



Newsletter

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FEBRUARY 1982

PRESIDENT'S CORNER

On behalf of the AEEP Board, I wish to thank Ben Dysart for his outstanding leadership this past year. Thanks also to Jim Patterson and Aarne Vesilind who leave the Board after three years of service. Jim did a fine job organizing the 4th Environmental Engineering Education Conference and Aarne kept us all abreast of graduate program activity with his annual enrollment survey. I welcome Lee Christensen, Jim Edzwald and Paul Robert, our new Board members, and I know they will work hard for AEEP.

Your ideas on what activities AEEP should undertake are important to me. One goal for this year is to bring new members to our Committees thereby continuing the spirit of professional involvement and assuring us of future leaders for AEEP. I will be asking for your help on several committees. A new joint activity of the Research and Awards Committees will be an annual award in recognition of an outstanding research paper published by an AEEP member. The Education Committee will need help in managing the Purdue Workshop, the AWWA/AEEP Evening Research Seminar and in revising the AEEP Unit Operations Manual.

A highlight of this year's activities will be a one day conference on "Fundamental Research Needs in Water and Wastewater Systems" to be co-sponsored by NSF and EPA. We also hope to develop an AEEP library of computer programs for instructional use in our graduate courses. Then too, we hope to video tape this year's Distinguished Lecturer's Program (given by Charlie O'Melia) and make it available to the membership.

Though AEEP is by all standards a small organization, it maintains a strong identity because the members share well defined, common professional interests and a spirit of collegiality. The days of training grants and large graduate programs at every institution are behind us now. We face new challenges in capturing research support at a time when National priorities are being reordered, temporarily at least. Nevertheless, our goal remains as excellence in research and teaching. We know full well that there is still

much to be learned about environmental engineering and that the decision-makers of the 1980's and 1990's will depend on us to supply the manpower and the scientific answers needed to affect sound environmental policies.

Francis A. DiGiano

NEW BOARD MEMBERS AND OFFICERS

Lee Christensen, Jim Edzwald and Paul Roberts have been elected to the Board of Directors of AEEP. In addition at its January meeting, the AEEP Board of Directors elected new officers. They are:

President: F.A. DiGiano
Vice President: J.K. Edzwald
Secretary-Treasurer: D.T. Lauria

Special thanks are extended to Ben Dysart past president of AEEP and Jim Patterson and Aarne Vesilind who are leaving the Board after three years of service.

AEEP MEMBERS HONORED

Dr. Raymond C. Loehr was one of five professors in the New York State College of Agriculture and Life Science at Cornell University to be elected Liberty Hyde Bailey Professors. These professorships provide recognition for distinguished faculty at Cornell who have national and international reputations in agriculture and related sciences. Dr. Loehr is recognized internationally for his work in agricultural waste management, pollution control and residue utilization.

Congratulations are extended to Dr. Loehr who is a former president of AEEP and remains an active member.

Professor Clifford W. Randall has been named Charles R. Lunsford Professor of Civil Engineering at VPI and SU. He has been on the faculty at Virginia Tech for over 14 years and is widely recognized for his work in water and waste water treatment. Congratulations are extended to Professor Randall who is a former Secretary-Treasurer of AEEP and remains an active member.

AEEP RESEARCH AWARDS

AEEP is very fortunate to be able to recognize outstanding research activity through the annual presentation of three research awards. The following individuals were honored in the previous year.

