

RISK *newsletter*

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Fourth Quarter 1994

Annual Meeting Features Special Sessions

Special sessions on ethics, economics, law, and the treatment of uncertainties will be featured at the 1994 Annual Meeting of the Society for Risk Analysis, which will be held December 4-7 at the Hyatt Regency on the Inner Harbor in Baltimore, Maryland. The special sessions will highlight the meeting's theme, "Risk Analysis: Learning Across Fields of Application."

The introduction of the special sessions in this year's program was a goal of President-elect Elisabeth Paté-Cornell, who is chair of the 1994 Annual Meeting Committee. Scheduled within the six concurrent tracks of the meeting, the sessions include "Ethics and Value Judgements in Environmental Risk Decision Making" (Monday, 3:30 p.m.); "Bringing Economics to Risk Analysis" (Wednesday, 1:30 p.m.); Legal and Regulatory Issues" (Wednesday, 1:30 p.m.), and "Scientific Uncertainty and Its Influence on the Public" (Tuesday, 3:30 p.m.). Other similar sessions are also scheduled.

The 1994 Annual Meeting program will also include a large number of symposia that have been organized to address specific topics, primarily through invited papers. Many of the symposia are sponsored by SRA's Specialty Groups, which have also organized sessions from contributed papers focusing on their areas of risk communication, ecological risk, exposure assessment, dose-response assessment, and engineering.

Plenary session

The 1994 SRA Annual Meeting will open at 8:30 a.m. Monday with a plenary session addressed by Dr. Lynn R. Goldman, Assistant Administrator for Prevention, Pesticides, and Toxic Substances of the U.S. Environmental Protection Agency. Her topic will be "Risks Along the Regulatory Super Highway."

Before joining the EPA in 1993, Dr. Goldman, a pediatrician and epidemiologist, was the acting chief of the California Department of Health Services' Division of Environmental and Occupational Disease Control. She has written extensively in the areas of environmental epidemiology and childhood lead poisoning prevention.

Town meeting

This year the Society is adding a town meeting to the agenda to give members a chance to ask questions about the organization and operation of SRA. The town meeting will immediately follow the business meeting luncheon on Tuesday, December 6.

(Continued on page 2.)

Six Risk Workshops At Annual Meeting

In addition to the five workshops announced in the preliminary program for the 1994 Annual Meeting in Baltimore, a sixth workshop on weight-of-evidence methodology has been added.

The six workshops are summarized below.

Weight-of-evidence methodology. Robert L. Sielken Jr. of Sielken Inc. is chairing a full-day workshop on "Comprehensive Realism: The Next Tier in Risk Assessment," which includes hands-on computer sessions.

This workshop will cover a weight-of-evidence methodology for the development of public health advisory criteria based on noncancer health effects. It will begin with an overview on quantitative risk assessment and will include the topics of decision analysis, probability distributions, reference and benchmark doses, and uncertainty factors.

The workshop will end with a brief discussion on the extension of the weight-of-evidence approach from noncancer health effects to cancer endpoints.

Child development. Lorraine McCune of Rutgers University is organizing a full-day workshop on applying knowledge of child development and parent influence to risk assessment, management, and communication. It is aimed at professionals engaged in tasks where children or developmental issues are important.

Monte Carlo techniques. Paul S. Price of McLaren/Hart Corp.'s ChemRisk and David E. Burmaster of Alceon Corp. are focusing a full-day workshop on the use of Monte Carlo techniques in environmental risk assessment. It will include an overview of how to use the techniques to characterize uncertainty and variation in exposure and risk estimates. The workshop is for risk assessment professionals who already are familiar with the general principals of exposure, risk assessment, spreadsheets, and elementary statistics.

Interval analysis and fuzzy arithmetic. Scott Ferson of Applied Biomathematics will review the use of interval analysis and fuzzy arithmetic for propagating uncertainty

(Continued on page 6.)

This newsletter is printed on recycled paper.

Baltimore Hosts Annual Meeting

Pubs on cobblestone streets, a Christmas parade of lighted boats, and hard-shell crabs at seafood restaurants await members of the Society for Risk Analysis who attend the 1994 Annual Meeting in Baltimore, Maryland, December 4-7.

The annual meeting site is at the Hyatt Regency in Baltimore's Inner Harbor area, which features a promenade along the water, shops, restaurants, and special holiday events

Ships in the harbor that include a three- from the Revolution- War II submarine, a cutter, and a light sentially a floating

From the In- tors can take trol- Taxis to visit other city. "The first thing the trolley and get an says Director of Tourism more Area Convention and trolley's route is narrated, and it is a great introduction to the area."



such as strolling carolers. are open to the public masted fighting ship ary War, a World U.S. Coast Guard ship, which is es- light house.

ner Harbor, visi- leys or Water sights in the historic to do is to jump on overview of the city,"

Gil Stotler of the Balti- Visitors Association. "The

During December, the trolleys run from 10 a.m. to 4 p.m. on Saturdays and Sundays, stopping every 30 minutes at each of the 20 stops. "You can get off at a stop, look around, and then catch the next trolley," Stotler says.

The trolley picks up passengers at the back of the Hyatt Regency, and brochures outlining the trolley route are available at the hotel's guest services desk. All-day passes are \$12 for adults, \$4.50 for children ages 5 to 12, and free for children under the age of five.

Water Taxis, which are boats that ferry visitors to locations across the harbor, also sell all-day passes.

Historic sites in Baltimore include the gravesite of American writer Edgar Allan Poe, the birthplace of baseball legend Babe Ruth, and the museum and cultural center on ragtime piano player and composer Eubie Blake, and Fort McHenry, where Francis Scott Key penned the "Star-Spangled Banner."

Scientific and educational sites include the Maryland Science Center, the National Aquarium, Johns Hopkins Hospital, Johns Hopkins University, University of Maryland Medical School, and the Columbus Center for Marine Research and Exploration, which is still under construction.

Restaurants that Baltimore residents recommend include Luigi Petti and Boccaccio in the Little Italy neighborhood, Phillip's in the Inner Harbor area for hard-shell crabs, and The Fishery in Fells Point community for seafood. Fells Point, which is an old maritime neighborhood with cobblestone roads, is also the location of some of the city's favorite pubs, which have names such as The Horse You Came in On, The Wharf Rat, and Sip and Bite.

"Baltimore is a town of neighborhoods, which is something that a lot of people don't realize when they first come to visit," Stotler said. "The city was the second biggest immigration center on the East Coast, next to New York, and many of the immigrants formed their own neighborhoods."

Special events around the time of the annual meeting include a holiday tree lighting at 5:15 p.m. on December 2 at the McKeldin Square entrance to the harbor. The annual lighted boat parade is at 6 p.m. on December 3.

Annual Meeting

(Continued from page 1.)

Opening reception

SRA councilors and officers and past presidents will be on hand to greet members at the welcoming reception at 5 p.m. on Sunday, December 4, and throughout the meeting.

Special breakfasts

The Society will host three breakfasts for special guests: one for all new SRA members at 7:30 a.m. on Monday, December 5; one for chapter and section representatives at 7 a.m. on Tuesday, December 6; and one for all international attendees at 7 a.m. on Wednesday, December 7.

New member assistance

In addition to attending the Sunday night reception and the new member breakfast, Society officials will be available throughout the meeting to assist newcomers, who will be identified by ribbons on their name tags that read "new member." Newcomers can also stop at the registration desk to ask for help in making key contacts.

