

NEWSLETTER

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PRESIDENT'S CORNER

Professor Erman Pearson, the first President of AEEP, passed away on August 30. Professor Jerry Thomas, Chair of the Sanitary Group at Berkeley has prepared a dedication for "Erm" which lists his many contributions to our profession. As one of Erm's students, I feel especially honored to have been selected as president of AEEP. I will do my best to honor his memory by executing the duties of the office in a manner which would meet with his approval.

The passing of our first president should remind all of us of the debt that we owe to the founders of our Association. We are planning a "silver" anniversary celebration at the WPCF conference in Dallas in 1988 both to celebrate our 25th birthday and pay our respects to those courageous professors of 1963 who were able to forsee the need for an Association such as ours and were willing to devote their energies to its formation. Joe Malina has agreed to serve as chairman of the organizing committee for this event and will be calling on several of you for assistance.

In addition to being president of AEEP, Erm was also a founding member and president of our international associa-

tion, IAWPRC. AEEP has always exerted strong leadership in international water pollution control activities and I know that Erm and our other founders would wish us to retain this role. I would like to urge all AEEP members to join IAWPRC and become active in its affairs. Tom Keinath is the Secretary-Treasurer of the USA National Committee (USANC) for IAWPRC. Please get in touch directly with Tom or any of the other USANC officers if you would like to participate in international activities.

A most important event for our profession is the Fifth Conference on Environmental Engineering Education which will be conducted on the campus of Michigan Tech, July 21-23, 1986. Bob Baillod, chairman of the conference planning committee, will be sending each of you more information as the conference develops. This is a critical time for many of our programs and all AEEP members are urged to come to the conference and present their ideas on the course that environmental engineering education should follow in the future.

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DEDICATION

PROFESSOR ERMAN A. PEARSON (1920-1985)

Emeritus Professor E. A. Pearson from the the University of California, Berkeley died Saturday, August 31, 1985 as the result of a lingering heart problem. He was a Civil Engineer and a well recognized international authority on water and water pollution. He is survived by his wife Ernestine; daughter Diane Pearson-Petty; and brother Alvin Pearson.

He was born and raised in the state of Washington with an early introduction to sanitary engineering; his family owned and operated a small potable water distribution system. He received a B.S. in Civil Engineering from the University of Washington, 1946; a Master of Science Degree from the Massachusetts Institute of Technology in 1947; and a Doctorate degree in Sanitary Engineering from the same institute in 1949. At the completion of his academic training he immediately joined the faculty in Civil Engineering on the Berkeley Campus of the University of California. He rose rapidly in the academic ranks progressing from Assistant to full Professor and holding the Chairmanship of the Sanitary/ Environmental Division for many years in the latter part of his tenure. In addition to his academic career he was active as a Consulting Sanitary Engineer. Because of a debilitating

heart condition he was forced into early retirement from his academic position in 1981 but maintained an active interest in the consulting area until his death.

Professor Pearson's major research in the academic area was primarily concerned with water resources quality management in the area of water and waste water treatment and technology. A specific fundamental research was directed toward the filtration of waters, utilizing electronic particle counters which gave new insights into the problems and control in aquatic colloidal chemistry. He was a pioneer in the particulate aqueous systems measuring mass and area of submicron size particles.

A major interest in the consulting area was marine water quality control, specifically, eutrophication kinetics. His expertise in the area of marine pollution started with the comprehensive study of the San Francisco Bay in the 1950's, continuing through the 60's coupled with his participation in the Southern California Coastal Water Research Project in the 1970's. This work represents a unique mix of quantitative ecological studies,

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PRESIDENT'S CORNER

The Education Conference is jointly sponsored by AEEP and the American Academy of Environmental Engineers (AAEE). It thus provides those of us in universities an excellent opportunity to engage in discussions with our fellow professionals in practice. It is hoped that these discussions will result in more cooperative efforts in teaching, research, and practice by AEEP members and practicing environmental engineers. So that this can be a continuing dialog, AEEP has created a sustaining membership category for those not affiliated with universities and I would like to urge each of you to contact practitioners with whom you are acquainted and urge them to join us in our endeavors to improve environmental engineering education.

