS-Secretariat, Monbijoustrasse 5, PO Box 2613, CH-3001 Berne, Switzerland; Telephone (++4131)216111; Telex 912110 (atag ch); Telecopier (++4131)229203.

—August 31—September 4. INTERNATIONAL SYMPOSIUM ON DOSIMETRY IN RADIOTHERAPY, Vienna, Austria. (See March 1987 newsletter.) Contact: Secretariat IAEA-SM-298, International Atomic Energy Agency, PO Box 100, A-1400 Vienna, Austria (Telex 1-12645; cable address, INATOM VIENNA).

—September 1-3. SHORT COURSE ON RISK ANALYSIS IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH—WITH EMPHASIS ON CARCINOGENESIS, School of Public Health, Harvard University, Boston, Massachusetts. Sessions will introduce the problem of risk analysis in the context of calculating risks when data are uncertain. The methodologies for risk evaluation, and the interplay of risk evaluation and risk assessment, will be discussed. Fee: \$600. Contact: Office of Continuing Education, Harvard School of Public Health, 677 Huntington Ave., Boston, MA 02115 (Phone 617-732-1171).

—September 9-11. SHORT COURSE ON INDOOR AIR QUALITY: EVALUATION, MEASUREMENT AND CONTROL, School of Public Health, Harvard University, Boston, Massachusetts. Will give overviews of issues in indoor air quality in both residential and commercial buildings. Will also address health implications of the indoor exposures associated with this problem. Objective is to recognize the degree of this health hazard and to explore potential means for its control. Fee: \$550. Contact: See above.

—September 14-18. SHORT COURSE ON FUNDAMENTALS OF INDUSTRIAL HYGIENE—WITH PRACTICUM, School of Public Health, Harvard University, Boston, Massachusetts. For engineers and others with a technical background who are starting careers in occupational health protection with little prior training or work experience. Objective is to prepare individuals to perform occupational health field duties with reliability, accuracy, and confidence, and with minimal supervision. Laboratories will be included. Fee: \$1000. Contact: See above.

—September 15-18. TOPICAL MEETING ON POPULATION EXPOSURES FROM THE NUCLEAR FUEL CYCLE, Oak Ridge, Tennessee. (See September 1986 newsletter.) Contact: Phone 615-576-2100.

—September 18-19. CONFERENCE ON NUCLEAR RADIATION AND PUBLIC HEALTH: PRACTICES AND POLICIES IN THE POST-CHERNOBYL WORLD, Georgetown University, Washington, DC. Sponsored by the Departments of Biology and Radiation Science and the Institute for Health Policy, Georgetown University. To focus on the future of nuclear power in general, using Chernobyl as a springboard for discussion. Topics will include biomedical effects of nuclear radiation, environmental effects, nuclear engineering, and health policy and communication issues. Contact: Kenneth L. Mossman, Department of Radiation Science, Georgetown University, 3800 Reservoir Road, NW, Washington, DC 20007 (Phone 202-625-8294).

—September 23-24. INTERNATIONAL SYMPOSIUM ON MAJOR EMERGENCIES: FIXED INSTALLATIONS AND TRANSPORT, University of Surrey, Guildford, United Kingdom. Sponsored by The Robens Institute in conjunction with J. C. Consultancy Ltd. Contact: J. Williams, The Robens Institute, University of Surrey, Guildford GU2 5XH, United Kingdom (Phone [0483]509218).

October 5-9. SHORT COURSE ON IN-PLACE TESTING WORKSHOP, School of Public Health, Harvard University, Boston, Massachusetts. Participants will examine air filtration theory, aerosol technology, adsorption theory, air flow measurements, in-place testing of particulate filters and gas adsorption units, as well as instruments useful for in-place testing of filters and adsorbers. Fee: \$1000. Contact: See above.

—October 14-16. 7th ANNUAL CONVENTION OF SOCIETY OF PIPING ENGINEERS AND DESIGNERS, Houston, Texas. (See March 1987 newsletter.) Contact: N. S. Nandagopal, Suite N-723, One Main Street, Houston, TX 77002 (Phone 713-221-8090).

