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NEWSLETTER

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Vol. 3, No. 1

October, 1967

"The care of the public health is the first duty
of a statesman."

--Disraeli

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SECOND NATIONAL CONFERENCE ON ENVIRONMENTAL
AND SANITARY ENGINEERING GRADUATE EDUCATION

From August 28-30, 1967, Northwestern University was host to approximately 150 conferees interested in sanitary and environmental engineering graduate education. A series of nine task committee reports were presented during the Conference. These committee reports formed the basis for subsequent discussion. Finally, after some modifications, some of the reports were presented to the assembled group for ratification. In some cases resolutions were made calling for further study. Unfortunately, it was not possible for the assembled group to have a copy of the finished document they were voting on. As a result, there was some confusion in the final session as to the procedures to be followed in preparing a final report.

At the risk of misinterpreting some of the proceedings, we will attempt to review some of the proposals and statements made at the Conference for those who were not present.

The first task committee was charged with the job of defining the "Role of the Sanitary Engineer in Environmental Engineering." In doing so this committee redefined both sanitary engineering and environmental engineering, casting the sanitary engineer essentially in the role of the water quality engineer, whereas the environmental engineer became, in a manner of speaking, all things to all people. The list of 17 activities in the definition of the environmental engineer included regional and city planning, housing, highway engineering, weather prediction and control, life support systems, human factors engineering, and biomedical engineering. On the other hand, the redefined "sanitary engineer" was stripped of any role outside of water quality.

Discussion of this committee report centered mainly on the proposed definitions. Complaints were voiced that sanitary engineering should not be restricted solely to water quality engineering. There were further complaints that the term, "environmental engineer" is too ill-defined. No preference poll was taken. However, at the end of the Conference, the definition of "environmental engineering" adopted by EEIB was affirmed, and was considered to include "sanitary engineering," "industrial hygiene engineering," "air pollution control engineering," and "radiation hazard control engineering."

The second session was devoted to "Identifying Activities of People in the Environmental Engineering Field." This task proved to be especially difficult due to problems with definitions of terms such as "urban ecologist." The discussion dwelled for some time on the need for the environmental engineer to be an administrator. Some typical comments on the subject were:

"He who administers is the pre-eminent figure."

"Do we propose to train the environmental engineer as chief of the team?"

"The engineer is chosen for the specialty that he brings to the team, not for his administrative ability."

Once again, the issues were unresolved, but interest was focussed on one central issue; that is, whether sanitary engineering graduate education should aim toward the education of a generalist or of a specialist.

The third and fourth sessions were devoted to discussions of chemistry and biology in environmental engineering curricula. Specific recommendations were made for the increased emphasis and upgrading of coursework in these fundamental areas. Many of the recommendations applied specifically to the water-oriented engineer. Modifications of these recommendations were made to include some of the other aspects of environmental engineering before the final draft was written.

The Social Sciences in Environmental Engineering was the subject of the fifth session. Once again, the committee called for additional coursework in these areas, leading one wag to comment, "Will there be any room left for engineering courses in the program?"

The task committee for the session on the Planning of Environmental Systems recommended coursework in systems analysis. The task committee for session VII on Engineering Preparation for Non-Engineering Students in Environmental Engineering came to grips with the problems of preparing non-engineering students, in particular, biologists and denists, for an engineering degree. Comments from the audience indicated that biologists, in general, are better prepared in mathematics and chemistry than they have been in the past. The Conference endorsed the concept that many schools should offer an interdisciplinary graduate sanitary or environmental science degree program, preferably closely associated with an engineering program.

The final session on Criteria and Mechanism for Accreditation probably stirred the emotions of those present to a greater extent than any of the preceding sessions. The committee recommended, though not unanimously, that the Conference go on record as opposing accreditation of graduate programs in sanitary and environmental engineering. The ensuing discussion indicated that there was a strong cross-current of opinion on the subject with, perhaps, many more people opposed to accreditation than might have been anticipated. In the final session on "Summary and Resolutions," the group voted to have a poll taken of all interested sanitary engineering educators.

