

# VEWSLETTER

**VOLUME 25, NO. 1** 

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**APRIL 1990** 

#### PRESIDENTS CORNER

The annual AEEP Executive Committee meeting was held in Washington, D.C. on 21-22 January 1990. The first day was dedicated to a review of AEEP's business activities and initiatives, while the second day consisted of visits with various agency administrators and congressional staffers. Although our deliberations were far reaching, I wish to share with you information on AEEP's activities in two important areas: (1) research funding initiatives and (2) the partnership initiative with our Latin American counterparts.

While meeting with various administrators of EPA's Office of Research and Development, our delegation was briefed on EPA's research strategy for the 1990's. We learned that EPA is targeting major research growth initiatives in four core areas: (1) ecological risk assessment, (2) human health risk assessment, (3) risk reduction, and (4) exploratory grants and academic research centers. EPA's present research annual budget in these four areas is \$115.7M which includes respective components of \$31M, 49.6M, 22.6M, and 12.5M. They are targeting a five-year growth to \$450.7M consisting of respective components of \$225M, 97.4M, 68.3M, and 60M. It is clear that EPA now views itself as a science agency as well as a regulatory agency.

Although these research initiatives are very good news, it is important that AEEP be extremely proactive in supporting EPA's initiative, both with the OMB and with Congress. Without such support, it is clear that these initiatives may never come to full fruition. Accordingly, Past-President George Tchobanoglous, Vice-President Bruce Rittmann, and I met with a number of congressional staffers serving the committees that review EPA's research missions and budgets. As a result of these meetings, we are scheduled to provide testimony before the House subcommittee on Natural Resources, Agriculture Research and Environment and the Senate Appropriations Subcommittee on VA, HUD, and Independent Agencies. We also intend to provide testimony on behalf of EPA's budget request before the House Appropriations Subcommittee on VA, HUD and Independent Agencies and the Senate Committee on Environment and Public Works.

While giving testimony before the key congressional committees is an important element in gaining approval for EPA's research funding initiatives, it is not sufficient. We were advised that it is important also to obtain grass roots support from local congressional delegations. I'll be in contact with you at the appropriate time to enlist your support in this regard.

Despite AEEP's efforts in supporting EPA's research initiatives, we suffer in two ways. That is, being a relatively small organization, we have a comparatively small voice since we do not have a large constituent base. Further, because we are a volunteer organization, we are not able to be as proactive with OMB and Congress as we might be, or should be. Consequently, we are considering establishing a coalition of the major professional organizations that deal with environmental issues; i.e., establishing a Council on Environmental Research. This would serve to give us a much larger voice, and give us a much broader base of talent and expertise that could be brought to bear on the critical research direction and funding issues of the day. The AEEP Board will discuss this concept in greater detail at its meeting to be held in Chicago on 6 May 1990. Should you have any opinions in this regard, or have any advice you wish to share, please contact me prior to that meeting.

One other issue we discussed with several EPA administrators, was the issue of the critical environmental engineering and science manpower shortages that presently exist. We were advised to meet with the EPA Administrator to present our views on this issue. I intend to meet with Mr. William Reilly in late March. I'll keep you apprised of the outcome of that meeting.

Last August, a number of AEEP members attended the first Pan American Meeting of Sanitary and Environmental Engineering Professors. You should be receiving a copy of the proceedings of this meeting in the relatively near future. The second such meeting is scheduled to be held in San Juan, Puerto Rico on **8-9 September 1990**. All interested parties are invited. Should you have an interest, please contact me so that I can keep you apprised of the arrangement, timing, and organizational details.

Ricardo Jacquez (New Mexico State) has accepted an invitation to chair AEEP's Ad-Hoc Committee on Latin American Initiatives. He is contacting various individuals to serve on the committee with him. Should you have an interest in serving on this committee, please contact him in the very near future. The AEEP Board of Directors intends to formally appoint this committee at its 6 May meeting.

One of the initial activities of this committee is to coordinate an initiative to collect teaching materials (e.g., textbooks, manuals, etc.), and distribute them to our environmental engineering counterparts in Latin America. You will be hearing more of this activity in the near future.

The next AEEP luncheon meeting of members is scheduled for **8 October 1990** in Washington, D.C. Also, AEEP again will host a reception later the same day. Please mark your calendars and plan to attend both of these events.

I wish you the best as you conclude the current academic year.

