



## **PRESIDENT'S CORNER**

In February of this year, the sixth edition of the Register of Environmental Engineering Graduate Programs was published. On behalf of the board of AEEP I extend my thanks to all of the members who took time from their busy schedules to fill out the necessary forms. The register is already a best seller and second printing has been ordered. Bill Knocke and Gary Amy, who compiled the register, deserve a round of applause for a job well done. Additional copies of the register can be obtained from Des Lawler.

The Executive Committee of AEEP held its annual meeting in Washington, D.C. on February 26, 1989. On Monday the 27th, we took advantage of being in Washington to visit with EPA, various congressional staff persons, NSF, and WPCF. The principal objectives of the meetings with EPA and congressional staff persons were to express the concerns of AEEP's membership with the limited availability of funding for investigator-initiated grants and to offer any assistance that might be of help in increasing the budget for the Office of Exploratory Research. In follow-up letters written to the congressional staffers with whom we visited, the initiative to increase the EPA budget for support of the peer-reviewed grants program was endorsed. Specifically, it was noted that the principal benefits to be derived from this program are:

- "The Exploratory Research Grants Program allows for the advancement of basic scientific information that is essential for the development of practical and cost-effective engineering solutions to environmental problems."
- "The Exploratory Research Grants Program helps to foster a diversity of scientific inquiry while at

the same time serving to train the professionals required to address our environmental needs."

The meetings with NSF and WPCF were primarily informational, dealing with issues of mutual concern, including funding (at NSF) and the new research journal (at WPCF).

Means of improving the effectiveness of the organization were also discussed at the meeting of the executive board. We will keep you apprised of any developments in this area. In the meantime, we welcome any suggestions you might have on how AEEP can be more effective in serving the membership.

Preparation of the AEEP history is progressing and, if all goes well, the printed volume should be available on or before the WPCF meeting in San Francisco. We have been contacted by the Pan American Health Organization about the possibility of developing a working program between AEEP, PAHO, and AID and our Latin American counterparts. We will keep you informed of any developments as we explore the options for effective interactions.

It has been called to my attention that many environmental engineering professors have stopped participating actively in the Standard Methods committee process. Notwithstanding the travails of committee work, I encourage all of you to participate and become more active in getting several of the methods that are now being used as "standard" into the next edition. I also encourage you to attend the Purdue Industrial Waste Conference and the AEEP Workshop in early May.

George Tchobanoglous  
President

# AEEP NEWS AND ANNOUNCEMENTS

## AEEP Workshop — Biological Processes in Drinking Water Treatment

**1989 AWWA Annual Conference, Los Angeles, California**

Biological processes have the potential to remove pollutants that may be ineffectively removed by conventional treatment, such as biodegradable organics, synthetic organic compounds, ammonia, nitrate, iron, and manganese. Bio-oxidation of organic matter and ammonia decreases available substrates for microbial regrowth in distribution systems, reduces taste and odors, and decreases the amount of precursor available to form disinfection by-products. Biological removal of certain contaminants could extend the service time or capacity of subsequent physicochemical processes. In U.S. water treatment, the practice is often to impair or preclude development of biological activity. Nevertheless, use of biological treatment to provide a safe and high quality drinking water is becoming relatively common in other parts of the world, especially in Western Europe. Information on biological process fundamentals pertinent to drinking water and European experience will be presented at this AEEP Workshop.

### 1. Overview and Principles

Edward J. Bouwer  
Geography and Environmental Engineering  
The Johns Hopkins University  
Baltimore, Maryland 21218

### 2. European Experience

Peter M. Huck  
Dept. of Civil Engineering  
University of Alberta  
Edmonton  
Canada T6G 2G7

## Engineering Science and CH2M-Hill Dissertation Awards

Entries are sought for the 1989 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 thesis to Dr. Stephen J. Randtke, Civil

Engineering Department, University of Kansas, Lawrence, KS, 66045. The deadline for submission is **June 15, 1989**, and the thesis must have been completed during the 1988-1989 academic year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of the two awards).