I am looking forward to serving as your president for the coming year. Ours is a small Association so please feel free to get in touch with me directly on any issue which you feel AEEP should address.

John F. Andrews, President

DEDICATION

relevant economics and practical civil and sanitary engineering. This work provided the major scientific/technological basis on which Congress passed an amendment to the Federal Water Pollution Act related to design and operation of ocean outfalls.

His experience brought him to London in 1962 to Chair the Marine Waste Disposal Section's First International Conference on Water Pollution Research and to Japan in 1964 to Chair the Second International Conference. He was a Senior Fulbright Research Scholar at the University of Oslo, Norway in the academic year 1962-63; Charter member and first President of the Association of Environmental Engineering Professors; and Founding member and President of the International Association for Water Pollution Research and an Honorary life member of this Association.

Acknowledgement

AEEP thanks Professor J. F. Thomas for preparing this dedication.

AEEP NEWS AND ANNOUNCEMENTS

New AEEP Board and Officers Elected

The AEEP general membership elected three new members to serve on the AEEP Board of Directors for the 1986-1988 three-year term. Because of the recently approved change in the AEEP By-laws their terms began with the October General Membership meeting at the WPCF Conference. The directors are:

- E. Robert Baumann, Professor of Civil Engineering, lowa State University
- Desmond F. Lawler, Associate Professor of Civil Engineering, University of Texas at Austin
- Richard G. Luthy, Professor of Civil Engineering, Carnegie-Mellon University.

The AEEP Board elected John Andrews as the new President of AEEP. The new Vice President is Bob Baumann and Bill Batchelor will continue to serve as Secretary-Treasurer.

Special thanks are extended to the members leaving the Board: John Crittendon, **Mike Saunders**, and Vern Snoeyink. Mike Saunders will continue to serve as Past President for the coming year.

Distinguished Lecture Tour

The Distinguished Lecturer for 1986 is Professor Donald J. O'Connor. Requests for hosting Professor O'Connor have been received by the Distinguished Lecturer Committee. It is anticipated that an itinerary for Professor O'Connor will be announced in early January.

Engineering Science, Inc./AEEP Award for the Best Doctoral Thesis Relevant to Environmental Engineering Practice

AEEP members are invited to submit Ph.D. theses completed under their supervision during the 1985-1986 academic year (dated June 1, 1985-May 31, 1986) for competition for the above award. The award is a certificate and a \$1,000 prize for the Ph.D. Candidate and a certificate and a \$1,000 prize for the faculty research advisor. For a thesis to be eligible it must be completed by the above dates and one copy must be received by Mr. Jack Pratt, Engineering Science, Inc., 125 West Huntington Drive, Arcadia, California 91106, prior to June 15, 1986. The judging panel for the award consists of Prof. Walter J. Weber, Jr., University of Michigan, Prof. Yavuz Corapcioglu, City College of New York and a member from Engineering Science, Inc. Each thesis is 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 award will be presented at the AEEP Meeting to be held during the WPCF 58th Annual Conference in Los Angeles, October, 1986.

Fifth Conference on Environmental Engineering Education Houghton, Michigan, July 21-23, 1986

Preparations are moving along for the Education Conference to be held on the Campus of Michigan Technological University, July 21-23, 1986. This Conference will provide an opportunity for critical discussion of crucial issues facing Environmental Engineering Education in the areas of computers, integrated approaches, design and operation. Moreover, the July date, coupled with the University setting at Houghton, Michigan, along the beautiful southern shore of Lake Superior will provide excellent opportunity for combining professional and vacation activities.

The Conference will deal with environmental engineering education at both the advanced undergraduate and graduate levels; however, special attention will be given to the M.S. level as preparation for research and professional practice. Research is an integral part of both the environmental engineering profession and graduate education at the masters and doctoral levels, and, because of this, research issues are deeply imbedded in the conference fabric. The Conference will be the fifth in a series co-sponsored by the American Academy of Environmental Engineers (AAEE) and AEEP. Previous Conferences were held at Harvard in 1960, Northwestern in 1967, Drexel in 1973, and Toronto in 1980.