Tom Keinath President

#### **AEEP NEWS AND ANNOUNCEMENTS**

#### Engineering Science and CH2M-Hill Dissertation Awards

Entries are sought for the 1990 Outstanding Doctoral Dissertation Awards, one sponsored by Engineering Science, Inc., and the other sponsored by CH2M-Hill. Two separate but equivalent awards will be given, each consisting of a plaque and a cash prize of \$1000 for the student and a plaque and a cash prize of \$500 for the faculty advisor.

Faculty advisors wishing to compete should send two copies of the dissertation to:

Steve Randtke Civil Engineering Dept. University of Kansas Lawrence, KS 66045

A simple letter of transmittal stating the student's current address and indicating when the thesis was completed should also be included. The copies will not be returned, so xerographic copies inexpensively bound are recommended.

The deadline for submission is **June 15, 1990** for dissertations completed during the 1989-1990 academic year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of the two awards); self nominations by students will not be accepted.

Faculty advisors should also be forewarned of the customary procedure for selecting the judges. According to long-established tradition, the faculty advisors of the winning dissertations serve as the judges the following year. The winners of the 1989 awards were:

Cheng-Fan Lin, "Adsorption of Metals and Dissolution of Ferrihydrite in the Presence of Polyphosphates," under the supervision of Mark Benjamin, University of Washington.

Jacques Manem, "Interactions Between Heterotrophic and Autotrophic Bacteria in Fixed-Film Biological Processes Used in Drinking Water Treatment," under the supervision of Bruce Rittmann, University of Illinois.

Each thesis will be judged on the basis of 100 points allocated as follows:

Scientific and Technological Validity of Research — 25

Originality of Research - 25

Contribution to Advancement of Environmental Engineering and Science — 40

Clarity of Presentation (Organization) — 10

The selections will be made by **September 1, 1990** so that the winning students and faculty advisors can be invited to the AEEP luncheon at the WPCF meeting.

Stephen Randtke Chairman, AEEP Awards Committee

#### **AEEP Outstanding Paper Award**

Nominations are sought for the 1990 AEEP 1989 Outstanding Paper Award for a paper that has "withstood the test of time". Nominators should send a copy of the paper and a letter (2 pages maximum) to:

Steve Randtke Civil Engineering Dept. University of Kansas Lawrence, KS 66045

The letter should give the full citation and the reasons why the paper is a "landmark", and explain how the paper has influenced the practice of environmental engineering. A nomination cannot be made by an

author or co-author of the paper. Nominations are due **July 15**.

According to the current rules of the competition, any author on a winning paper is ineligible in the competition for a period of three years. The previous winners were:

1983	Stumm, W., of Aspects of Water Work	Coagulati	on", Jour.	Amer.
	NAME OF THE PARTY			

1984 Stumm, W., and O'Melia, C.R., "Stoichiometry of Coagulation", Jour. Amer. Water Works Assn., May, 1968.

McCarty, P.L., and Lawrence, A.W., "Unified Basis for Biological Treatment Design and Operation", J. San. Engrg. Div., ASCE, June, 1970.

1986 Dick, R.I., "Role of Activated Sludge Final Settling Tanks", J. San. Engrg. Div., ASCE, April, 1970.

Dick, R.I., and Ewing, B.B., "Evaluation of Activated Sludge Thickening Theories", J. San. Engrg. Div., ASCE, August, 1967.

1988 McCarly, P.L., "Anaerobic Waste Treatment Fundamentals", *Public Works*, September-December, 1964.

W.J. Weber, Jr., and J.C. Morris, "Kinetics of Adsorption on Carbon From Solution" and "Equilibria and Capacities for Adsorption on Carbon". J. San. Engrg. Div., ASCE, April 1963 and June 1964.