Student awards

For the second year in a row, the Society is offering several \$500 awards for outstanding student papers.

The 1994 student award winners will present their papers at a platform session at 10:30 a.m. on Monday, December 5.

Poster sessions

For Poster Session P1, authors will be present from 10 to 10:30 a.m. and from 3 to 3:30 p.m. on Monday, December 5. For Poster Session P2, authors will be present from 10 to 10:30 a.m. and from 3 to 3:30 p.m. on Tuesday, December 6.

For Poster Session P3, authors will be on hand from 8 to 8:30 a.m. and from 10 to 10:30 a.m. on Wednesday, December 7.

Council meetings

The 1993-94 SRA Council will meet from noon to 5 p.m. on Sunday, December 4. The 1994-95 Council will convene at 7 p.m. on Tuesday, December 6.

Exhibits

The Society encourages members to visit the meeting exhibit area, which will include book displays by publishers, software displays by computer companies, and exhibits by the U.S. Department of Energy and the U.S. Environmental Protection Agency. The exhibit hours will be Monday from noon to 6:00 p.m., Tuesday from 9 a.m. to 5:30 p.m., and Wednesday from 9:00 a.m. till noon.

Companies wishing to participate in the exhibit program must register with the SRA Secretariat's office, telephone (703) 790-1745.

Meeting organizers

SRA President-elect Elisabeth Paté-Cornell is the chair of the 1994 Annual Meeting Committee. Other committee members are Deborah Amaral of the University of North Carolina, George Apostolakis of the University of California, David Burmaster of Alceon Corp., Alison Cullen of the Harvard School of Public Health, Ann Fisher of Pennsylvania State University, Christopher Frey of North Carolina State University, David Gaylor of the National Center for Toxicological Research, John Graham of the Harvard School of Public Health, John Keller of Apex Environmental Inc., Robert Mulvihill of PRC Inc., Mary Paxton of the American Petroleum Institute, Virginia Sublet of the University of Cincinnati, Paul Price of ChemRisk, Michael Stamatelatos of Sciencetech Inc., and Larisa Rudenko of Environ Corp.

SRA's National Capital Area Chapter hosted the paper review and assisted in organizing sessions for the meeting.

Registration

To register for the 1994 SRA Annual Meeting, contact the SRA Secretariat at the address shown on page 16. On-site fees are \$225 for members, \$105 for students, and \$300 for non-members. The non-member fee is higher because it includes a one-year SRA membership and journal subscription.

To reserve a room at the Hyatt Regency on Baltimore's Inner Harbor, call (410) 528-1234. Rates are \$118 for both single and double rooms if reservations are made by November 9.

Elisabeth Paté-Cornell Is 1995 President

Elisabeth Paté-Cornell of Stanford University in California takes the helm of the Society for Risk Analysis as president at the 1994 Annual Meeting in December.

Paté-Cornell, who is a professor of industrial engineering and engineering management at Stanford, began working on her goals for the Society during her term as president-elect this past year. Accomplishments already realized include organizing sessions at the 1994 SRA Annual Meeting that will bring together different disciplines, scheduling more engineering papers at the meeting, and increasing the Society's visibility among government officials.



Elisabeth Paté-Cornell

Traditionally, each year the president-elect of SRA chairs the Annual Meeting Committee. "My goal was to arrange special sessions on topics such as economics and ethics where members from different fields could learn from each other, and we did it," Paté-Cornell said. (See related story on page 1.)

As part of her work to attract more engineers to SRA meetings, Paté-Cornell represented SRA at the International Conference on Probabilistic Safety Assessment and Management (PSAM-II) and arranged for all PSAM attendees to receive the call for papers for the 1994 SRA Annual Meeting.

"As a result, we have a much larger number of engineering papers this year than we did at the last annual meeting," she said.

In visits to Washington, D.C., the president-elect has worked with others in the Society to increase the awareness of SRA at government agencies such as the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the U.S. Office of Management and Budget.

"I met with government officials to convince them of what SRA has to offer," she said.

At the same time, she discovered what some agencies have to offer the Society. "When I met with officials at the National Science Foundation, the director of engineering pointed me toward several programs that might be possible sources of funding for engineers in risk analysis."

This past summer, Paté-Cornell was a recipient of a National Aeronautics and Space Administration faculty fellowship under which she worked on space walk research. In addition, she was selected as a member of the National Research Council's Marine Board and its Committee on Decontamination and Decommissioning of Uranium Enrichment Plants. She and her group at Stanford also recently completed a study of patient risks in anesthesia.

Paté-Cornell has a Ph.D. in engineering-economic systems from Stanford University and an engineering degree in computer science from the Institut Polytechnique de Grenoble, France. She has been a member of the Society since 1981 and served on the SRA Council from 1984 to 1986.

She succeeds SRA's 1994 president Robert G. Tardiff of EA Engineering, Science, & Technology, Inc.

Nominations of SRA Officers Announced

The Society for Risk Analysis Nominating Committee has announced the slate of candidates for the 1994 elections of president-elect, treasurer, and three councilors, and ballots have been mailed to the membership.

The results of the elections will be announced in December at the 1994 SRA Annual Meeting in Baltimore.

The chairman of the Nominating Committee is D. Warner North of Decision Focus Inc. Other committee members are Alison Cullen of the Harvard School of Public Health, Clifford Duke of Common Sense Environmental, Robert Hetes of Research Triangle Institute, John Kissel of the University of Washington, Stanley Levinson of B & W Nuclear Technologies, Catherine St. Hilaire of Hershey Corporation, and SRA Councilor Rae Zimmerman of New York University.

President-elect: Gough vs. Graham

Michael Gough is a senior associate in the U.S. Congress' Office of Technology Assessment, where he directed the project that resulted in the 1981 report *Technologies for Determining Cancer Risks from the Environment*, as well as assessments of occupational safety and health and of technologies for detecting heritable genetic mutations in humans. He has contributed to numerous other Office of Technology Assessment reports on topics ranging from biotechnology to oil shale mining to Love Canal.

His experience includes serving as director of the Center for Risk Management at Resources for the Future, director of the Risk Science Institute, project director at Environ Corporation, and as a Fulbright Lecturer in Peru and India. While at Resources for the Future, he collaborated with T.S. Glickman in editing *Readings in Risk* (Johns Hopkins; 1990). He chaired the U.S. Department of Veterans Affairs Advisory Committee on the Health-related Effects of Herbicides for three years and currently chairs the U.S. Department of Health and Human Services Committee for Review and Oversight of the U.S. Air

Force Study of the Health Effects of Agent Orange.

He received a bachelor's degree in biology from Grinnell College and a Ph.D. in biology from Brown University. He was a post-doctoral fellow in human genetics at the University of Michigan. He has held teaching positions at the Baylor College of Medicine and at the State University of New York at Stony Brook.

From 1985 to 1987, Gough was SRA's secretary and chairman of the Publications Committee. Currently he is on the editorial board of SRA's journal *Risk Analysis*.

John Graham is the director and founder of the Center for Risk Analysis at the Harvard School of Public Health, which promotes analytical thinking about societal responses to health, safety, and environmental hazards. He also heads the Harvard Injury Control Center and is a professor of policy and decision sciences, teaching the methods of risk analysis and benefit cost analysis.