The focal issues and corresponding Task Committee Chairmen of the Conference are:

- Role of Computers in Environmental Engineering Education and Research John C. Crittenden, Michigan Technological University
- Integrated, Air, Water, Land Approaches in Environmental Engineering
 - P. Mac Berthouex, University of Wisconsin, Madison
- Role of Design and Operation in Environmental Engineering Education

Davis Ford, Engineering Science.

Task Committees have prepared initial and second drafts of position papers on each focal issue. These papers were reviewed at a Conference Planning Symposium held in Houghton on August 21-22. Additional review and discussion took place during Task Committee meetings held at the Kansas City WPCF Conference. It is planned that the Position Papers will be completed and distributed to the membership of AAEE and AEEP during April. Substantial partial financial support for the Conference has been obtained via grants from the National Science Foundation (\$30,000) and the Michigan Technological University Century II Campaign (\$14,000).

The format of the Conference will be similar to that of previous education conferences with summaries and initial disucssion of the position papers on the first day, expanded Task Committee sessions on the afternoon of the second day, and a plenary session to discuss and vote on the Task Committee Recommendations on the morning of the third day. However, a new twist has been added on the second day. The Task Committees have arranged concurrent Forums to discuss and demonstrate approaches to the sub-issues raised in the position papers.

The Computer Group has effectively built on the nearly two years of work put in by John Crittenden's AEEP Software Committee and plans to release the AEEP Software Manual at the Conference. That group will sponsor a Teaching Forum as well as a Research Forum featuring several presentations on computer applications. In addition, the afternoon of the second day will feature a SOFTWARE EXPOSITION at which up to twenty-five micro and main frame stations will be available for informal demonstration and discussion of the programs featured in the AEEP Manual. Diskettes will be available for copying programs.

Each position paper will deal with:

The current situation,

Present and future educational and research needs, Various ways to meet these needs

Conclusions and Recommendations

Key sub-issues to be treated in each of the position papers include:

Computers:

- Appropriate Competence and Skill in Programming and Numerical Analysis at the BS and MS levels.
- Application of General Purpose, e.g. spreadsheets, and special purpose software to teaching and research.
- · Application to Instrumentation and Control.
- Application to Teaching: Process Simulation, Visual Aids

Integrated Approaches

- Multimedia Knowledge and Skills Required in Practice, Particularly those Required to Deal with Hazardous Wastes and Risk Assessment
- Curricular Design; Emphasis Given to Basic Principles, Natural Science, Engineering Science; Balance with Traditional Subjects
- · Role of Research at the M.S. and Ph.D. Levels
- Appropriate Laboratory Facilities, Equipment and Experiences

Design and Operation

- Design and Operation Skills Required by the Profession.
- Incorporation of the Integrated Approach into Design.
- Appropriate Emphasis on Design and Operation at the B.S. and M.S. Level, Specific Examples.

At the Conference, the positions taken on major issues will be discussed, debated, and perhaps revised in an effort to reach concensus positions. Individuals wishing to take an active role in the development of the position papers should contact the appropriate Task Committee Chairman.

Houghton is served by Republic Express and Simmons Airlines with seven daily flights from Minneapolis, Chicago and Detroit. It is expected that a conference air fare rate will be available from Republic Airlines. The possibility of a Conference Charter Flight from and to Chicago is under investigation. By car, it is a beautiful six hour drive from either Minneapolis or Milwaukee. A large block of hotel rooms (\$30-\$40/night) have been reserved. In addition, a large number of dormitory rooms (\$7-\$9/night) and furnished University Apartments (\$112/week for two bedroom) are available.

Pre and post conference "workshops" on Lake Superior Sport Fishing are planned for the afternoons of Sunday, July 20 and Wed., July 23. Enrollment in these "workshops" is limited and requires preregistration. An "Alternative Conference" for spouses will highlight the natural and cultural history of the region and will feature the alternative to mall shopping, traffic lights and expensive restaurants. Houghton is the gateway to Isle Royale National Park and several excellent State Campgrounds. It would be possible to couple the Conference to a camping vacation or subsequent wilderness excursion to Isle Royale National Park.