Each year the papers ranked 2, 3, and 4 are automatically considered in the next year's voting. A paper is dropped from consideration if: (a) it finishes fifth or lower in any year, or (b) it has been in competition for three years without being selected. The carryover nominations for this year's competition are:

Cleasby, J.L., and E. R. Baumann, "Selection of Sand Filtration Rates", Jour. Amer. Water Works Assn., 54, 579 (1962); and Cleasby, J.L., M.M. Williamson, and E.R. Baumann, "Effect of Filtration Rate changes on Quality", Jour. Amer. Water Works Assn., 55, 869-880 (1963). (Nominated 1989)

O'Connor, D.J. "Oxygen Balance of an Estuary", Jour. San. Engrg. Dev., ASCE, 86, SA3, 35-55 (May, 1960). (Nominated 1989)

Yao, K.M., M.t. Habibian, and C.R. O'Melia, "Water and Waste Water Filtration: Concepts and Applications", Environ. Sci. & Tech., 5, 1105-1112 (1971). (Nominated 1989)

Please take a few moments to reflect on the papers that you think have had the greatest impact on environmental engineering and consider nominating one of them for this award. Note that papers in all areas of environmental engineering, including air

pollution, water quality modeling, solid waste disposal, etc., are eligible.

Stephen Randtke Chairman, AEEP Awards Committee

### Aeep Founder's Award

The AEEP Executive Committee has recommended the establishment of an AEEP Founders' Award to recognize a maximum of one individual each year for "sustained and outstanding contributions to environmental engineering education". The Awards Committee has been asked to recommend criteria and a selection procedure; and, in the interim, nominations for the award are being sought so that an award can be made at the annual luncheon in Washington this October.

To nominate someone for this award, please send a letter of nomination by **June 15, 1990** to:

Steve Randtke Civil Engineering Dept. University of Kansas Lawrence, KS 66045

The letter should clearly describe the nature of the "sustained and outstanding contributions" the individual has made to environmental engineering education. Other letters supporting the nomination are welcome, and may be included with the letter of nomination or sent separately. A brief resume tailored to highlight the nominee's contributions should also be included.

Stephen Randtke Chairman, AEEP Awards Committee

# **AEEP/AAEE Liaison Matters**

The American Academy of Environmental Engineers held their Board of Trustees Annual Meeting in Boston on November 4-7, 1989. Of particular interest to AEEP were the actions taken on ABET accreditation criteria, the Kappe Lecturer program, professional development and creation of new member classes.

Several of the criteria for advanced level ABET accreditation for environmental engineering programs were changed. Among these was a relaxation of the requirement that only faculty who are registered professional engineers could teach courses that are listed as design courses. Paul Bishop was selected to chair the AAEE Education Committee which has the responsibility to establish ABET criteria. Faculty will therefore now have more input into decisions concerning their educational programs.

The 1990 AAEE Kappe Lecturer will be **Dr. Paul L. Busch**, President of Malcolm Pirnie, Inc. His lectures are entitled "Bench and Pilot-Scale Studies: An Integral Part of Design" and "Mitigating PCB Contam-

ination in the Hudson River". AAEE is now accepting applications for his presentations.

There is a strong push to make continuing professional development (CPD) a requirement for renewal of professional engineering licenses. AAEE has voted to begin a voluntary CPD credit reporting procedure during their annual certification renewal. The long range implications are that demands on university environmental engineering programs for environmental engineering continuing education greatly increase.

Two new membership classes have been created. One will be for Associate Diplomates who are engineers with a P.E. but do not yet have the necessary years of experience for full Diplomate status. The second is for Intern Environmental Engineers and is intended for new engineering graduates who are not yet ready to be Associate Diplomates.

Paul L. Bishop Chairman, AEEP/AAEE Liaison Committee

#### **AEEP Promotes CONSERV 90**

AEEP has decided to become a Promotional Partner for the upcoming conference entitled CONSERV 90. Slated for **August 12-15**, **1990**, CONSERV 90 will be a national conference and exposition focused on water supply solutions for the 1990's, with an emphasis on beneficial conservation and improved management solutions. The conference will be held in Phoenix, Arizona. If you are interested in obtaining more information about CONSERV 90, please write to:

CONSERV 90 6375 Riverside Drive Dublin, OH 43017.

#### **AEEP Seminars**

#### At AWWA Conference

"State of the Art in Removal of Trace Organics from Drinking Water"

> by Prof. I. H. (Mel) Suffet Drexel University

Monday, June 18, 5:15-7:15 PM Location to be announced.

#### At Purdue Industrial Waste Conference

"Expert Systems and Dynamic Modeling in Wastewater Engineering"

> by Prof Giles Patry McMaster University

Monday, May 7, 7-9 PM Purdue Memorial Union

Room to be announced

#### Deadline for September 1990 Newsletter

Please mail articles for the September issue of the AEEP Newsletter to the editor, G.D. Boardman, by **August 1, 1990**.