He went to Harvard in 1984 as a post-doctoral trainee in environmental science and public policy, which led to the publication of his first book, *In Search of Safety: Chemicals and Cancer Risk* (Harvard University Press; 1988). He received his bachelor's degree at Wake Forest University, his master's degree at Duke University, and his Ph.D. in public policy at Carnegie-Mellon University. His dissertation on automobile airbag technology was later published and cited in pro-airbag decisions by both the U.S. Supreme Court in 1983 and U.S. Secretary of Transportation Elizabeth Dole in 1984.

In 1991, he received the "Award for Outstanding Service in Helping to Develop and Support the National Agenda for Injury Control" from U.S. Surgeon General Antonia Novello.

Graham is a charter member of the Society and has served as an SRA councilor since 1992.

Treasurer: Price vs. Putzrath

Paul Price is a supervising scientist with ChemRisk, a division of

McLaren/Hart Corp. His financial experience includes maintaining timely and high-quality projects within budgetary constraints at ChemRisk, as well as managing substantial budgets for research and regulatory affairs activities for the U.S. Environmental Protection Agency and the American Petroleum Institute.

He has a bachelor's degree in chemistry and a master's degree in civil engineering, both from the University of Maryland.

A charter member of SRA, Price's activities within the Society include founding and chairing the Exposure Assessment Specialty Group. He has helped organize sessions on exposure analysis for the last three annual meetings and led a workshop on the application of Monte Carlo modeling to exposure and risk analysis at the 1993 meeting. He is a member of the 1994 Annual Meeting Committee and also serves on the Management Committee for the Residential Exposure Assessment Project.

Resha Putzrath is a principal in toxicology and risk assessment with the Georgetown Risk Group. She has more than 13 years of experience in toxicology and risk assessment, beginning in 1980 when she served as the toxicologist for the Hazardous Waste Enforcement Task Force of the U.S. Environmental Protection Agency (EPA).

Her experience includes assisting regulatory agencies with policy development, managing multi-disciplinary projects such as hazardous waste sites, modeling exposure to chemicals in consumer products, and developing methods for including quantitatively all available data through techniques of meta-analysis.

She received a bachelor's degree in physics from Smith College and a master's degree and Ph.D. in biophysics from the University of Rochester.

Putzrath currently serves on SRA's Gifts and Grants Committee, and she assisted in organizing the 1993 SRA

Annual Meeting program. Her financial training includes serving as treasurer of Step 5 Corporation and managing the finances of the Environmental Group of Organization Resources Counselors Inc.

Councilor: Barnthouse vs. McKone

Lawrence Barnthouse is the leader of the Environmental Risk Group at Oak Ridge National Laboratory, where he has been a pioneer in the development and application of methodologies for quantitative ecological risk assessment. He was a principal investigator on EPA's first formally designated ecological risk assessment research project, and he is committed to ensuring that scientifically credible techniques for ecological risk assessment are adopted both nationally and internationally. A member of SRA since 1983, Barnthouse chaired the Ecological Risk Assessment Specialty Group from 1991 to 1993.

Thomas E. McKone is the group leader of the Exposure Assessment Group in the Health and Ecological Assessment Division at Lawrence Livermore National Laboratory and is a lecturer and research environmental engineer with the Environmental Toxicology Department at the University of California in Davis. He recently served a year as a visiting scientist at the Harvard School of Public Health and has been a visiting lecturer for courses on risk assessment at the University of California in Los Angeles and at Stanford University. He is on the editorial board of SRA's journal *Risk Analysis*.

Councilor: Burmaster vs. Strauss

David Burmaster is the founder and president of Alceon Corporation and is an adjunct associate professor at the Boston University School of Public Health, where he taught a graduate course in public health and environmental risk assessment for three years. He has more than 20 years of technical and managerial experience working on environmental problems in the private, academic, and public sectors, including serving for three years as the water quality staff member of the U.S. President's

Council on Environmental Quality. He currently is serving on the 1994 Annual Meeting Committee.

Harlee Strauss is the founder and president of H. Strauss Associates Inc. She works on a broad range of projects, including site-specific human health risk assessments, in-depth evaluations of the toxicity of individual chemicals, and the development of frameworks for risk assessment for micro-organisms. She recently published a paper and has given lectures on identifying gender biases in risk assessment involving both toxicology and exposure. A member of SRA since 1987, Strauss is the former president of the New England Chapter and has served on the advisory committee for an SRA workshop on carcinogen risk assessment guidelines. Currently, she is the New England Chapter's newsletter editor and serves on the Management Committee for the Residential Exposure Assessment Project.

Charnley vs. Farland

Gail Charnley is currently serving as the executive director of the federal Risk Assessment and Management Commission, which the 1990 Clean Air Act Amendments established. The commission is evaluating aspects of human health risk assessment methodology and will focus on how the results of risk assessments are used in regulatory decision making. Previously, Charnley was the acting director of the Human Toxicology and Risk Assessment Program at the National Academy of Sciences, which published reports such as *Science and Judgment in Risk Assessment* and *Issues in Risk Assessment*.

William Farland is the director of the EPA's Office of Health and Environmental Assessment, which has major responsibility for the conduct of chemical-specific risk assessments in support of regulatory programs, the development of agency-wide guidance on risk assessment, and the conduct of research to improve risk assessment. Previously, he served as the director of the Carcinogen Assessment Group and acting director of the Reproductive Effects Assessment Group. He is committed to developing national and international

approaches to the testing and assessment of the fate and effects of environmental agents. He has served on the editorial board of SRA's journal *Risk Analysis* since 1987.

Member News

Henrik Kortner began a new position in August. His address is Henrik Kortner, SKM-963, Det Norske Veritas Industry AS, Veritasvn. 1, N-1322 HØVIK, Norway, telephone (47) 67 57 8461, fax (47) 67 57 7474.

David A. Moore is president and chief executive officer of his recently formed consulting engineering firm that specializes in process risk management: AcuTech Consulting Inc., 100 Pine Street, Suite 2240, San Francisco, CA 94111, telephone (415) 772-5972, fax (415) 772-5975.

SRA member **Christina Chociolko** is the co-author of the recently published book *Risk and Responsibility* along with William Leiss (McGill-Queen's University Press; 1994). She also has a new address: Environmental Policy Unit, School of Policy Studies, Queen's University, Kingston, Ontario K7L 3N6, e-mail chociolk@qucdn.queensu.ca.

David McCallum of Focus Group's Washington, D.C., office has a new address: Focus Group, 1101 Seventeenth Street, N.W., Suite 500, Washington, D.C. 20036, telephone (202) 338-2156, fax (202) 338-2159.

Corazon PB. Claudio, who is president of the SRA Philippine Chapter, has been given honorary membership in the Society of Risk and Insurance Management of the Philippines.

Membership Update

As of October 1994, the Society for Risk Analysis had a total of 1,948 members: 1,720 in the United States, 63 in Canada, and 165 in other countries.

Workshops

(Continued from page 1.)

through calculations in a quantitative risk assessment in a full-day workshop. During the workshop, he will apply the methods to several environmental risk assessment problems as examples, including hydrocarbon soil contamination, pesticide misapplication, lead cleanup levels, and extinction of endangered species.

Public involvement in risk communication. Using case studies, video examples, discussions, and role playing in a full-day workshop, Arnold Den and Alvin Chun, senior advisors with the U.S. Environmental Protection Agency, will teach participants the skills needed to understand and address concerned citizens and explain why risk communication and public involvement should be an important consideration in environmental issues.