For additional information, contact C. Robert Baillod, Conference Chairman, Civil Engineering Department, Michigan Technological University, Houghton, Michigan, 49931. Telephone: 906-487-2530

Nominations for AEEP 1986 Outstanding Publication Requested

Nominations are requested for the AEEP 1986 Outstanding Publication Award. This award is given annually to a landmark paper that has had a lasting influence on the environmental engineering field. Each nomination should be accompanied by a statement indicating how the paper has influenced the field and why the nominator thinks the paper is in the landmark category. Authors need not be members of AEEP.

Send all nominations and accompanying statements to Dr. James M. Symons, Chairman, Outstanding Publication Award Committee, Department of Civil Engineering, University of Houston-University Park, Houston, Texas 77004.

The deadline for nominations is June 1, 1986. The award will be presented at the 1986 WPCF Conference.

AEEP Publications Available

 Copies of the "1984 Survey of Environmental Science and Engineering Graduate Student Enrollment" are available from:

Jeffrey Peirce
Dept. of Civil & Environmental Engineering
Duke University
Durham, North Carolina 27706

Copies of either the 1983-84 or 1984-85 AEEP "Listing of Masters Theses and Ph.D. Dissertations" are available from:

Richard W. Walters Dept. of Civil Engineering University of Maryland College Park, MD 20742

GENERAL NEWS

Occupational Health and Safety

The American Academy of Environmental Engineers recently published a report on "The Need to Address Occupational Health and Safety in Engineering Education Programs". Citing the significance of occupational accidents, safety and health hazards to society (estimated at \$30 billion/yr) and the absence of adequate educational programs in current engineering education, the Academy recommended:

- Addressing worker protection problems within the framework of the engineering curriculum. This includes the specific recommendation that ABET should promote the concept of safety in their design course criteria to include both health and safety issues and worker protection.
- Designing ABET accreditation reviews and site visits to encourage attention to occupational safety and health instructional responsibilities.

In order to develop awareness and skills in practicing engineers the Academy recommended:

- Practicing environmental engineers should include the principles of occupational safety and health and the use of engineering techniques to control occupational safety and health hazards as part of their continuing education.
- The Academy's sponsor organizations should include sessions on occupational safety and health at their various technical meetings and develop short courses and correspondence courses that would be available for the continuing education of practicing engineers.
- Employers should encourage their engineering staff
 to take advantage of continuing education opportunities offered by schools and societies by paying
 a portion of the related expenses.

Copies of the full report may be obtained from the Academy or by consulting the Summer 1985 issue of the Diplomat.

IAWPRC is for You!

The International Association on Water Pollution Research and Control (IAWPRC) was formally organized in 1965 having grown out of several international conferences on water pollution research organized in the early 1960's. IAWPRC is the lead organization that deals with all aspects of water pollution control in the international arena.

IAWPRC is managed by a Governing Board that consists of representatives of each National Committee. In the US, the United States of America National Committee (USANC) is the representing group. It consists of two delegates and two alternates that are appointed by each of six sponsoring organizations including ACS, AEEP, AIChE, ASCE, ASM and WPCF. USANC coordinates all of the USA's activities relative to IAWPRC.

IAWPRC's activities center on the international exchange of information in water pollution control. This is achieved in many ways. The primary avenue is through biennial international conferences that have been held at many locations throughout the world during the past two decades. The next biennial conference is scheduled for 17-22 August 1986 to be held in Rio de Janiero. It promises to be an excellent conference; technically as well as socially. The 1988 conference is scheduled for London, 1990 for Tokyo and 1992 for Washington DC.

Another avenue through which IAWPRC meets its information exchange objectives is through its sponsorship of regional and specialized conferences (6-8 are scheduled per year on all aspects of water pollution control). It also sponsors task groups that are charged to carry out an investigation within a finite time scale and study groups that have an ongoing program of activities. Study groups that are currently active focus on topics such as water virology, biological phosphorus removal, instrumentation, and microcomputers. Many IAWPRC members become actively involved in these types of activities.

Finally, IAWPRC is actively involved in publishing. It publishes two leading refereed international technical journals: Water Research and Water Science and Technology. It also publishes many books, a regular newsletter and a directory/yearbook.