#### **New AEEP Editor Needed**

Gregory D. Boardman will be retiring from his position as the AEEP Newsletter editor in **December, 1990**. If you are interested in becoming the editor, please contact any one of the AEEP officers listed at the back of this publication.

# **GENERAL NEWS**

#### Free IAWPRC Memberships for Graduate Students

From revenue generated by an endowment fund, the U.S.A. National Committee (USANC) of the International Association on Water Pollution Research and Control (IAWPRC) once again will award a number of gratis one-year student memberships in IAWPRC. Included are subscriptions to Water Research and Water Quality International. Awards will be made on a first-come basis subject to the condition that not more than one graduate student from any one university be granted an award unless fewer applications than awards available are re-

ceived by the application deadline (**15 April 1990**). Graduate students wishing to be considered for such an award should have their faculty advisor nominate them in a letter directed to:

Dr. Tom Keinath USANC Chairman Environmental Systems Engineering Clemson University Clemson, SC 29634-0919

No university should nominate more than three graduate students. If more than one is nominated, the list should be prioritized. Preference is to be given to PhD students.

#### New International Journal Seeks Manuscript Submissions

A new journal entitled the International Journal of Environmental Technology and Policy research is being launched by the European Center for Pollution Research which is administratively headquartered at the University of London. This journal aims to provide an international forum for the discussion and reporting on technologies and policy issues relating to environmental pollution and its prevention. The intent is to establish an effective channel of communication between policy-makers, governmental agencies, academic and research institutions, and industrial organizations. The journal will consist of state-of-art review and refereed papers, technical notes, conference reports, book reviews, letters to the Editor, and news and briefs. The Journal is to be published quarterly beginning with the third quarter of 1990.

The Journal solicits manuscripts in the following areas:

- Review of past policies and assessment of their impact
- Strategy and framework for future policy making
- National interests in the context of formulating trans-national and international policies
- Environmental and human health
- Assessment of risks to humans from water, soil and air pollution, and the development of effective and viable remedies
- Protection and the remediation of soils and groundwater
- Environmental restoration
- Waste minimization and clean-up technologies
- Technological hazards
- The evaluation and management of environmental risk.

All individuals conducting research in any of the areas identified above are cordially invited to submit manuscripts for publication in the Journal. Manuscripts should be submitted to:

Dr. Torn Keinath Environmental Systems Engineering Clernson University Clemson, SC 29634-0919 (203) 656-5572 Fax: (803) 656-2698

#### IIE Survey Reports Over 62,000 U.S. Students Received Academic Credit for Study Abroad in 1987/88

In 1987/88 a total of 62,342 U.S. students studied abroad. This represents an increase of 13,858 (29%) since IIE conducted its first statistical survey of U.S. students who received academic credit for study abroad in 1985/86.

Europe continued to attract the largest proportion — 75%. This percentage decreased from the 80% reported in the previous survey, with slightly larger percentages of students receiving credit for study in Asia, Latin America and the Middle East — although no region outside Europe had as much as 10% of the total

The percentage of U.S. students studying abroad in liberal arts, foreign languages and social studies was almost half, while the percentage in business/management was 11%. Only 5% chose to study in engineering, mathematics/computer sciences, and physical/life sciences.

The pattern of field-of-study choices for U.S. students is in complete contrast to that of foreign students in the United States. Foreign students in the U.S. studying engineering and business/ management account for almost 40% of the total.

## Environmental Legislation Will Impede Recycling, Scrap Industry Says

Dr. Herschel Cutler, executive director of the Institute of Scrap Recycling Industries, Inc., (ISRI) in January told Congress that proposed legislation to reauthorize and extend the Solid Waste Disposal Act (RCRA) would reduce the amount of recycling done in the U.S. instead of enabling states to meet the bill's mandatory 25 percent level of recycling.

Testifying before the Subcommittee on Transportation and Hazardous Materials of the House Committee on Energy and Commerce, Cutler asserted that the underlying problem with the bill, H.R. 3735, was its definition of what is a waste product.

Cutler noted that Section 103 defines "recyclable material" so that it means material that has been diverted from solid waste for recycling, a definition supported by the scrap recycling industry. But, he pointed out, the legislation's preceding paragraph confuses the issue by defining "recycle" and "recycling" to mean "any activity or process by which solid waste is collected, separated, or processed for reuse as a raw material or product." He told the subcommittee that "if it has been diverted from solid waste then clearly it has never become a solid waste. To be a solid waste it must be destined for disposal; . .