Community dynamics in risk communication. Rose Pfund of the University of Hawaii will conduct a half-day workshop on understanding community dynamics and public participation in risk communication. Designed for administrators and communicators of regulatory or environmental and resource management agencies, the workshop will give a better understanding of risk communication processes and why communication dysfunction occurs. The workshop will include a practicum that gives participants an opportunity to develop a communication program that incorporates procedures and theories presented.

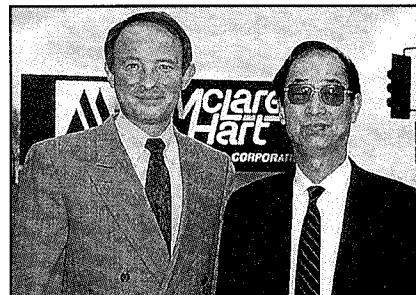
Registration

Except for the first one, these workshops are described in more detail in the preliminary program for the 1994 SRA Annual Meeting. Fees are \$150 for each of the five full-day workshops, which run from 9 a.m. to 5 p.m., and \$75 for the half-day workshop, which is from 9 a.m. to 1 p.m. To register, contact the SRA Secretariat at telephone (703) 790-1745.

China's Top Environmental Official Meets with SRA Member

The visit of China's top environmental official to the United States this summer to learn more about risk assessment included in-depth meetings with a member of the Society for Risk Analysis.

Qu Ge-Ping, who is chairman of the Environmental and Resources Protection Committee of the National People's Congress, met with SRA member Dennis Paustenbach, who is head of McLaren/Hart Corp.'s ChemRisk division.



Paustenbach and Ge-Ping

"He was here to learn about how we use risk assessment in the United States to prioritize our environmental agenda," Paustenbach said. "He was very interested in how we weigh the importance of acute risks like dumping raw industrial sewage and chemicals into waterways versus hazards associated with air pollution."

One of Ge-Ping's biggest environmental concerns is water pollution. "By the end of his visit he had concluded that China's most important priority is to get safe drinking water to the people and to start insisting upon treatment of industrial outfalls at the source," Paustenbach said.

During his visit, Ge-Ping said that he planned to have Paustenbach's 1,100-page book titled *The Risk Assessment of Environmental Hazards: A Textbook of Case Studies* (Wiley and Sons; 1990) translated into Chinese. Several U.S. universities use the book as a text for graduate-level courses.

SRA Members Contribute to Risk Legislation

Among the avalanche of risk legislation that the U.S. Congress considered this year was an amendment of the proposed Environmental Technologies Act, which included contributions from Society for Risk Analysis members.

The proposed Environmental Technologies Act, H.R. 3870, was aimed at commercializing environmental technologies that in some manner help prevent, reduce, or clean up pollution. To help improve the language of the bill's amendment that covered risk assessment guidelines related to the technologies that the bill promotes, SRA past presidents D. Warner North, James D. Wilson, and Lester B. Lave submitted a

letter to Congressional staff outlining recommended changes.

"The amendment concerned assessing both risks to be reduced by the new technology and risks that might be caused by such technology," said Wilson, who served as SRA president during 1993.

H.R. 3870 is just one of several bills to which SRA members have contributed.

"SRA members are making a positive impact across the board on legislation involving risk analysis," said Nandan Kenkeremath, who is the minority counsel to the U.S. House of

Representatives' Committee on Energy and Commerce in Washington, D.C.

Kenkeremath, who is a proponent of legislation that requires the unbiased presentation of risk assessments and the presentation of estimated risk to the extent feasible, also has worked with SRA members on other proposed legislation, such as the Risk Communication Act of 1993, H.R. 2910. "Dr. Jim Wilson, Dr. John Graham, and Dr. Ann Fisher endorsed H.R. 2910," said Kenkeremath, who is the author of the bill. Graham is an SRA councilor, and Fisher is a former councilor.

(Continued on page 13.)

Update on Residential Exposure Assessment Project

Members of the Society for Risk Analysis and the International Society of Exposure Analysis have moved ahead recently on efforts to develop a unique reference book on approaches to assessing exposures to chemicals and other environmental agents found in residences.

The societies have a cooperative agreement with the U.S. Environmental Protection Agency's Office of Health Research to develop the book with co-funding from industry and trade associations such as the Chemical Manufacturers Association.

In August, the project's Management Committee met for two days to select the Editorial Committee for the reference book and to develop the guidelines it is to follow. The Editorial Committee will manage the technical aspects of the project.

"The book will include some hard-to-find data but will not duplicate sources like EPA's Exposure Factors Handbook," said SRA member David McCallum of Focus Group, who is chair of the Management Committee.

Editorial Committee named

SRA members elected to the Editorial Committee are Jeffrey Driver of Technology Sciences Group Inc., P.J. (Bert) Hakkinen of The Procter & Gamble Co., Judith Schreiber of the New York State Department of Health, Linda Triemer of Exxon Biomedical Sciences Inc., and Susan Youngren of EA Engineering, Science, & Technology. Other members are Phil Hopke of Clarkson University, Jack Spengler of Harvard University, and Bill Wood of EPA.

Questionnaire successful

More than 200 members of both societies responded to a survey concerning the project that was mailed to members earlier this year. The respondents said they would like to use the book as a reference for guidance on exposure parameter default values and distributional data, recommendations on exposure modeling methods, and data on human activity patterns. About half of the respondents indicated that they would like to contribute unique data, research results, case studies, modeling software, or monitoring developments.

Survey respondents were interested nearly equally in most classes of potential indoor air toxicants, including volatile organic compounds, metals, particulates, radionuclides, and pesticides. Interest was also equally divided among monitoring techniques, exposure models, and data for residential exposure assessments.

Plans under way

The Management Committee has outlined a schedule to complete the book by June 1996. The Editorial Committee will be finalizing the outline for the book and also selecting chapter authors and working group members in November.

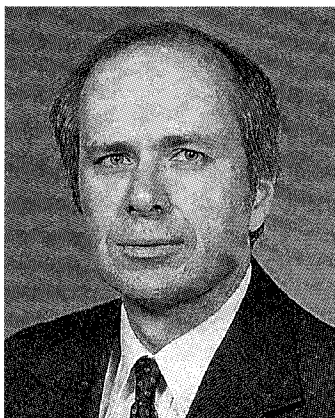
"This is a workable but optimistic schedule that will require hard work by the project participants," McCallum said. "We will need cooperation from interested members to make this happen."

Anyone who is interested in learning more about the Residential Exposure Assessment Project can contact McCallum by telephone at (202) 338-2156 or by fax at (202) 338-2159.

Colglazier Named Executive Officer of National Academy of Sciences, National Research Council

SRA member E. William (Bill) Colglazier has been named executive officer of the National Academy of Sciences and National Research Council following the retirement of Philip M. Smith.

As executive officer, Colglazier heads all program activity of the National Research Council, which is the principal operating arm of the National Academy of Sciences and the National Academy of Engineering and provides independent advice on science and technology issues under a congressional charter. The council's work involves a broad range of policy studies performed by 570 committees with more than 5,600 members.



E. William (Bill) Colglazier

Since 1991, Colglazier has been executive director of the National Research Council's Office of International Affairs. For eight years before that, he was a professor of physics and director of three science and technology policy centers at the University of Tennessee in Knoxville.