1. *The Nalco Chemical Award for the Best Doctoral thesis on Chemical Research in the Area of Water and Wastewater Treatment*—was presented to Dr. Windsor Sung for his dissertation "Catalytic Effect of the alpha-Fe-OOH (Ipidorocrite) surface of the Oxygenation Removal Kinetics of Fe (II) and Mn (II)." His advisor was Dr. James S. Morgan of the California Institute of Technology, Dr. Sung is presently Assistant Professor, Department of Civil Engineering, University of New Hampshire.
2. *The Nalco Chemical Award for the Best Doctoral thesis on Chemical Research in the Area of Industrial Water and Wastewater Treatment of Combined Industrial/Municipal Water*—was presented to Dr. William E.T. Thacker for his dissertation "Modeling of Activated Carbon and Coal Gasification Char Adsorbants in Single Solute and Bi-solute Systems." His advisor was Dr. Vernon L. Snoeyink of the Department of Civil Engineering, University of Illinois. Dr. Thacker is presently Assistant Professor, Department of Paper Science and Engineering, Western Michigan University.
3. *Engineering Science, Inc./AEEP Award for the Best Doctoral thesis Relevant to Environmental Engineering Practice*—was presented to Dr. Antonio Oswaldo Lau for his dissertation "Substrate Uptake and Mass Transfer Effects in Activated Sludge Bulking." His advisor was Dr. David Jenkins of the University of California, Berkeley. Dr. Lau is presently employed by Exxon Research and Engineering at Florham Park, New Jersey.

Congratulations are extended to the students and their advisors.

AEEP DISTINGUISHED LECTURER FOR 1981-82

Professor Charles R. O'Melia of the Johns Hopkins University has been selected as this year's Distinguished Lecturer. Professor O'Melia is well known for his research in water treatment, and particularly the coagulation process. In addition, he has been very active in the affairs of AEEP.

All AEEP members should have received materials describing this year's program. The itinerary is currently being arranged and will soon be made public by Lee Christensen, chairman of the selection committee.

AEEP MEMBERS INVITED TO REVIEW NSF PROPOSALS

During the recent AEEP board meeting held at the WPCF Conference, in Detroit, Dr. Edward Bryan, Program Director of the NSF Water Resources and Environmental Research Program, invited AEEP members to participate in the review of research proposals submitted to NSF. AEEP members wishing to review such proposals in their area of expertise should send their name and resume to:

Dr. Edward Bryan
Program Director
Water Resources & Environmental Research Program
National Science Foundation
Room 11-30
1800 G Street NW
Washington, DC 20050

AEEP WORKSHOP

The Association of Environmental Engineering Professors will sponsor a one-day workshop entitled "Applying Chemical Structural and Thermodynamic Correlations to Treatment Process Selection" just prior to this year's Purdue Industrial Waste Conference on Monday, May 10, 1982. The Workshop will be conducted by professors D. Mackay, G. Belfort, and W.B. Arbuckle and by Dr. S.H. Yalkowsky in Room 214 of Purdue's Stewart Center. Registration is at 8:15 am with the Workshop beginning at 8:45. There is no fee, but space is limited so all attendees are urged to pre-register.

The Workshop's purpose is (1) to present basic concepts not readily available in textbooks, (2) to describe the application of these concepts, and (3) to encourage the introduction of these concepts into our courses.

For more information or to pre-register, contact:

Dr. Wm. Brian Arbuckle
Department of Environmental
Engineering Sciences
University of Florida
Gainesville, FL 32611
(904) 392-0843

FINANCIAL STATEMENT TO 1981

| Item | Total for Year |
|--|----------------|
| Starting Balance | |
| General Fund | 2,500.00 |
| Savings Account | 20,103.00 |
| Total | 22,603.00 |
| Income | |
| General Fund | 12,168.22 |
| Publications Account | 1,758.31 |
| Savings Account | 2,070.00 |
| Total | 15,996.53 |
| Expenses | |
| General Fund | 14,483.34 |
| Total | 14,483.34 |
| Transfer to General Fund from Savings | +4,000.00 |
| Ending Balance (Jan. 4, 1982) | |
| General Fund | 4,184.88 |
| Publication Account | 1,758.31 |
| Savings Account | 18,173.00 |
| Total | 24,116.19 |