Continued next page

US engineers and scientists can join IAWPRC as Individual Members. Annual membership fees are \$50 which includes subscriptions to *Water Research* and the IAWPRC *Newsletter* and entitles you to receive a copy of the Year-book/Directory. Student membership fees are \$25.

The organization is a very active organization from which many AEEP members can benefit and to which many can

fruitfully contribute. It offers you the opportunity to become involved in the international affairs of the water pollution control field. Consider joining now. To do so contact Tom Keinath (Environmental Systems Engineering, Clemson University, Clemson, SC 29634-0919; 803/656-5572) to obtain a membership application blank.

CALL FOR PAPERS

Symposium on Environmental Chemistry Education at the Graduate and Undergraduate Level

This symposium will be held in Anaheim, California (192nd ACS Meeting) on September 7-12, 1986. Example areas for papers include:

- History of Environmental Chemistry, Teaching and Programs
- Environmental Chemistry as a Discipline, Subdiscipline, and Applied Interdisciplinary Area of Science and Engineering
- Role of Undergraduate Courses for Science, Engineering, and Non-science Majors
- Needs for Graduate and Undergraduate Programs -Curricula Used
- Teaching Resources Available Use of Microcomputers
- Desirable Backgrounds for Graduate Students in Environmental Chemistry, Environmental Engineering, Etc.
- · Role of Laboratories in Teaching

All interested people please contact:

Dr. Alan W. Elzerman Environmental Systems Engineering Rhodes 401 Clemson University Clemson, SC 29634-0919

The Canadian Society for Civil Engineering Annual Meeting

Toronto - May 14-16, 1986

This year it is proposed that there will be one thematic day to demonstrate how the various branches of Civil Engineering interact for the benefit of society. In addition, there will be two other Environmental Engineering Division days available for research and technical papers on all aspects of environmental engineering.

Engineers and aquatic scientists are invited to submit abstracts to be considered for presentation at this conference. Papers accepted for presentation will be reviewed for possible publication in the *Canadian Journal of Civil Engineering*. Abstracts should be sent as soon as possible to:

Professor P. H. Jones
Department of Civil Engineering
Institute for Environmental Studies
University of Toronto
Toronto, Ontario, M5\$ 1A4
Telephone (413) 978-7078

IAWPRC 13th Biennial International Conference

Rio de Janiero, August 17-22, 1986

Deadline: 31 December 1985
Lay sheets can be obtained directly from:
IAWPRC
1 Queen Anne's Gate
London SW1H 9BT, ENGLAND

CONFERENCES

American Institute of Chemical Engineers 1986 Summer National AIChE Meeting

Boston, Massachusetts August 24-27, 1986

A special session on "Emerging Techniques for Heavy Metals Separation" is planned for the Summer National AIChE Meeting. This session is part of the block programming effort of the Environmental Division; 35 environmental sessions are planned for this meeting.

Availability of Conference Proceedings

The Proceedings of the First International Conference on Management Strategies for Phosphorus in the Environment held in Lisbon, July 1985 are now available.

The 69 papers presented cover eutrophication, phosphorus in the water cycle, biological phosphorus removal, chemical phosphorus removal technology, phosphate sludge and the current status of phosphorus management.

The Proceedings may be obtained by writing and enclosing a check or money order for \$48.00 US (inclusive of postage and shipping) made payable to 'Tektran International' addressed to: Tektran International, PO Box 915 SUB. P.O. No. 11, Edmonton, Alberta, Canada T6G 2E0

POSITIONS AVAILABLE

Georgia Institute of Technology, Atlanta, GA

The School of Civil Engineering at Georgia Institute of Technology is seeking applicants for two tenure-track faculty positions in Environmental Engineering. Candidates must have a doctorate in engineering, with the ability to develop independent research and teach both undergraduate and graduate courses. The available positions are in the following areas.