Previously, he was a research fellow with the Center for Science and International Affairs, Kennedy School of Government, Harvard University. He also performed research at Princeton University and Stanford University. He received his bachelor's degree and doctorate in theoretical physics from the California Institute of Technology.

The Society's Financial Status

(Editor's Note: The following report on the Society's financial status was submitted to RISK newsletter by SRA's Executive Committee.)

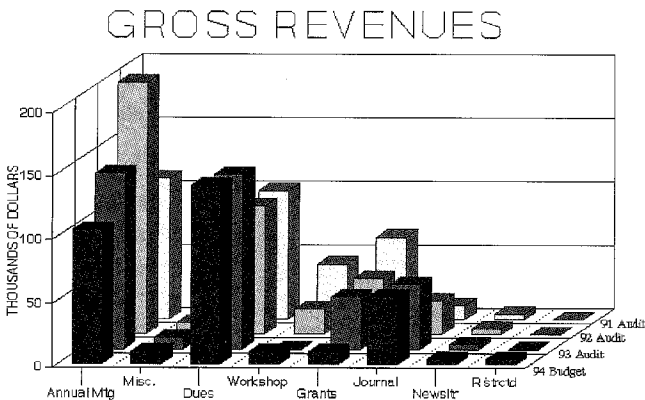
The Society's financial condition is judged to be sound—but could always be improved. The officers want to provide the members with a summary of the major elements that make up our gross revenues and expenses—which, when combined, produce our net revenue. To help understand the recent trends in SRA's financial status, audited data from fiscal years 1991-1993 were graphed along with the budgetary estimates for fiscal year 1994, which ends December 31, 1994. This information has been compiled from the Treasurer's Reports to the membership over the past three fiscal years.

Three graphs are provided: one for revenues, another for expenses, and a third for net revenues. To simplify the graphical presentation, several revenue items were combined from the detailed budget categories tracked in SRA accounting system; e.g., dues from individual members (including subscription revenue) and sustaining sponsors were combined, and "miscellaneous" herein includes all other revenue sources not specifically identified. Likewise, expense categories were also combined: e.g., officers, councilors, and support were grouped under "Council;" all cooperative grants were combined under "restricted;" and "miscellaneous" includes all other expense sources not specifically identified.

As background, each year several weeks prior to the Society's Annual Meeting, the Society's Treasurer and Executive Secretary develop a budget. The proposed budget is based on established financial commitments, historical experience, and budget requests from various sources (e.g., Officers and Committee Chairs). The proposed budget (including expected net receipts for the Annual Meeting of the specified fiscal year) is then reviewed, modified when needed, and formally approved by the Council at a meeting that occurs during the Annual Meeting. Implementation of the budget is accomplished by the Executive Secretary with close oversight from the Society's Treasurer and President.

Gross Revenues

The gross revenues of the Society were nearly \$344,000 in 1991, rose to a record of \$399,000 in 1992, declined to

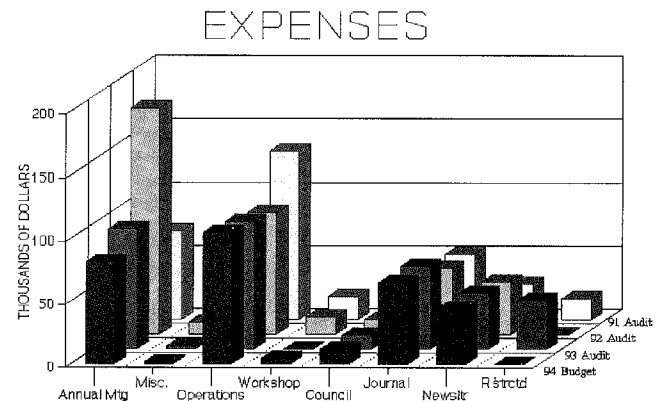


\$381,200 in 1993, and are estimated to be \$332,000 (including expected receipts of the Annual Meeting) in 1994.

The Society's gross revenues for the years covered are derived principally from the dues of individual members and sustaining sponsors (30%, 25%, 36% and 42% (est.), respectively), journal subscriptions (3%, 7%, 14%, and 16%, respectively), and the annual meeting (32%, 50%, 36%, and 31% (est.), respectively). Note that in 1991 and 1992, the revenues from workshops were much greater than those in 1993 or those anticipated in 1994. The change in revenue from the Journal subscriptions after 1992 is particularly noteworthy, because it reflects a major initiative by SRA officials to obtain a contract for its publication that is considerably advantageous to the Society.

Expenses

The expenses of the Society were approximately \$335,000 in 1991, rose to a record of \$406,500 in 1992, declined to approximately \$361,000 in 1993, and are estimated to be \$312,000 in 1994.



The primary sources of the Society's yearly expenses consist of three parts:

- **Management & Operations** provided by the Secretariat (i.e., Burk & Associates, Inc.) which includes salaries, salary-based charges, rent, equipment, insurance, bonds, taxes, and other direct costs (e.g., committee operations, organizational support, and Society direct costs such as postage, printing, audit and legal, telephone and duplication)—representing for the subject years 40%, 24%, 28%, and 33% (est.), respectively, of the Society's total expenses. The Secretariat's management fee was lowered in 1991 from that in 1990, and has remained flat since then. The management fee accounts for less than two-thirds of the management and operations costs.

- **Publications**, which include the Journal and the Newsletter; for the subject years, the expenses for the Journal are 16%, 13%, 18%, and 21% (est.), respectively, of the total

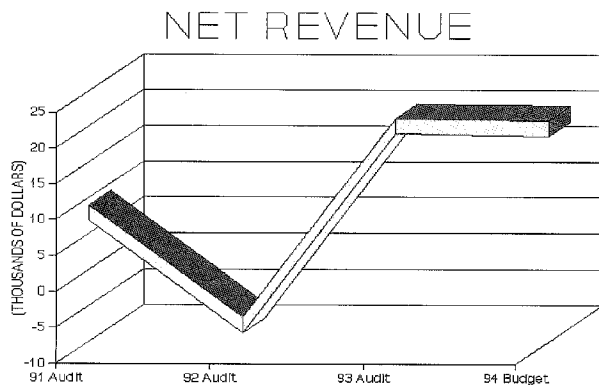
expenditures; whereas the Newsletter accounts for 9%, 10%, 12%, and 14% (est.), respectively.

• **Annual Meeting**, whose expenses for the subject years were 21%, 44%, 26%, and 26% (est.), respectively, of the total expenditures.

The high expenses recorded in fiscal year 1992 were the result of a higher percent cost for the Annual Meeting, increased costs of the Newsletter, and higher proportional expenses for Workshops—despite a reduction in management and operating expenses.

Net Revenues

The net revenues (losses) of the Society were \$8,100 for 1991, (\$7,600) for 1992, \$20,300 for 1993, and \$20,000 (estimated) for 1994. The Society's net loss in 1992 was due primarily to the existence of prior contractual commitments for Annual Meeting proceedings and the Society's involvement in international travel programs. Those programs are now completed; and no plans exist to reintroduce similar expenditures.



For this four-year time period, the Annual Meetings have made an average positive contribution of approximately \$30,000 per year.

Since 1993, the Journal expenses have shown considerable improvement in offsetting expenses with revenues. For instance, net operating losses were reduced from \$41,700 (1991), to \$26,600 (1992), to \$14,600 (1993), to \$12,000 (1994 est.). This improvement was based in large measure on the new contract negotiated with Plenum, and on greater management control over expenses.