GENERAL FUND SUMMARY

| Item | Total for Year |
|--------------------------------------|------------------|
| INCOME | |
| 1. Dues, luncheons, etc. | 7,203.09 |
| 2. Publications | 200.13 |
| 3. Visting Lecturer | 4,500.00 |
| 4. Labels | 265.00 |
| TOTAL | 12,168.22 |
| EXPENSES | |
| 1. Office | 1,477.41 |
| 2. Newsletter | 1,143.05 |
| 3. Publication | 547.75 |
| 4. Board Meeting | 3,053.08 |
| 5. Workshops | 3,708.00 |
| 6. Committees | 721.18 |
| 7. Awards | 761.67 |
| 8. Misc. (includes Visting Lecturer) | 3,071.20 |
| TOTAL | 14,483.34 |

Donald T. Lauria

NALCO Chemical Award for the Best Doctoral Thesis on CHEMICAL RESEARCH in the area of WATER AND WASTEWATER TREATMENT.

An award consisting of \$2,500 to be dividied between the thesis author and his major professor (\$1,250 each) will be presented to the selected candidate at the 1982 American Water Works Association meeting, Miami, Florida.

This award is sponsored by Nalco Chemical Company under the auspices of the Association of Environmental Engineering Professors (AEEP) and is companion to a parallel award from Nalco on Industrial Water or Waste Treatment awarded at the AEEP meeting at the St. Louis WPCF meeting.

Doctoral theses completed over the past year (1/1/81-12/31/81) are eligible for submission for this award year. The research work must be related to the chemical aspects of water and wastewater treatment and must be complete at the time of submission since a copy of the dissertation is required for judging.

Submission of theses for consideration by the review committee must be received on or before March 15, 1982. Winners will be notified by June 1, 1980. Send 2 copies of dissertation to:

Dr. James J. Morgan
Kech Laboratory
Division of Engineering
and Applied Science
California Institute of Technology
Pasadena, CA 91125

Specific information pertaining to the Nalco Industrial Waste Treatment Award and the Engineering Science Award will appear in subsequent issues of the **NEWS-LETTER**.

INTRODUCTORY SUBSCRIPTION RATE FOR AEEP UNIVERSITY LIBRARIES

The rapid communication journal *Environmental Technology Letters* is offering a preferential library subscription rate of US \$25.00 where sponsored by AEEP members. The journal, now in its third year of publication is published in 12 issues per year and provides a forum for rapid communication of refereed short papers.

Specimen copies of the journal may be obtained from:

Dr. Steve E. Hrudehy
Dept. of Civil Engineering
University of Alberta
Edmonton, Alberta
Canada T6G 2G7

Dr. J.N. Lester
Dept. of Civil Engineering
Imperial College of Science
and Technology
Imperial College Road
London SW7 2BU
England

Library subscriptions may be entered by providing the name of the sponsoring AEEP member with a purchase order to:

Environmental Technology Letter
12 Clarence Rd.
Kew, Surrey TW9 3NL
England

ANNOUNCEMENTS

Next AEEP General Membership Luncheon

The next AEEP luncheon will be held on the Tuesday of the Purdue Industrial Waste Conference.

AEEP Sponsored Evening Seminar at AWWA Conference

AEEP will be offering an informal research seminar on Tuesday evening 8-10 p.m. at the AWWA Conference in Miami. Two or three speakers will be selected to lead discussion on "Disinfectant Residuals in Distribution Systems: Microbial Protection vs. THM Control." Phil Singer (North Carolina) is in charge of the program. He may be reached at:

Dept. of Environmental Sciences and Engineering
University of North Carolina
Chapel Hill, NC 27514

Announcement

The Civil Engineering Department of Duke University has been renamed the Department of Civil and Environmental Engineering.

CONFERENCE ANNOUNCEMENT

The Gordon Research Conference on Environmental Sciences: Water will be held at the New Hampton School in New Hampton, New Hampshire, on 27 June to 2 July 1982. The topic will be "The Scientific Basis for Risk Analysis in Surface and Groundwaters." The full program will be published in the March 5th issue of *Science*. For an application to attend, please contact: Dr. Alexander M. Cruickshank, Gordon Research Conference, Pastore Chemical Laboratory, University of Rhode Island, Kingston, RI 02881, (401) 783-4011 or (401) 783-3372. The Conference Chairman is Richard A. Conway, Union Carbide Corporation, South Charleston, WV, (304) 747-4016; Richard Zepp of the U.S. Environmental Protection Agency, Athens, GA, (404) 546-3428, is Vice-Chairman.