- (1) Design and Management of Pollution Control Systems: Candidate must have a strong background and practical experience in design, control and optimization of industrial and domestic water and waste treatment systems, including the control and management of toxic and hazardous substances. Experience with computer-aided system design and process optimization and the ability to develop courses in these areas are desired.
- (2) Physico-Chemical Treatment Systems: Candidate must be an engineer with a strong background in theoretical and practical aspects of conventional or innovative physico-chemical treatment processes used in municipal or industrial water and waste treatment, including groundwater renovation. Experience in computer modeling and analysis of natural and engineered process systems is desired.

Rank and salary for the positions are open and will be commensurate with qualifications. Candidates should submit a detailed resume, names of references, and position and salary required to:

Dr. J. Edmund Fitzgerald, Director School of Civil Engineering Georgia Institute of Technology Atlanta, GA 30332 Telephone: (404) 894-2201

University of Texas at Austin

The University of Texas at Austin is looking for Post-Doctoral Associates in one or more of the following areas:

- · hazardous waste management
- transport and fate of pollutants in ground and surface waters
- water and wastewater treatment processes
- water resource systems planning and management

Inquiries should be directed to:

Graduate Advisor
Environmental and Water Resources Engineering
Department of Civil Engineering (ECJ 8.6)
The University of Texas at Austin
Austin, Texas 78712-1076
Telephone: (512) 471-5602

Environmental Engineer

Proctor & Gamble has an immediate entry-level opening for a Ph.D. or postdoctoral environmental engineer in the Environmental Safety Department at the Ivorydale Technical Center, Cincinnati, Ohio. This position offers a combination of environmental research and issue management. The opening requires an individual with the ability to develop and apply practical laboratory models/methods which predict the fate and transport of materials in water and wastewater treatment and a demonstrated ability to solve practical problems. The individual's background and experience should include chemistry, biology and modeling. Knowledge of fate and transport of materials in surface water and groundwater systems is important. Some familiarity with sludge treatment and disposal is desirable.

Candidates must be U.S. citizens or hold a permanent resident visa and should send their resumes with publications list by January 10, 1986 to:

Dr. T. J. Logan, Manager Ph.D. Recruiting Environmental Engineer The Proctor & Gamble Company P.O. Box 39175 Cincinnati, Ohio 45247

WELCOME TO NEW AEEP MEMBERS

Dr. Scott C. Martin
Civil Engineering
Youngstown State University
Youngstown, Ohio 44555
(216) 742-1741

Dr. Eugene C. McCall
Civil Engineering Department
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(919) 966-2643

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Dr. Sandra Woods Civil Engineering Oregon State University Corvallis, Oregon 97331 (503) 754-2751

ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS

Attn: Dr. Desmand F. Lawler Department of Civil Engineering, ECJ 8.6 The University of Texas at Austin Austin, Texas 78712

The publications and tapes listed below are available from AEEP. Prepayment must accompany all orders. Please forward a check or money order made payable to AFEP to the above address.

	Trondy, 51, All-mater Exchange Trocesses	30/#001	Subtot		
	McKay, D., "Air-Water Exchange Processes"	\$5/week	\$5/week		
	McKay, D., "Environmental Modelling with Fugacity"	\$5/week	\$5/week		
	O'Melia, C. R., "Aquasols: Physical Aspects of the Behavior of Small Particles in Aquatic Systems"	\$5/week	\$5/week		
	O'Melia, C. R., "Coagulation for Removal of Natural Organic Substances from Water Supplies"	\$5/week	\$5/week		
Tapes	Tapes:				
6	So You Want to Be an Environmental Engineer?	\$.50	\$.50		
5	Register of Environmental Engineering Graduate Programs (1984 Edition)	\$15.00	\$30.00		
4	Fundamental Research Needs for Water and Wastewater Systems (Proceedings of the Dec. 1 and 2, 1982 AEEP/ NSF Conference)	Free	Free		
3	Proceedings, Fourth Conference on Environmental Engineering Education (June 19-21, 1980, Univ. of Toronto)	Free	\$ 3.00		
2	Aquatic Microbiology Laboratory Manual (Cooper, et al)	\$ 7.00	\$ 7.00		
1	Environmental Engineering Unit Operations and Unit Processes Laboratory Manual (Ed.: O'Connor)(Rev.1984)	\$10.00	\$20.00		
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