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To obtain copies of ISRI's complete written testimony and its proposed amendment to obtain a two-year federal study of recycling, contact:

Eileen Timlin or Evelyn Haught (202) 466-4050.

## NETAC Awarded Grant by Beazer Materials and Services, Inc. to Evaluate Technologies

The National Environmental Technology Applications Corporation (NETAC) at the University of Pittsburgh has been awarded a \$50,000 grant from BEAZER Materials and Services, Inc. (BM&S), a construction materials and service company headquartered in Pittsburgh. Under the terms of the grant, NETAC will conduct an in-depth, independent evaluation of technologies for applications to the environmental challenges of the wood-treating industry.

# ASCE Announces New Standards Activity Guidelines for Artificial Recharge of Ground Water

The American Society of Civil Engineers (ASCE) Board of Direction has approved the establishment of a standards activity to develop guidelines for the artificial recharge of ground water.

ASCE's standards process is an open, consensus process. All interested persons are welcome to serve on the committee. ASCE membership is not required. ASCE rules require a balance on the committee between Producer, Consumer and General Interest Groups. Persons interested in serving on the committee should send a letter of application and a brief resume to:

Edwin Jones Director, Codes and Standards ASCE 345 East 47th Street New York, NY 10017

#### PERSONAL ACCOMPLISHMENTS

# Grady Wins ASCE Simon W. Freese Environmental Engineering Award & Lecture

**C.P. Leslie Grady, Jr.,** the R.A. Bowen Professor of Environmental Systems Engineering at Clemson University, delivered the American Society of Civil Engineers (ASCE) 1989 Simon W. Freese Environmental Engineering Lecture.

Grady delivered his lecture, "Biodegradation of Toxic Organics: Status and Potential", in July 1989 during ASCE's Environmental Engineering Conference in Austin. TX.

Throughout his career, Dr. Grady has concentrated his research and teaching on the biological treatment of wastewaters. He is a diplomate of the American Academy of Environmental Engineers and member of many professional organizations.

#### **Ghosh Receives Goodrich Chair**

The University of Tennessee Department of Civil Engineering announced the appointment of **Dr. Mriganka M. Ghosh** as the **Henry C. Go**odrich Chair of Excellence in Environmental Engineering and Professor of Civil Engineering.

#### Mihelcic Appointed as Assistant Professor

The Department of Civil and Environmental Engineering at Michigan Technological University announced the appointment of **Dr. James R. Mihelcic** as an assistant professor in environmental engineering.

#### **Noll Accepts Chairmanship**

**Kenneth E. Noll** became Chairman of the Pritzker Department of Environmental Engineering at the Illinois Institute of Technology on January 16, 1990.

# Academy of Environmental Engineers Names Officers

**David M. Benforado**, P.E., DEE was installed as President and **Joseph F. Lagnese**, Jr., P.E., DEE was installed as President-Elect for 1989-90 at the Annual Meeting of the American Academy of Environmental Engineers held in **Boston**, Massachusetts.

Benforado is a Senior Environmental Specialist in the Environmental Engineering and Pollution Control Division at 3M where he has been employed since 1969. Lagnese is a consultant and Adjunct Professor serving the University of North Carolina, Carnegie-Mellon University and the University of Pittsburgh. Previously, he founded and developed Duncan, Lagnese and Associates of Pittsburgh, an environ-

mental consulting firm. He was President of the Water Pollution Control Federation in 1972.

#### Shirmer Becomes ASCE International Contact Director

Howard A. Schirmer, Jr., was appointed International Contact Director of the American Society of Civil Engineers (ASCE) at the Society's Annual Convention in New Orleans last October. Schirmer is the managing director at CH2M-Hill International, a planning, design program and construction management firm which specializes in water management, waste management, energy and transportation.

#### New ASCE President and President-Elect

John A. Focht, Jr., was installed as the 121st president of the American Society of Civil Engineers (ASCE) at the society's Annual Convention in New Orleans in October. Focht is Chairman of the Board of Fubro-McClelland, Inc., an international, geotechnical engineering consulting firm.

Installed as President-Elect was **James E. Sawyer**. Sawyer is chief operating officer and vice president of Greiner Engineering, Inc. in Tampa, Florida.