AEEP Luncheon at WPCF a Success

Over 60 attended the general membership luncheon at the WRCF Conference in Detroit. AEEP plans for new activities were announced. The highlight of the luncheon was the presentation to winners of the Nalco Chemical Company/AEEP and the Engineering Science awards (see related story).

NEWSLETTER EDITOR CORRECTION

Effective immediately Dr. Neil M. Ram and Dr. Michael S. Switzenbaum will assume the duties of **NEWSLETTER CO-EDITORS**. Items to be included in the May **NEWSLETTER** issue must be received no later than **March 15, 1981**. Please submit any items of general interest to the profession to:

N.M Ram and M.S. Switzenbaum
Co-Editors, **AEEP NEWSLETTER**
Civil Engineering Department
University of Massachusetts
Amherst, MA 01003
(413) 545-0685

New Logo

AEEP is soliciting ideas for a new logo, hopefully to be adopted by the Board at its May meeting at Purdue. If you have an idea for a new logo, please send it to Arne Vesilind. The winning entry will not receive a cash award! only fame and glory for creative genius.

Dues

Dues notices were sent out last December. Many of the members have already paid but a large amount of money is still outstanding. The association needs your support, especially during these times of rising costs and tight finances. If you have not already done so, please send your check to Don Lauria TODAY. The deadline for having your name in the directory is February 15, 1982. Thank you.

Committee Assignments

Several committee and other assignments in AEEP are presently available. If you are interested in serving the association in a more active capacity, please contact Fran DiGiano who can provide information on openings and duties.

USANC

AEEP has four delegates to USANC (United States of America National Committee) which represents US interests in IAWPR (International Association on Water Pollution Research). Every two years, a new delegate is elected to replace one whose term has expired. A full term on USANC lasts eight years. In May of this year at the Purdue Conference, the AEEP Board will elect a new delegate. The other delegates at that time will be Fred Pohland, Jim Patterson and Tom Keinath. If you would like to be considered for this assignment, please contact Ben Dysart, Chairman of the Nominating Committee. Ben can also provide information on the duties of the USANC representative.

VISITING PROFESSORSHIP DESIRED

Professor Januszkiewicz is interested in receiving information concerning the possibility of obtaining a visiting professor position for one or two semesters with a university or research institute dealing with water pollution problems in the U.S. or Canada. Professor Januszkiewicz's principle interests are in the fields of chemical and technical aspects of water pollution control. He has over 30 years experience in the field. He may be contacted as shown below:

Professor Tadeusz Januszkiewicz
Agricultural and Technical Academy in Olsztyn
The Faculty of Water Preservation and Inland Fisheries
10-957 Olsztyn-Kortowo, POLAND

PROFESSIONAL CONTACTS DESIRED

Dr. Jan R. Dojlido would like to develop contacts with environmental engineering professionals in this country. Dr. Dojlido's principle interests are in the fields of water quality, thermal pollution, non-point source pollution, methods of analysis, and biogradation of organic pollutants. He may be contacted as shown below:

Professor Jan R. Dojlido
Instytut of Meteorology and Water Management
Kolektorska 4
01-692 Warsaw, POLAND

Wanted: Contributors to the Third Edition, AEEP Environmental Engineering Unit Operations and Unit Processes Laboratory Manual

The AEEP Board of Directors has authorized the updating of the *AEEP Environmental Engineering Unit Operations and Unit Processes Laboratory Manual*. The second edition of this manual was issued in 1975 and the manual inventory is now virtually exhausted.