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 theses serve as the judges for the following year. The winners of the 1988 awards were:

- James R. Mihelcic, "Microbial Degradation of Polycyclic Aromatic Hydrocarbons under Denitrification Conditions in Soil-Water Suspensions," under the supervision of Richard G. Luthy, Department of Civil Engineering, Carnegie Mellon University.
- John E. Tobiason, "Physicochemical Aspects of Particle Deposition in Porous Media," under the supervision of Charles R. O'Melia, Dept. of Geography and Environmental Engineering, The Johns Hopkins University.

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, 1989 so that the winning students and faculty advisors can be invited to the AEEP luncheon at the WPCF meeting.

## AEEP Outstanding Paper Award

Nominations are sought for the 1989 AEEP Outstanding Paper Award for a paper that has "withstood the test of time". Nominators should send a letter (2 pages maximum) to Dr. Stephen J. Randtke (Department of Civil Engineering, University of Kansas, Lawrence, KS 66045) giving the full reference and the reasons why the paper is considered a "landmark" and explaining how it 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., and Morgan, J. J., "Chemical Aspects of Coagulation", *Journal of the American Water Works Association*, 54, 8, 971-992 (August, 1962).
- 1984 — Stumm, W., and O'Melia, C. R., "Stoichiometry of Coagulation", *Journal of the American Water Works Association*, 60, 5, 514-539 (May, 1968).
- 1985 — McCarty, P. L., and Lawrence, A. W., "Unified Basis for Biological Treatment Design and Operation", *Journal of the Sanitary Engineering Division, ASCE*, 96, SA3, 757-778 (June, 1970).
- 1986 — Dick, R. I., "Role of Activated Sludge Final Settling Tanks", *Journal of the Sanitary Engineering Division, ASCE*, 96, SA2, 423-436 (April, 1970).
- 1987 — Dick, R. I., and Ewing, B. B., "Evaluation of Activated Sludge Thickening Theories", *Journal of the Sanitary Engineering Division, ASCE*, 93, SA4, 9-29 (August, 1967).
- 1988 — McCarty, P. L., "Anaerobic Waste Treatment Fundamentals", *Public Works*, 95, 9, 107-112; 10, 123-126; 11, 91-94; 12, 95-99 (September-December, 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 only carryover nominations for this year's competition are:

Weber, W. J., and Morris, J. C., "Kinetics of Adsorption of Carbon from Solution", *SED, ASCE*, 89, SA-2, 31-55 (April, 1963). **Nominated 1988.**

Weber, W. J., and Morris, J. C., "Equilibria and Capacities for Adsorption on Carbon", *SED, ASCE*, 90, SA-3, 79-105 (June, 1964). **Nominated 1988.**

The Awards Committee consists of a voting Chairman with a three-year term and six members each with a rotating three-year term. The Chairman is appointed by the President of AEEP. The two new committee members are appointed each year by the Chairman. Each term starts at the end of the Annual WPCF Conference. The current Committee is:

Stephen J. Randtke, Chairman, term ends 1991  
Perry L. McCarty, term ends 1989  
Richard I. Dick, term ends 1989  
Edward J. Bouwer, term ends 1990  
Jack L. Cleasby, term ends 1990  
Mackenzie L. Davis, term ends 1991  
Jon C. Liebman, term ends 1991

Any Committee member who is an author or co-author of a nominated paper will refrain from voting on that paper.

The current Committee has been asked to consider whether any changes should be made in the nomination process or in the selection process. Suggestions from the AEEP membership are most welcome and should be conveyed (preferably in writing) to the Chairman of the Awards Committee.

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 modelling, solid waste disposal, etc., are eligible.

## Nominations Requested for 1990 AEEP Lecturer

Nominations are being sought for the 1990 Distinguished Lecturer tour. If you wish to nominate a speaker for consideration, please contact Dr. Fred Pohland at the Dept. of Civil Engineering, 1141 Benedum Hall, University of Pittsburgh, Pittsburgh, PA 15261-2294 (☎ 412-624-1880). Nominations are due no later than **June 1**.

## Emeritus Member Nominations Sought

The AEEP Board of Directors typically elects members to the status of Emeritus Member at its fall meeting. The Board wishes to solicit nominations for Emeritus Member status. Our by-laws read "Upon retirement, an AEEP member who has been active in the Association may be nominated by a member for the grade of Emeritus Member...The Emeritus Membership shall continue for the life of the member and all dues will be waived." If you wish to nominate any member who has recently retired, please send your nomination to Bill Knocke, our AEEP Secretary, as soon as possible.