—October 20-23. 26th HANFORD LIFE SCIENCE SYMPOSIUM ON MODELING FOR SCALING TO MAN—BIOLOGY, DOSIMETRY, AND RESPONSE, Richland, Washington. (See March 1987 newsletter.) Contact: J. A. Mahaffey, Battelle, Pacific Northwest Laboratories, PO Box 999, Richland, WA 99352 (Phone 509-376-4402).

—October 26-30. SECOND U.S.-JAPAN WORKSHOP ON RISK ASSESSMENT/RISK MANAGEMENT, Osaka, Japan. (See September 1986 newsletter.) Contacts: Kazuhiko Kawamura, PO Box 6188, Station B, Vanderbilt University, Nashville, TN 37235 (Phone 615-322-2735); Paul Finger Lynes, Craig-Lynes Chemical Management (Phone 615-383-8490).

—November 1-4. ANNUAL MEETING OF THE SOCIETY FOR RISK ANALYSIS, Wyndham Hotel, Houston, Texas. (See story in this newsletter.)

—November 2-5. CONFERENCE ON RADIONUCLIDES IN THE FOOD CHAIN, Laxenburg Conference Center, Laxenburg, Austria. Sponsored by International Life Sciences Institute in association with International Institute for Applied Systems Analysis. Designed for international audience from all relevant disciplines. Contact in U.S.: L. Merritt, ILSI, 1126 Sixteenth St., N.W., Washington, DC 20036 (Phone 202-659-0074). Contact outside U.S.: Gerhard Kromer, IIASA, A-2361 Laxenburg, Austria (Phone 02236-71521).

—December 1-2. RISK COMMUNICATION SYMPOSIUM, Congress Centre, Ottawa, Canada. Sponsored by Institute for Risk Research, University of Waterloo. To bring together parties interested in risk communication in Canada, to define the problems of risk communication, and to define the roles of the media and government in risk communication. Contact: Niels C. Lind, Director, IRR, Engineering 2, University of Waterloo, Waterloo, Ontario, N2L 3G1 (Phone 519-885-1211).

—February 15-19, 1988. INTERNATIONAL CONFERENCE ON MAN-MACHINE INTERFACE IN THE NUCLEAR INDUSTRY (Control and Instrumentation, Robotics and Artificial Intelligence), Tokyo, Japan. Organized by International Atomic Energy Agency in cooperation with OECD Nuclear Energy Agency and the Commission of the European Communities. Topics to be addressed are analysis of accidents with relevance to man-machine interface, the human factor in man-machine interface, improvement and evaluation of man-machine systems, and new control and instrumentation concepts and instrumentation techniques. Participation in conference must be through designation by the government of a member state of the IAEA or by an organization invited to participate. Contact: Secretariat IAEA-CN-49, International Atomic Energy Agency, PO Box 100, A-1400 Vienna, Austria (Telex 1-12645; cable address, INATOM VIENNA).



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Note: Contributions to the newsletter should be mailed to one of the following addresses:

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CORPORATE CLASSIFIED

Research Staff Openings. The new Center for Risk Management recently established at Resources for the Future (see story in this newsletter) is recruiting a small interdisciplinary research staff. Candidates should have a PhD or equivalent degree and a commitment to careful and impartial research. Consideration will be given to those with backgrounds in biostatistics and life sciences, engineering, law, and the social and natural sciences. Salary and benefits will be commensurate with experience. Send cover letter, curriculum vita, and the names, addresses and phone numbers of three professional references to: Paul R. Portney, Director, Center for Risk Management, Resources for the Future, 1616 P Street NW, Washington, DC 20036. (RFF is an affirmative action/equal opportunity employer.)

NOTE: SRA publishes classified ads only for its corporate contributors. Companies or organizations wishing to become sustaining members of the society should contact the society secretariat at the address shown in the newsletter masthead.

NOTE: Risk newsletter is published quarterly: in March, June, September, and December. All contributions to the newsletter should be received by the editor by the fifteenth day of the month preceding the month of publication. That is, the deadline for contributions to the September newsletter is August 15, and deadlines for the December, March, and June newsletters will be November 15, February 15, and May 15, respectively.

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