AEEP members are invited to contribute to the third edition of the manual. If you would like to be involved with either the updating of specific experiments already included in the manual or the development of new experiments, please write to:

Professor John T. O'Connor
Department of Civil Engineering
University of Missouri-Columbia
Columbia, MO 65211

The on-going development of the AEEP Manual is totally a volunteer effort and is a unique opportunity to share your laboratory experience with environmental engineering students and faculty nationwide. AEEP has not placed restrictions on the photocopying of experiments from the manual for specific class needs.

Please consider joining in this effort to develop an educational tool of real significance to the entire environmental engineering profession.

WELCOME TO NEW AEEP MEMBERS

Leonard W. Lion
Dept. of Civil and Environmental Engineering
Hollister Hall
Cornell University
Ithaca, NY 14835
(607) 256-7571

Dr. Glen T. Daigger
CH₂M Hill
7201 N.W. 11th Place
Gainesville, FL 32602
(904) 377-2442

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LBJ School of Public Affairs
University of Texas at Austin
Austin, TX 78712
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University of Maine
Orono, ME 04469
(207) 581-2119

WELCOME TO NEW AEEP MEMBERS

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(617) 628-5000

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Louisville, KY 40205
(502) 588-6357

Thomas C. Young
Department of Civil and
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Clarkson College of Technology
Potsdam, NY 13676
(315) 268-4430

Raymond W. Regan
Department of Civil Engineering
212 Sackett Building
Pennsylvania State University
University Park, PA 16802
(814) 863-0601

Brian A. Dempsey
Department of Civil Engineering
University of Missouri at Rolla
Rolla, MO 65401
(314) 341-4498

PUBLICATION OF THESIS TITLE

Titles of theses completed during the 1980-81
academic year are presented below

AIR POLLUTION

"Ground Access to the Orlando International Airport -
Design and Evaluation of Various Transportation Alternatives," George S. Fan (MS), 90 pp., December, 1980, University of Central Florida (C. David Cooper and Satish Mohan).

GROUNDWATER

"Modeling and Field Study of Water and Solute Movement in a Shallow, Unconfined Aquifer," David F. Leland (MS), 138 pp., February, 1981, University of Massachusetts (Daniel Hillel and Donald Dean Adrian).

NON-POINT SOURCE POLLUTION

"Sediment, Nutrient, and Hydrologic Interactions in Lake Houston," Ernesto Baca, M.S., 150 pp., May, 1981, Rice University (P.B. Bedient).

"An Assessment of Point and Nonpoint Pollution Loads Into Lake Houston," Charles Joseph Newell, M.S., 107 pp., May, 1981, Rice University (P.B. Bedient).

"Stormwater Management and Design Aid," Timothy M. Curran (MS) 100 pp., December, 1980, University of Central Florida (Martin P. Wanielista).

"The Effects of Sedimentation on the Quality of Urban Stormwater Runoff from the Lake Eola Watershed," Victor J. Godlewski (MSE), 120 pp., December, 1980, University of Central Florida (James S. Taylor).

"Quantitative and Qualitative Analysis of the Water Budget from Lake Eola Watershed," Timothy B. Walsh (MSE), 100 pp., May, 1981, University of Central Florida (Yousef A. Yousef).

"Chemical Treatment of Urban Stormwater by Settling Column Studies," Paul H. Moore (MSE), 120 pp., August, 1980, University of Central Florida (James S. Taylor).

"Filtration of Stormwater Detention Effluents," Claude L. Cassagnol (MSE), 80 pp., June, 1981, University of Central Florida (Martin P. Wanielista).

RIVERS, ESTUARIES AND LAKES

"Impact of Highway Bridge Runoff on Adjacent Receiving Water Bodies," James E. Christopher (MS), 110 pp., August, 1980, University of Central Florida (Yousef A. Yousef).

"Ecological Responses to Inactivation of Anaerobic Lake Sediments with Water Treatment Sludges," David B. Jellerson (MSE), 110 pp., May, 1981, University of Central Florida (Yousef A. Yousef).