The Newsletter expenses have been offset by advertisement revenue to a modest degree. For instance, for the subject years, the advertising revenues have averaged approximately \$4,000 yearly, leading to net operating losses reported as \$24,400, \$37,500, \$40,900, and \$40,000 (est.), respectively. The increase in cost (54%) experienced from 1991 to 1992

was due largely to a change in the size and presentation quality of the RISK newsletter.

As a result of these revenue-generating and other management initiatives, the Officers of the Society have succeeded in maintaining a dues structure that is considered, among professional societies of its size, one of the most favorable to its members. Although the publications of the Journal and the Newsletter are expected to be subsidized partially from members' dues, the external revenues for each have contributed in varying degrees to keeping the dues at their relatively low level.

Reserves

Cash reserves are those funds (in savings and investments) that remain at the end of the fiscal year after all revenues have been obtained and all bills paid. These funds are important not only to avoid difficulties with cash flow but also to provide insurance against unforeseen reversals in the financial projections of subsequent years. Most societies of our size and maturity are recommended to have cash reserves equivalent to one year's operating budget. Had SRA followed this rule of thumb, it should have had in hand \$312,000 (the 1994 budget of \$332,000 minus the hoped-for contribution to cash reserves of \$20,000) at the end of 1993. The Society's cash reserves were only \$91,000—considerably less than what is needed to responsibly manage the Society in the foreseeable future. For this fiscal year, your officers have hoped to add some \$20,000 to that sum; with a successful Annual Meeting in Baltimore, we will meet our objective. However, that still leaves an uncomfortable distance from our overall target of \$312,000 in cash reserves.

For fiscal year 1995, the Society plans to raise net revenues in several ways. First, SRA is expanding its revenue generating activities (e.g., expansion of its workshops that fulfill its educational mission). Second, the Society is seeking to actively control its expenses. For instance, the Officers have instituted a mechanism to assure that workshops are on a sound financial basis prior to their implementation; they are also in the process of negotiating contracts with the producers of the Newsletter and with the Secretariat that will further control costs while retaining high quality services. Third, SRA is reviewing its investment strategy for its cash reserves to shift from relatively low yield financial instruments to those that provide higher yields while still retaining a relatively high degree of safety to the principal. SRA's ultimate long-range goal is to ensure the presence at all times of funds sufficient to carry out the activities essential to sustain effective operations of the Society for a full year.

With these objectives in mind, the 1995 budget is presently being prepared for review, revision, and approval at the Annual Meeting in December.

SRA Specialty Groups

On Tuesday evening, December 6, at the 1994 Society for Risk Analysis Annual Meeting, the SRA specialty groups will hold their individual annual meetings. Following are highlights of the groups' annual meeting plans and other activities:

Ecological Risk Specialty Group has arranged a two-part symposium titled "New Developments in Wildlife Food Web Exposure Modeling" on Tuesday afternoon, December 6. The topics include links between aquatic and terrestrial food webs, telemetry and spatial analysis using geographical information systems, and the use of probabilistic approaches.

The group is seeking a candidate to serve as its chair in 1994-95. Anyone who is interested in the position should contact **Laura Haselow** of Westinghouse Savannah River Company at telephone (803) 644-6885 or fax (803) 644-6923. Nominations will close in mid-November, and the new chair will be announced at the group's meeting on Tuesday.

Engineering Specialty Group will meet on Tuesday evening and discuss topics such as how to increase SRA's engineering membership and the number of engineering papers at SRA annual meetings and in *Risk Analysis*. **Ralph Miles** of Jet Propulsion Laboratory will chair the meeting. To suggest other items for the meeting agenda, contact Miles at telephone (818) 798-7096 or fax (818) 798-5066.

Exposure Assessment Specialty Group is sponsoring several events beginning on Sunday, December 4, with a workshop titled "Application of Monte Carlo Techniques to Exposure Analysis" (see page 1) and continuing on Monday and Tuesday with a symposium titled "Probabilistic Approaches for Environmental Health Risk Analysis: Applications and Case Studies," which is a follow-up to the symposium on probabilistic methods in exposure assessment at the 1993 Annual Meeting. The group has organized six platform sessions, including one on SRA's distribution development document project that the U.S. Environmental Protection Agency is funding.

When the group meets on Tuesday, it will plan for the 1995 SRA Annual Meeting in Hawaii and the 1996 joint meeting of SRA and the International Society for Exposure Analysis (ISEA). It will also select new officers, discuss ongoing projects (the residential exposure assessment reference book, the distribution development document, and the Monte Carlo case book), and consider potential projects (such as a model comparison exercise to compare various exposure models and assess their overall reliability).

Exposure Assessment Specialty Group members who have contributions for the Monte Carlo case book should contact **Robert Fares** (address below) or **Paul Price** at ChemRisk, 1685 Congress Street, Portland, Maine 04102, telephone (207) 784-0012, and fax (207) 774-8263.

Anyone who would like to know more about the specialty group's activities should contact its chair, **Robert Fares**, Versar Inc., 6850 Versar Center, Springfield, Virginia 22151, telephone (703) 642-6863, fax (703) 642-6954; or secretary/

Specialty Group Seeks SRA Approval

An ad hoc working group of Society for Risk Analysis members who are interested in forming an SRA specialty group on dose-response assessment has requested approval of the SRA Council to initiate the new group at the 1994 SRA Annual Meeting. The Council is expected to discuss the recommendation when it meets in Baltimore.

The working group has held several discussions via conference calls in recent months to determine SRA's need of a dose-response specialty group and has drawn up a draft statement of purpose for the group, which was submitted to the Council.

Anyone with an interest in participating in a dose-response specialty group should contact Michael Dourson of the U.S. Environmental Protection Agency in Cincinnati, Ohio at telephone (513) 569-7533 or fax (513) 569-7916; or Helen Goeden of the Minnesota Pollution Control Agency in St. Paul at telephone (612) 296-7358 or fax (612) 296-9707.

chair-elect, **Thomas E. McKone**, Lawrence Livermore National Laboratory, P.O. Box 808, L-453, Livermore, California 94551, telephone 510-422-7535, fax 510-423-6785, e-mail mckone1@llnl.gov.

Risk Communication Specialty Group has organized symposia, platform sessions, and several poster presentations. The symposium titled "Divergent Risk Perceptions and Evaluations of Yucca Mountain: Multidisciplinary Perspectives" will begin on Monday afternoon, December 5, followed by the annual "U.S. Environmental Protection Agency Roundtable," in two parts. The third symposium, which will begin on Tuesday morning, is titled "Organizational Perspectives on Risk Communication and Pollution Prevention."

The risk communication sessions will focus on new insights into risk perception, intervention strategies, scientific uncertainty's influence on the public, issues of trust and public reliance, and risk communication education. The poster presentations are scheduled on Monday and Wednesday mornings and Tuesday afternoon.

The specialty group chair, **Ann Fisher** of Pennsylvania State University has issued a final call for nominations of materials that risk communication practitioners in industry would find most useful, including materials that have been prepared for companies but have not been published for external use. The materials, which are currently in review, will be included in a short, annotated bibliography that SRA and the Chemical Manufacturers Association will be making available (see *RISK newsletter*, Third Quarter 1994, page 7). Please

(Continued on page 16.)

U.S. Chapter News

Greater Pittsburgh Chapter

The Greater Pittsburgh Chapter recently held a mini-symposium titled "New Pennsylvania Industrial Site Re-use Legislation."