In summary, the conclusions which one might have drawn from attending the Conference were:

1. The question of a common name for all those in sanitary or environmental engineering or science is still unresolved. However, this Conference adopted the use of "environmental engineering" as the generic term and "sanitary engineering" as embracing all of environmental engineering not included in the other three categories; vis., industrial hygiene engineering, air pollution control engineering, and radiation hazard control engineering.

2. There is a division of opinion as to whether better graduate education in sanitary engineering means further specialization in the basic sciences, such as chemistry and biology, or a more generalized program which would emphasize humanities and social sciences. For some of the conferees, interest in the social sciences and humanities stemmed primarily from a desire to train environmental engineers for administrative or management duties. For others, interest in these

areas seemed to stem from the feeling that even the specialist needs an appreciation of these aspects to contribute to the solution of the significant problems of society. While not entirely true, it appeared that administrators preferred the creation of more administrators while the specialists were convinced that still further specialization was necessary.

3. There seemed to be general agreement that the Conference served a most useful purpose. Points of agreement and points of departure were made known. Many important issues were brought into better focus. The task committees, although they represented only a small sampling of those interested in each specific topic, had set up a framework for comment and criticism and had received both. The conferees felt that their time had been spent profitably and that similar conferences should be held more frequently.

BOARD OF DIRECTORS MEET IN EVANSTON

The thirteenth meeting of the Board of Directors of AAPSE was held in the Orrington Hotel in Evanston on Sunday, August 27, 1967. The agenda included reports from many of the committees and plans for the Association activities for the next few months.

The Board took action to re-initiate a monthly digest of legislative action which will be prepared by the Legislative Committee and distributed to all members of AAPSE. This information is believed to be important in keeping sanitary engineering educators apprised of these rapidly moving events.

Plans were made for the fall meeting in New York's Americana Hotel on the evening of October 9. The meeting, which will be in the Malmaison Suite 7 & 8, will be the annual AAPSE Business Meeting. The agenda will include a discussion of educational policies led by the Education Committee of AAPSE. The discussion will center around possible recommendations for the implementation of the educational policy suggested by the National Environmental Engineering Education Conference sponsored by EEIB and AAPSE. Also on the agenda will be committee reports and nominations of Board members for next year.

The Board approved recommended changes in the By-Laws pertaining to the election of officers. These changes will be presented to the members at the Annual Business Meeting in New York for approval as indicated by a two-thirds majority of a quorum.

The Secretary reported eight new members of AAPSE which brings the membership to 74. Professors Bernard L. Berger, Gilbert Dunstan, W. M. McLellan, Alan A. Molof, R. T. Skrinde, E. L. Thackston, R. F. Christman, and John Pfeffer are the new members.

Other action included plans for a meeting of the Board of Directors in November and discussion of the possibilities of a joint meeting with the Sanitary Engineering Committee of the Civil Engineering Division of ASEE. The Board also adopted as policy of the Association the "endorsement of the methods described in STANDARD METHODS OF THE EXAMINATION OF WATER AND WASTEWATER (latest edition) as the standard methods for water and wastewater analysis in the United States."

UCOWR COMMITTEE REPORTS ON WATER QUALITY

The Committee on Education and Research in Water Quality for the Universities Council on Water Resources (UCOWR) has recently issued a report of its activities for 1966-67.

The report discusses the preparation of various persons working in the water resources field insofar as water quality concerned. It also includes a discussion of various types of "service" courses in water quality and treatment which might be useful for the water resources people who are not specialists in water quality. Four types of such courses are described in the report. The Committee report also discusses the relationship between sanitary engineering and water resources engineering curricula.

The Committee on Education and Research in Water Quality is chaired by Professor W. J. Kaufman. Other members include R. O. Sylvester, B. B. Ewing, E. C. Tsivoglou, H. B. Peterson, and W. J. Weber, Jr.

DR. LAWRENCE NOW AT CORNELL

Dr. Alonzo Wm. Lawrence has been appointed Assistant Professor of Sanitary Engineering in the Department of Water Resources Engineering at Cornell University; he had been an Assistant Professor of Civil Engineering in the Environmental Engineering and Science Program at Drexel Institute of Technology since September 1965. Dr. Lawrence received the Ph.D. degree from Stanford University in April 1967.