"Vessel-Related Inputs of Copper to the Coastal Zone," Mehrdad Sadoughi (M.Sc.), December, 1980, Florida Institute of Technology (J.H. Trefrey).

"An Evaluation of Frequency Distribution Patterns and Partitioning of Copper, Iron, and Zinc in Selected Tissues of the Black Mullet, *Mugil Cephalus*," Charles J. Venuto (M.Sc.), December, 1980, Florida Institute of Technology (J.H. Trefrey).

"Mathematical Modeling of Suspended Solids and Associated Pollutant Transport," Christopher G. Uchirin (Ph.D.), 339 pp., July, 1980, The University of Michigan (Walter J. Weber, Jr.).

"Mathematical Modeling of Recovery of a Eutrophic Lake," David R. Bingham (MS), 90 pp., June, 1980, University of Massachusetts (Tsuan Hua Feng).

"The Development of Chemical Budgets for a Small Adirondack Acid Lake," William C. Becker (MS), 77 pp., January, 1981, Clarkson College of Technology (James K. Edzward).

"An Evaluation of the Recovery of an Adirondack Acid Lake Through Chemical Manipulation," Richard J. Theiss (MS), 112 pp., March, 1981, Clarkson College of Technology (James K. Edzward).

"The Effects of Acid Lake Recovery by Chemical Manipulation on Algal Growth Potential," Robin L. Autenrieth (MS), 146 pp., May, 1981, Clarkson College of Technology (Joseph V. DePinto).

"The Effects of Urban Runoff on the Heavy Concentrations, Productivity, and Auto-Trophic Index of the Periphyton from the Occuquan Watershed," Brenda L. Dawson (MS), 191 pp., December, 1980, VPI & SU (Hoehn).

"The Effect of Urban Runoff on Algal Growth & Trihalomethane Formation Potentials of Lake Barcroft," Gina L. Hendrickson (MS), 143 pp., January, 1981, VPI & SU (Randall).

"Physical/Chemical Characterization of an Agrarian Pond Sediment of the Occuquan Basin & Implications for Runoff Water Quality," Dianna M. Kelley (MS), 125 pp., March, 1981, VPI & SU (Hoehn).

"Evaluation of Select Management Practices to Control Flow and Pollutants from Small Agricultural Watershed in Northern Virginia," William McTernan (Ph.D.), 210 pp., July, 1980, VPI & SU (Hoehn).

SOLID WASTES

"City of Kissimmee Solid Waste Collection System," Larry W. Walter (MSE), 70 pp., December, 1980, University of Central Florida (Martin P. Wanielista).

WATER AND WASTEWATER TREATMENT

"Determination of Mass Transport Parameters for Fixed-Bed Adsorbers by a Micro-Column Technique," Kuang-Tsan Liu (Ph.D.), 182 pp., July, 1980, The University of Michigan (Walter J. Weber, Jr.).

"Performance Predictions for Removal of Toxic and Carcinogenic Compounds from Water Supplies by Adsorption," Massoud Pirbazari (Ph.D.), 436 pp., August, 1980, The University of Michigan (Walter J. Weber, Jr.).

"Comparative Adsorption Performance of Synthetic Adsorbents and Activated Carbons," Benjamin M. van Vliet (Ph.D.), 270 pp., December, 1980, The University of Michigan (Walter J. Weber, Jr.).

"A Dynamic Settling Column for Measurement of Sedimentation of Flocculent Material Under the Influence of Turbulence," Tin Y. Lo (Ph.D.), 274 pp., May, 1981, The University of Michigan (Walter J. Weber, Jr.).

"A Preliminary Investigation of the Treatment of Cheese Whey in an Anaerobic Attached Film Expanded Bed Reactor," Scott C. Danskin (MS), August, 1980, Clarkson College of Technology (Michael S. Switzenbaum).

"Phosphorus Removal from Municipal Wastewater by Alum Addition," Kent R. McManus (MS), August, 1980, Clarkson College of Technology (Michael S. Switzenbaum).