Pennsylvania is looking at ways to combine economic growth and redevelopment with industrial cleanup and restoration and has drafted new legislation to encourage cleanups for redevelopment and to clearly define liabilities for abandoned sites, explains the chapter's President Gregg Claycamp of the University of Pittsburgh's Center for Environmental and Occupational Health and Toxicology.

The symposium speakers, which included representatives from Pennsylvania's Senate Resources and Environment Committee, Department of Environmental Resources, and Environmental Council, discussed the impact of the new legislation on risk assessment and risk management goals in Pennsylvania.

New England Chapter

The New England Chapter began its 1994-95 seminar series on September 21 with a joint seminar titled "Dosemetry Modeling to Compare Cancer Potency Factors Across Dose Routes: A Case Study with Epichlorohydrin" by Gary Ginsberg of TRC Environmental Corporation and Dale Hattis of Clark University and Massachusetts Institute of Technology.

In October, the scheduled seminars were "The Identification of Human Risk Factors" by Norman Klein of the University of Connecticut and "The Need for New Methods to Back Calculate Soil Cleanup Targets in Interval and Probabilistic Cancer Risk Assessments" by David Burmaster of Alceon Corporation.

Ohio Chapter

The Ohio Chapter sponsored a seminar titled "Use of Risk Assessment in Setting Cleanup Levels in Ohio" in June. Approximately 50 representatives from state and federal agencies, industry, academia, and consultancies attended.

U.S. Chapter Contacts

Columbia-Cascades: Jim Dukelow, president, telephone (509) 372-4074, e-mail js_dukelow@pnl.gov

East Tennessee: Joe Minarick, president, (615) 481-2117, e-mail minarickj@orvb.saic.com

Greater Pittsburgh: Gregg Claycamp, president, (412) 967-6524, e-mail hgc2@vms.cis.pitt.edu

Lone Star: Ruth Thompson, secretary, (713) 586-5661

Metropolitan (CT-NJ-NY): Miriam de Salegui, president, (212) 749-7961

Michigan: Betty Locey, president, (810) 344-2663

National Capital Area: Rebecca Klemm, president-elect, (202) 667-5244

New England: Wency Koch, president, (203) 289-8631

Northern California: Tom McKone, acting secretary, (510) 422-7535, e-mail mckonel@lfnl.gov

Ohio: Jon Reid, president, (513) 558-1723

Philadelphia: Tom Ledoux, president, (609) 633-1311

Research Triangle: Annie Jarabek, president, (919) 541-4847, e-mail jarabek.annie@epamail.epa.gov

Rocky Mountain: Dennis Smith, president, (303) 933-8875

Southern California: Doug Orvis, president, (619) 592-0189

William Rish of Woodward-Clyde Consultants hosted the meeting, and the presenters included Elizabeth Rothschild of the Ohio Environmental Protection Agency, Erin Moran of the U.S. Environmental Protection Agency, Jenifer Kwasniewski of the Ohio EPA, Kathryn Mahaffey of the U.S. EPA's Environmental Criteria and Assessment Office, Teresa Bowers of Gradient Corporation, and Debra Procter of ChemRisk.

The seminar also included a panel discussion on key issues that should be addressed to improve the risk assessment process for establishing cleanup levels in Ohio. The chapter's president-elect, Jeffrey Fisher of the Armstrong Aerospace Medical Research Laboratory at Wright Patterson Air Force Base chaired the panel.

Research Triangle Chapter

The Research Triangle Chapter scheduled its annual fall symposium titled "Environmental Risk Equity: Is Life 'Fair'?" for October 31, 1994, at the Friday Center in Chapel Hill, North Carolina. The scheduled speakers included representatives from the National Sierra Club and the White House's Office of Science, Technology, and Policy

and a U.S. Environmental Protection Agency environmental justice program manager. Topics addressed were health issues, methodological issues for environmental equity, the legal system's response amidst factual uncertainty and conflicting policy, and the use of decision analysis and dispute resolution procedures to achieve environmental equity. The program also included case studies of hazardous waste facilities. For more information, contact the chapter's president (see box above).

Southern California Chapter

The Southern California Chapter has chosen "Building Bridges" as its 1994-95 program year theme. The idea of this theme is that the chapter will acquire more resources for its members by forming connections with other organizations which share common interests.

In keeping with the theme, the chapter scheduled the American Society for Quality Control's Los Angeles Chapter chair, Mitchell Locks of LG Associates, to speak at the Southern California Chapter meeting in October. His scheduled topic was "Efficient System Reliability-Confidence Assessment by Exact Methods."

SRA International Reports

Russian Intern Sponsored

In a recent communication to RISK newsletter, Vitaly A. Eremenko, organizing chairman of SRA of the Russian Federation, wrote "We have a historic opportunity to introduce risk methods in the economy, industry and politics of our country." Russia of today has inherited "extremely severe environmental problems," and interest in applying risk assessments to those problems is arising in the Far East, in Siberia, in the Arctic, and in the central and southern parts of Russia.

To seize the opportunity, the organizing committee feels that better communication among the SRA-RF chapters is imperative and has assumed the task of creating a Russian-language risk journal. As a first step, Oksana Shilova of St. Petersburg is in the midst of a three-month internship with Tec-Com Inc., the publisher of RISK newsletter, where she is studying the mechanics of the production of newsletters and/or journals. Her visit is supported both by SRA and by Tec-Com.

SRA International Sections

SRA-Europe: W. Leyens-Wiedau, Society for Risk Analysis-Europe, Procter & Gamble Company, Postfach 2503, Sulzbacher Strasse 40, D-65818 Schwalbach a. T., Germany, telephone 49 6196 89 4398, fax 49 6196 89 4476

SRA-Japan: Saburo Ikeda, Society for Risk Analysis-Japan Section Secretariat, University of Tsukuba, Institute of Socio-Economic Planning, Tsukuba, Ibaraki 305, Japan, telephone 81 2 98 53 5380, fax 81 2 98 55 3849, e-mail ikeda@shako.sk.tsukuba.ac.jp

Other SRA International Contacts

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Czech Republic: Karel Blaha of the National Institute of Public Health in Prague, Czech Republic, telephone 422 67311 467, e-mail blaha@eam.cvut.cz, fax 422 67311 236

Philippines: Corazon PB. Claudio of Technology, Environmental Risk and Management Foundation Inc. in Manila, Philippines, telephone 63 2 673 2619, fax 63 2 693 4079

Russia: Vitaly A. Eremenko of the International Centre of Educational Systems in Moscow, Russia, telephone 7 095 275 3489, e-mail vitaly@glas.apc.org, fax 7 095 882-5809

Ukraine: Naum I. Borodianskii of the V. Glushkov Institute of Cybernetics in Kiev, Ukraine, telephone 7 044 266 1558, fax 7 044 266 7418

SRA-Japan Holds Meeting

The Society for Risk Analysis-Japan will hold its 1994 Annual Meeting and Seventh Research Symposium on November 24 and 25 in the Tokyo Maritime Fire Insurance Company's Congress Hall. Five sessions to discuss the symposium's theme, "Risk Issues in Systems/Institutional Fatigue and Failure Problems," will focus on systems risk identification and its management, product liability and risk information, risk characterization and management, risk communication, and risk assessment and communication.

Saburo Kato, who currently directs the Institute of Earth-Environment and previously directed the Japanese Environment Agency's Air Pollution Prevention Bureau, will present the symposium's keynote address titled "How to Respond to Risks in the 21st Century."