# Ohio State Team Wins ASCE Hilgard Prize

A team of civil engineers from Ohio State University has won the American Society of Civil Engineers' (ASCE) Karl Emil Hilgard Hydraulic Prize. Keith Wilson Bedford, professor of civil engineering, Onyx Wai W.H., graduate research associate, Charles M.

Libicki, research scientist, and Robert E. Van Evra III, senior research associate, received the award for their paper dealing with the problems of measuring the effects of dredged material, scour and toxic substances. Their work presented some of the first estimates of entrainment of silty sediments as measured in Central Long Island Sound.

#### Shahin Wins ASCE Arid Lands Hydraulic Engineering Award

**Dr. Mamdouh M. Shahin**, senior scientific officer and senior lecturer at the International Institute for Hydraulic and Environmental Engineering, Delft, The Netherlands, has won the American Society of Civil Engineers' (ASCE) 1989 Arid Lands Hydraulic Engineering Award.

More than 35 years ago, Shahin began to investigate the water-balance components in several parts of a large arid surface in Africa, including the Nile River basin, and in the Arab region in the Middle and Near East. His research included collecting data on such factors as soil drainage conditions, losses by evaporation and evapotranspiration, groundwater levels, aquifer geohydrology, and streamflow.

#### **Chin Wins ASCE Collingwood Prize**

**Dr. David A. Chin**, associate professor of civil engineering at the University of Miami, Miami, FL, has been named winner of the American Society of Civil Engineers' (ASCE) 1989 Collingwood Prize. The Prize was awarded for his paper "Influence of Surface Wayes on Outfall Dilution".

Through his research, Chin determined that in shallower waters the influence of prevalent surface waves could induce sufficient dilution to justify placing outfalls closer to shore, providing significant economic savings.

#### CONFERENCES AND EDUCATIONAL PROGRAMS

# Environmental Gene Probe Workshop

Michigan State University, June 5-25, 1990

The Center for Microbial Ecology, a National Science Foundation Center for Science and Technology at Michigan State University, will conduct a four-week lecture/laboratory workshop June 5-June 25, 1990, in which the focus will be the use of gene probes in nucleic acid hybridization studies of environmental

samples. Experience in the area of molecular biology is not required. A basic background in manipulative techniques related to DNA cloning will be included. Laboratory activities will be supplemented with lectures on microbial ecology. This program is particularly oriented toward those interested in environmental sciences. Stipends covering registration, travel, and lodging are available to U.S. citizens. Interested applicants should submit a curriculum vitae stating how this course would apply to their research and career goals. Graduate students and postdoctorals should ask that two letters of recommendation be sent. Submit queries and applications to:

Gene Probe Workshop Center for Microbial Ecology 540 Plant and Soil Sciences Building Michigan State University East Lansing, MI 48824 **353-9021** 

Fax: (517) 353-2917

## **Drinking Water and Public Health**

# University of Massachusetts, May 1-2,

A conference entitled "Drinking Water and Public Health" will be held May 1 and May 2, 1990 at the University of Massachusetts, Amherst. The conference directors are Edward J. Calabrese and Charles E. Gilbert. The conference will offer major sessions on Federal regulations and control strategies and their likely public health impact for lead contamination and control, radon contamination and conmicrobes and disinfection by-products, hazardous waste sites and ground water contamination. A special session addressing the development of defensible criteria for closing contaminated wells is scheduled. Cosponsors include the U.S. Environmental Protection Agency, and U.S. Agency for Toxic Substances and Disease Registry. For general Information contact:

Charles E. Gilbert Northeast Regional Environmental Public Health Center School of Public Health University of Massachusetts Amherst, MA 01003-0081 **3**(413) 545-3164 Fax: (413) 545-4692.

For poster and exhibitor information contact:

Naomi Feger See address above **(413) 545**-3164 Fax: (413) 545-4962

#### Workshop on Industrial and Toxic **Wastewaters**

#### Kitchener, Ontario, June 11-14, 1990

There will be a Process Design Workshop on Industrial and Toxic Wastewater Management with W. Wesley Eckenfelder, Jr. and Norbert W. Schmidtke, June 11-14, 1990, Kitchener, Ontario, Canada. A practical, applications oriented workshop with stateof-the-art technology and hands-on problem solving. Contact:

Lyn James CHI 36 Stuart St... Guelph, Ontario CANADA N1E 4S5 **(519)** 767-0197 Fax: (519) 744-4282.