"Bioavailability of Phosphorus in Municipal Wastewater," Steven E. Flint (MS), October, 1980, Clarkson College of Technology (Thomas C. Young).

"Evaluation of Trihalomethane Precursor and Organics Removal from the Grasses River by Direct Filtration and Conventional Water Treatment Methods," Benjamin Gong (MS), 186 pp., January, 1981, Clarkson College of Technology (James K. Edzwald).

"Application of Polanyi's Adsorption Potential Theory to Single Solute and Bisolute Adsorption from Aqueous Solutions on Activated Carbon," Patricia Hogan Hamm (MS), 121 pp., September, 1981, University of Massachusetts (Francis A. DiGianno).

"The Influence of Ozonation on the Adsorption of Selected Aromatic Ring, Weak Organic Acids onto Activated Carbon," Michael F. Lorenzo (MS), 118 pp., September, 1981, University of Massachusetts (Francis A. DiGianno).

"A Comparison of Adsorption of Acetophenone, O-cresol, and Veratrole on XE 340, XE 347, and XE 348 Carbonaceous Resins," Richard A. DiMambro (MS), 105 pp., September, 1981, University of Massachusetts (Francis A. DiGianno).

"Predictions of Competitive Adsorption: Observations of Anomalous Behavior in Specific Bi- and Tri-solute Systems," William H. Frye (Ph.D.), 121 pp., September, 1980, University of Massachusetts (Francis A. DiGianno).

"Availability of Sorbed Substrate on Granular Activated Carbon for Microbial Degradation," Alan Y. L. Li (Ph.D.), 164 pp., February, 1981, University of Massachusetts (Francis A. DiGianno).

"Catalytic Degradation of Humic Acid on Activated Carbon," Raymond Carlsen (M.Sc.), March, 1981, Florida Institute of Technology (P.A. Jennings).

"A Statistical Analysis of Wastewater Treatment Plant Operational Control Programs," Susan M. Meyers (M.Sc.), June, 1981, Florida Institute of Technology (T.V. Belanger).

"Granular Activated Carbon Treatment for the Removal of Color from Lake Washington (Florida) Water," Barbara A. Zemelka (M.Sc.), December, 1980, Florida Institute of Technology (P.A. Jennings).

"Coagulation in Natural Waters," Kathleen M. Bowman (MSEE), December, 1980, University of North Carolina (Charles R. O'Melia).

"Removal of Trihalomethane Precursors by Permanganate Oxidation and Manganese Dioxide Adsorption," Jean M. Colthrust (MSEE), December, 1980, University of North Carolina (Philip C. Singer).

"Treatment Modifications for Limited Trihalomethane Production in Wilmington, NC Drinking Water," Glenn M. Palen (MSEE), May, 1981, University of North Carolina (Philip C. Singer).

"Physical-Chemical Interactions of Ozone with Aquatic Humic Materials," Paul C. Chrostowski (Ph.D.), 314 pp., June, 1981, Drexel University (I.H. Suffet).

"Effect of Water Quality on the Ozonation of Micropollutants," Andrea M. Dietrich (MS), 175 pp., June, 1981, Drexel University (I.H. Suffet).

"An Investigation of the Oxygen Demand Materials of the Water Column in Prawn Grow-Out Ponds," Thomas M. Losordo (MA), 100 pp., December, 1980, University of Hawaii at Manoa (P.Y. Yang).

"Design Criteria for the Aerobic Treatment Process With and Without Pretreatment of Swine Waste," Ching-Jiunn Huang (MS), 72 pp., December, 1980, University of Hawaii at Manoa (P.Y. Yang).

"The Simultaneous Precipitation of Calcium Carbonate and Magnesium Hydroxide in the Water Softening Process," by Robert William Peters (Ph.D.), 429 pp., August, 1980, Iowa State University (John D. Stevens and Maurice A. Larson).

"Sewer System Evaluation Surveys Conducted in Industrial Plants," Robert B. Cadle (MSE), 80 pp., September, 1980, University of Central Florida (Waldron M. McLellon).