Risk-Related Happenings

SRA Members Lead DOE Risk Project

Members of the Society for Risk Analysis are leading a major risk analysis project involving the cleanup of weapons production sites for the U.S. Department of Energy.

The Consortium for Environmental Risk Evaluation is under the direction of Tulane University in New Orleans, which is acting in partnership with Xavier University of Louisiana. It is composed of experts from universities and consulting firms across the nation.

"We're working to develop and apply a credible, scientific approach for interpreting available information concerning existing risks to public health, workers, or the environment," said SRA member James L. Regens, who is the consortium's principal investigator and the Freeport-McMoRan Professor of environmental policy and the director of the ENTERGY Spatial Analysis Research Laboratory at Tulane University Medical Center.

Former SRA presidents Elizabeth (Betty) Anderson of Sciences International Inc., D. Warner North of Decision Focus Inc., and Chris Whipple of ICF/Kaiser Engineers are among the senior scientists directing the qualitative risk evaluation effort.

The consortium's mission is to conduct an independent appraisal of the risks linked to the cleanup of weapons production sites.

"We are putting together guidance so that reviews are consistent and use current standards for risk assessment," Whipple said.

The Department of Energy's Office of Environmental Management will use the reports that the consortium prepares as background for its required June 1995 report to Congress describing the risks and costs associated with cleaning up the weapons complex.

New Journal on Women's Health Issues Call for Papers

A scholarly journal on women's physical health titled *Women's Health: Research on Gender, Behavior, and Policy* is currently accepting manuscripts for its first issue, which will be published in March.

Areas of interest include psychosocial and sociocultural risk and protective factors for health and illness, reproductive health, illnesses more prevalent among women, health consequences of violence against women, and prevention and health promotion intervention at the community level. "Studies that foster our understanding of the complex interrelationships among gender, ethnicity, and life-stage in the understanding of health and illness are particularly encouraged," Revenson stated.

For a copy of instructions to authors, contact Revenson by e-mail at ewh@cunyvm1.gc.cuny.edu or write to Editor, Box 335, The Graduate School & University Center, City University of New York, 33 West 42nd Street, New York, NY 10036-8099.

Risk Policy Newsletter Launched

In the premier issue of *Risk Policy Report*, editor David Clark states that "environmental risk policy is becoming a household word."

Launched by the publishers of *Inside EPA* in September, the 24-page newsletter covers risk policy issues such as the U.S. Environmental Protection Agency cancer risk characterization guidelines, risk legislation in Congress, and key studies and research.

Subscription rates for the monthly newsletter are \$295 per year in the United States and Canada and \$345 elsewhere. To subscribe, mail payment to Risk Policy Report, P.O. Box 7167, Washington, D.C. 20044.

Report Urges Better Data on Microbial Risks

The United States needs better data on microbial risks to make the nation's food supply safer, according to a report from the Council for Agricultural Science and Technology.

To order a copy of the 87-page *Foodborne Pathogens: Risks and Consequences*, which makes 15 recommendations for improvements in food safety, send \$18 to CAST, 4420 West Lincoln Way, Ames, Iowa 50014-3447, or call (515) 292-2125.

PSAM-III Issues Call for Papers For June 1996 Conference in Greece

The recently formed International Association for Probabilistic Safety Assessment and Management (PSAM) has issued a call for papers for its third conference, to be held on June 24-28, 1996, in Crete, Greece. The meeting will be held jointly with ESREL '96, the conference of the European Safety and Reliability Association.

Abstracts are due on July 1, 1995, and full texts of the selected papers must be submitted by January 1, 1996. Ab-

stracts should be mailed to the technical program committee chair: P. Carlo Cacciabue, European Commission, Joint Research Centre, Institute for Systems Engineering and Informatics, I-21020 Ispra (VA), Italy.

For more information on PSAM-III, contact Cacciabue at telephone (39) 332 789869, fax (39) 332 785813, e-mail pietro.cacciabue@cen.jrc.it; or the general program chair, Ioannis A. Papazoglou, in Greece at telephone (30) 1 6510348, Fax (30) 1 6533431. 332 785813.

Risk Legislation

(Continued from page 6.)

"In H.R. 2910 we asked risk assessors to provide the most plausible and unbiased estimate given the information they have in addition to any appropriate upper-bound estimate, which is not what happens today under existing legislation. It is critical to scientific integrity to separate the risk assessment process from the risk management process. In risk management, it may be appropriate to pick a conservative measure. But the goal of risk assessment should be an unbiased analysis and presentation of information," he said.

While neither bill became law—Congress adjourned without taking any action on H.R. 2910 and without reconciling the differences between the Senate- and House-passed versions of H.R. 3870—Kenkeremath is optimistic that risk analysis debates in Congress are helping to improve all proposed environmental bills.

"We expect all environmental legislation to include provisions for the accountability in the presentation of risk information," he said.

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natural resources program or project management; (6) ability to communicate effectively both orally and in writing. **Selective:** Must possess thorough knowledge and experience in performing human health risk assessments in accordance with EPA's Risk Assessment Guidance; must have toxicological-related coursework (please list all classes and coursework); and must be able to pass physical examination requirement in accordance with 29 CFR 1910.120. For job information, call DNREC Personnel Office at (302) 739-5823. State of Delaware applications may be obtained from and must be returned to DNREC Personnel Office, 89 Kings Hwy., P.O. Box 1401, Dover, DE 19903. Applications will be accepted between November 14 and December 14, 1994.

NOTE: You must indicate position #65382 on the application. AA/EOE



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Specialty Groups

(Continued from page 10.)

send nominations to Karen Moore at the office of the SRA Secretariat (see box at left) or to Fisher at telephone (814) 865-3143, fax (814) 865-3746, Bitnet e-mail ANF1 at PSUVM or Internet e-mail anf1@psuvm.psu.edu or.

Risk Communication Specialty Group members who would like to be included in an Internet directory for the group should send their e-mail address and telephone and fax numbers to Jon Klauenberg of Armstrong Laboratory at Brooks Air Force Base in San Antonio, Texas, at e-mail klauenberg@rfr.brooks.af.mil.

Calendar of Events

November 28-December 2. **Marine Radioactivity Risk Assessment Meeting**, Jacksonville, Florida. Hosted by the Coordinated Research and Environmental Surveillance Program of the Organization for Economic Cooperation and Development. Contact Marilyn Varela at telephone (202) 260-8704.

December 4-7. **Society for Risk Analysis 1994 Annual Meeting**, Hyatt Regency, Baltimore, Maryland (see page 1).

March 5-9, 1995. **Society of Toxicology Annual Meeting**, Baltimore Convention Center, Maryland. Contact the society at telephone (703) 438-3115.

May 21-25, 1995. **Fifth Conference of the Society for Risk Analysis-Europe**, Congress Center Stuttgart, Germany. Contact Ortwin Renn, Organizer, SRA-Europe Fifth Conference, Center of Technology Assessment in Baden-Württemberg, Nobelstrasse 15, D-70569 Stuttgart, Germany, telephone (49) 711-6783-160, fax (49) 711-6783-299, e-mail renn@afta-bw.de.

June 27-29, 1995. **Butadiene and Isoprene Health Risks Symposium**. SRA Councilor John Graham will chair the Socratic Session. Contact John Ludwig at telephone (713) 783-7511.

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