# **PUBLICATIONS AVAILABLE**

#### Old Journals Available

Edward Thackston and Frank Parker of Vanderbill University have a number of old journals (WPCF, AWWA, various ASCE journals, Health Physics) that they would be happy to make available to anyone who will pay the freight charges. Their preference would be to give them to a school where an AEEP member is working, but which does not have back issues of the pertinent journals.

If interested, please call Dr. Thackston at (615) 322-7311 for further detoils.

## Infrastructure, Environmental Issues **Headline New Policy Brochure**

Issues such as the Clean Air Act, Infrastructure Financing and the National Space Policy are among 18 topics scheduled for focus and review by the American Society of Civil Engineers (ASCE) this year. These topics, part of the 1990 Priority Issues Agenda, are outlined in ASCE's summary booklet Policies

and Priorities 1990, which can be obtained free of charge by writing to:

Policies and Priorities **ASCE** Washington Office 1015 15th Street, NW Suite 600 Washington, DC 20005

#### New "Water Encyclopedia" **Published**

The second edition of The Water Encyclopedia has been published. The first edition was selected as "One of the Outstanding Reference Books of the Year" by the American Library Association, and as "One of the Outstanding Academic Books of the Year" by the Association of College Research Librories.

The second edition of The Water Encyclopedia by Frits van der Leeden, Fred L. Troise, and David Keith Todd, is over 800 pages long and contains 630 tables and 112 diagrams and maps. Copies may be ordered from:

Water Information Center, Inc. 125 E. Bethpage Rd. Plainview, NY 11803 (516) 249-7600

Price: \$128 (includes postage and handling)

#### Environmental Publications by Tektran

Cold Regions Environmental Engineering, Proceedings of the Second International Conference, Edmonton, Alberta 1987 (eds. D.W. Smith and T. Tilsworth) ISBN-0-921721-00-5. (p. 396 \$35.00)

To order, write:

Tektran International Inc. 259 King St. W Kitchener, ON, Canada N2G 1B1 Fax: (519) 744-4282

The Role of Ozone in Water and Wastewater Treatment, Proceedings of the Second International Conference, Edmonton, Alberta 1987 (eds. D.W. Smith and G.R. Finch) ISBN 0-921721-01-3. (p. 352 \$45.00). Also available from Tecktran.

Scale-up of Water and Wastewater Treatment Processes, First International Workshop, Edmonton, Alberta 1983 (eds. N.W. Schmidtke and D.W. Smith) ISBN 0-250-40638-1. (p. 447 \$45.00)

To order, write:

Norbert W. Schmidtke & Assoc. Ltd. 259 King St. W, Kitchener, ON, Canada N2G 1B1. Fax: (519) 744-4282

#### **EMPLOYMENT OPPORTUNITIES**

#### **Arizona State University**

The Department of Civil and Environmental Engineering Arizona State University invites applications for assistant or associate professorships in the area of environmental engineering. The candidate must have a Ph.D. with emphasis in environmental engineering with a major emphasis in one of the fields such as: biological and or physical/chemical treatment and design; industrial/hazardous/solid waste; or environmental engineering systems.

Duties include: development of funded research activity including graduate student supervision, graduate and undergraduate teaching, and college, university and professional community service.

Candidates should have a well-established record or an outstanding potential for research and teaching excellence. Applicants are sought who will provide a significant contribution to the development of the department. These positions are tenure-track. Salary will be commensurate with experience and qualifications.

ASU enrolls over 42,000 students and is located in the Phoenix metropolitan area. The Department of Civil Engineering has 20 full-time faculty, 200 undergraduate and 90 graduate students, and approximately \$1.7 million in research activity. The undergraduate program in civil engineering is fully accredited by ABET.