## AEEP Committee Assignments

Committee	Chairperson
AEEP Liaison	Paul Bishop
AWWARF Liaison	Jim Edzwald
Archives	David Hendricks
Arrangements	Tom Keinath
Audit	John Ferguson
Awards	Steve Randtke
Computer Software	J. B. Neethling
Distinguished Lecturer	Makram Suidan
Education	Bill Batchelor
1990's Education Conference	Robert Baillod
Enrollment Survey	Bill Ray
Legislative Analysis	Ray Letterman
Membership	Bill Knocke
Newsletter	Greg Boardman
Nominating	Dick Luthy
Publications	Desmond Lawler
Register	Bill Knocke

Relations with USANC  
Sustaining Member Liaison  
WPCF Liaison  
Water Quality 2000  
Hazardous Waste Curriculum Survey

Tom Keinath  
Bill Knocke  
Walter Weber  
Walter Weber  
Mark Benjamin

## Deadline for the September 1989 Newsletter

Please mail articles for the September issue of the AEEP Newsletter to the editor, G. D. Boardman, by August 1, 1989.

## GENERAL NEWS

### AEE Certification

The American Academy of Environmental Engineers (AAEE) is a group of highly qualified professional engineers who have imposed self-testing and review for entry qualification. The Academy is an active participant in the accreditation of environmental engineering curricula, ensuring that educational standards are responsive to the needs of the professional. Thus, the activities of the Academy should be of major interest to all environmental engineering educators.

The Association of Environmental Engineering Professors is a sponsoring organization of the American Academy of Environmental Engineers. Each sponsoring organization of the Academy may submit a list of not more than five (5) of its qualified members for consideration by the AAEE Board for certification.

The candidates must meet the following AAEE criteria:

1. B.S. in engineering or a related field.
2. Professional Engineer's license.
3. Professionally engaged on a full-time basis.
4. Must have at least fifteen (15) years of environmental engineering experience in one or more of the specialty fields. Eleven (11) of the fifteen (15) years shall be in responsible charge, which work must include active participation with responsibility primarily in one or more fields of environmental engineering.

Candidates' applications will be reviewed to see that all criteria are met and then presented to the AEEP Board for approval. The Board-approved applications will be submitted with a letter of transmittal to AAEE for consideration by the Academy Review Committee and Board.

Any active AEEP member in good standing who meets the above criteria is eligible for nomination. All applications should include letters of endorsement from three AEEP members who are familiar with the candidate's achievements. Consideration shall be given to the record of service to AEEP.

Note that any AEEP members meeting the criteria may apply directly to the Academy for membership, and acceptance is conditional on an oral examination. In addition, any members that do not have the

experience noted above but have eight or more years experience in this field can apply directly to the Academy, and acceptance is conditional on a written and an oral examination. The Academy address and telephone number is:

American Academy of Environmental Engineers  
132 Holiday Court, Suite 206  
Annapolis, MD 21404  
☎ (301) 266-3311

Qualified AEEP members wishing to be sponsored as a nominee of AEEP or desiring more information should apply directly to the AEEP-AAEE Trustee, Dr. Paul L. Bishop, Department of Civil and Environmental Engineering, ML 71, University of Cincinnati, Cincinnati, Ohio 45221.

### Student Memberships in IAWPRC

The International Association on Water Pollution Research and Control (IAWPRC) has a graduate student membership classification that costs only \$28 per year. Since this enables them to receive subscriptions to both *Water Research* and *Water Quality International*, many may wish to avail themselves of this inexpensive opportunity to begin building their personal professional library. It is requested that environmental engineering faculty make this known to their graduate student body, and encourage them to join IAWPRC. An appropriate number of application blanks can be obtained by contacting Prof. T. M. Keinath either by mail (Department of Environmental Systems Engineering; Clemson University; Clemson, SC 29634-0919), or telephone (☎ 803-656-5572).

### Reorganization of NSF's Engineering Directorate

The National Science Foundation's Engineering Directorate was restructured on March 12, 1989. The new Division designations in the Engineering Directorate are: Chemical and Thermal Systems, Electrical and Communications Systems, Mechanical and Structural Systems, Design and Manufacturing Systems, Biological and Critical Systems, and Engineering Centers.