Interested persons should send a resume, transcript and names of three references to:

Professor P.F. Ruff Search Committee Chair Department of Civil Engineering Arizona State University Tempe, Arizona 85287-5306

#### **University of Central Florida**

The Department of Civil Engineering is seeking qualified applicants for at least one position. We are considering two areas, namely: (1) Geotechnical with capabilities in modeling groundwater contaminant transport, and (2) Air Quality/Transportation with capabilities in dispersion modeling. The Department has 14 full-time faculty, approximately 250 undergraduate and 90 graduate students, and is enjoying enrollment growth. The Department is active in sponsored research with over \$1.5 million dollars in current funding. UCF, with a current enrollment in excess of 18,000 students, is one of the nine campuses in Florida's State University System. The UCF College of Engineering has over 3500 students in 6 academic departments. The Department offers BSE, MSE, and PhD degrees in both areas. UCF is located in the greater Orlando area, which was recently rated as one of the 10 best U.S. cities to live in by a national magazine. The applicant must have an earned doctorate or show evidence that it is imminent. Registration as a Professional Engineer or the ability to become registered is required.

Applicants should submit a letter of interest and a resume to:

Martin P. Wanielista, Ph.D., P.E. Chair, Search Committee University of Central Florida C.E.E. Department 4000 Central Florida Blvd. Orlando, Florida 32816-0450 (207) 275-2841 (207) 281-5483

The University of Central Florida is an Equal Opportunity, Affirmative Action Employer. As an agency of the State of Florida, the University makes all applications materials and the selection procedures available for public review.

#### **University of Illinois**

The Department of Civil Engineering of the University of Illinois at Urbana-Champaign seeks applications for a tenure-track position in the Environmental Engineering area at the Assistant Professor level, although a higher rank may be considered in exceptional cases. Applicants should have a Ph.D., or be in the process of completing the requirements for it, and should have a strong background in the physical, chemical and/or biological aspects of water quality control processes. The successful candidate will be able to initiate and conduct a program of research and development in areas such as drinking water treatment, industrial or municipal wastewater treatment, or hazardous waste treatment. Expertise in applications of artificial intelligence or the mathematical modeling of unit processes is of particular interest.

The successful candidate will be expected to teach at the undergraduate and graduate levels in the environmental engineering area of civil engineering. The salary will depend upon qualifications.

The position is available beginning August 21, 1990, or thereafter. Priority will be given to applications received by March 15, 1990. applications, including names and addresses of at least 3 references, should be addressed to:

Professor W. J. Hall, Head
Department of Civil Engineering
University of Illinois
at Urbana-Champaign
1114 Newmark Civil
Engineering Laboratory
205 North Mathews Avenue
Urbana, IL 61801
\$\alpha\$(217) 333-3927
Fax: (217) 333-9464

The University of Illinois at Urbana-Champaign is an equal opportunity/affirmative action employer.

# Illinois Institute of Technology

The Pritzker Department of Environmental Engineering at the Illinois Institute of Technology announces

the availability of a tenure-track faculty position. The area of specialization is open, however, the candidate should complement and have the ability to cooperate with faculty with current interests in water and wastewater treatment, environmental chemistry. hazardous waste management, air resources, and environmental assessment. The successful candidate is expected to teach graduate courses and develop a research program in cooperation with other faculty. The department has six full time faculty, and 30 full time and 50 part time graduate students. IIT is the site of the USEPA-supported Industrial Waste Elimination Research Center. III and its sister research organization, the IIT Research Institute, form the midwest's largest private center for research and development.

Applicants should forward their curriculum vitae and the names and addresses of three referees to:

Professor Charles N. Haas Pritzker Department of Environmental Engineering Illinois Institute of Technology 3200 South State Street Chicago, IL 60616

Applications will be accepted until the position is filled. *Illinois Institute of Technology is an AA/EO employer.* 

#### **University of North Carolina**

The Department of Environmental Sciences and Engineering of the University of North Carolina at Chapel Hill announces a tenure track faculty position. Responsibilities include: feaching, guidance of araduate students, research, and involvement in all academic activities of the Department. Requirements for consideration include: a doctoral degree, a bachelors degree from an accredited engineering program, and research experience in surface water hydrology and water quality modeling. Examples of such research include: watershed management and protection; nutrient cycling in lakes and estuaries; modeling the fate and transport of hazardous materials in surface waters. Review of applications will begin on 2 January 1990; applications will be considered until the position is filled. Send statement of interest, curriculum vitae, and names of three references to:

Dr. Edward J. Kuenzler Search Committee Chairman 109 Rosenau Hall CB#7400 University of North Carolina Chapel Hill, NC 27599-7400

The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Women and minorities are invited to apply and identify themselves.

# **APPLICATION FOR MEMBERSHIP**

# in the Association of Environmental Engineering Professors

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