The Environmental Engineering Program was re-named Environmental Systems, one of two "catego-

ries" in the new Environmental and Ocean Systems Program. The section of the Biological and Critical Systems Division within which this Program is located is named Bioengineering and Environmental Systems, and includes three other programs, viz. Biochemical Engineering, Biotechnology, and Biomedical Engineering and Aiding the Disabled. The other section in the Division of Biological and Critical Systems is made up of the Earthquake Hazard and the Natural and Man-Made Hazard Mitigation Programs.

The Director of the Biological and Critical Systems Division is Dr. Robert D. Hanson. The Head for the Bioengineering and Environmental Systems Section is Dr. Duane F. Bruley. Program Directors in the Environmental and Ocean Systems Program are: Dr. Edward H. Bryan (Environmental Systems) and Dr. Norman Caplan (Ocean Systems). The Assistant Director for Engineering is Dr. John A. White and his Deputy is Dr. Carl W. Hall.

## **Request for Information About Applications of Radiation Energy in Environmental Engineering**

The American Society of Civil Engineers' (ASCE) Task Committee on Radiation Energy Treatment of Water and Wastewater met on January 18 in Emeryville, California. Committee Chairman is Paul Kruger, Professor Emeritus of Nuclear Civil Engineering at Stanford University. Control Group members present and their topic assignments are: S. B. Ahlstrom, Water and Wastewater Division Manager, CH2M Hill, Denver (Gamma Radiation); E. H. Bryan, National Science Foundation (High Energy Electron Radiation); Dale A. Carlson, School of Engineering, University of Washington (Ultraviolet Radiation); Richard I. Dick, Dept. of Civil Engineering, Cornell University (X-Ray Radiation).

The Committee plans to complete a preliminary draft of a report for discussion at a Committee meeting during the 1989 ASCE National Conference on Environmental Engineering in Austin, Texas (July 10-12, 1989). Any contributions by members of AEEP to the Control Members of the Task Committee that will assist them in compiling a summary of the state-of-the-art of radiation energy treatment of water and wastewater and other appropriate applications in environmental engineering practice are welcome.

## **Annual American Institute of Chemical Engineers (AIChE) Environmental Division Student Award**

### **Call for Papers**

1st Place — \$300.00  
2nd Place — \$200.00

3rd Place — \$100.00

Certificates and awards will be presented at the Summer National AIChE Meeting to be held in Philadelphia, Pennsylvania on August 20-23, 1989. The AIChE will also provide the 1st place winner with the lowest cost airfare and two (2) days accommodation for attendance at the awards presentation. In addition, the paper is intended for publication in *Environmental Progress*.

Contest entry rules:

1. The work must be a first paper (i.e., report on original unpublished work).
2. The paper must report on research or investigation related to an environmental program.
3. The author must be the sole author and must be a full-time undergraduate student in a school with an accredited chemical engineering program.
4. The student author must be a member of the student chapter of AIChE.

Submit manuscript with cover letter by **May 14, 1989**, to the Second Vice Chairman of the Environmental Division:

Dr. Joseph J. Cramer  
Stone & Webster Engineering Corporation  
245 Summer Street - 11th floor  
Boston, MA 02107

## **Southerly Wastewater Treatment Center Nominated for ASCE Engineering Achievement Award**

The Southerly Wastewater Treatment Center, located in the Cleveland suburb of Cuyahoga Heights, Ohio, is one of 13 projects nominated for the American Society of Civil Engineers' (ASCE) 1989 Outstanding Civil Engineering Achievement Award (OCEA).

The OCEA award recognizes engineering projects that demonstrate the greatest engineering skills and represent the greatest contribution to civil engineering progress and mankind. The winning project and awards of merit will be named in April 1989 at the Society's Board of Direction meeting.

In continuous construction for 13 years, the Southerly Wastewater Treatment Plant is the largest in Ohio and one of the ten largest advanced treatment facilities in the United States. It has an average design flow of 200 million gallons a day (mgd) and a stormwater flow capacity of 735 mgd.

## **ASCE Announces Priority Issues**

The American Society of Civil Engineers (ASCE) recently published the summary of ASCE Board-adopted policy statements, position papers, and