CLEMSON ADDS NEW STAFF

Clemson University announces the appointment of Dr. Henry R. Bungay III as Professor of Environmental Systems Engineering. From 1963 to 1967 Dr. Bungay was a member of the Sanitary Engineering group at Virginia Polytechnic Institute. He received his Ph.D. in Biochemistry from Syracuse University in 1954. His primary research interests are in the dynamics of microbial systems.

HARVARD WATER CHEMISTRY INSTITUTE by Russell F. Christman

The first Summer Institute in Advanced Topics in the Theory and Practice of Sanitary Chemistry was held this summer at Harvard University. The program, partially supported by FWPCA grants-in-aid, consisted of two consecutive four-week sessions directed toward selected theoretical and applied aspects of water chemistry. It was jointly directed by Professors J. C. Morris and Werner Stumm of Harvard University.

The topics covered, each of which occupied approximately one week of lecture and laboratory work, were:

- a. Thermodynamics in Aqueous Solutions
- b. Equilibrium Relations

- c. Reaction Rates and Mechanisms
- d. Theory of Electrode Processes
- e. Coagulation
- f. Chlorination and Disinfection
- g. Removal of Soluble Organic Substances
- h. Deferrization and Demanganization

The participants in this, the first of a continuing series of summer institutes in Water Chemistry to be held at Harvard, found the presentations stimulating and the discussions lively. A particularly enjoyable facet of the conference was the attention given to informal discussion of research ideas and teaching methodology among the participants. Many of the attendees were, in fact, teachers of water chemistry at various institutions, although the level of rigor in the program caused most of us to question the appropriateness of these appointments.

The program was delightfully punctuated by the FIRST ANNUAL WATER CHEMISTRY PICNIC AND INEBRIETY FUNCTION; congenially hosted by John and Jgní O'Connor, just before many returned home to rewrite lecture notes.

Information regarding specific topics scheduled for coverage during subsequent summers can be obtained from Dr. J. C. Morris, Division of Engineering and Applied Physics, Harvard University.

Participants:

Julian B. Andelman	University of Pittsburgh
Francis B. Birkner	University of Maryland
Ariaan Boes	N. V. Intercommunal Waterleiding, Netherlands
Ching-lin Chen	California Institute of Technology
Russell F. Christman	University of Washington
Samuel D. Faust	Rutgers University
Tsuan Hua Feng	University of Massachusetts
Jon Foulds	New Mexico State University
Donald G. Jacobs	Oak Ridge National Laboratory
Charles R. Jenkins	West Virginia University
John S. Jeris	Manhattan College
John T. O'Connor	University of Illinois
Charles Oulman	Iowa State University
Alan J. Rubin	University of Cincinnati
Richard J. Williams	Johns Hopkins University
James R. Wood	Johns Hopkins University

FOREIGN TEACHING OPPORTUNITIES

Join the WHO and see the world! If you are interested in spending one year abroad, we suggest you write to Mr. C. H. Atkins, Director Environmental Health Division, World Health Organization, Avenue Appia, 1211 Geneva, Switzerland. He is looking for both English and French speaking sanitary engineering teachers for these one-year assignments.

DOMESTIC TEACHING OPPORTUNITIES

The University of Alaska has an opening for an Assistant Professor. They are looking for a recent Ph.D. with interests in water supply, treatment, and distribution. Contact Professor R. Sage Murphy, University of Alaska, College, Alaska, 99735.

Clemson University has an academic position in the Environmental Systems Engineering program. They prefer a man with background in physical processes such as sedimentation, thickening, adsorption, filtration, ion exchange, etc. Rank and salary are open. Reply to Dr. John F. Andrews, Environmental Systems Engineering, Clemson University, Clemson, South Carolina, 29631.

A vacancy has developed in the Department of Civil Engineering at Lehigh University for someone to teach sanitary engineering. Interested candidates should contact Professor Lynn S. Beedle, Acting Chairman, Department of Civil Engineering, Lehigh University, Bethlehem, Pennsylvania, 18015.

CHROMATOGRAPHY WORKSHOP SYLLABUS AVAILABLE

The AAPSE Workshop on Fundamentals of Chromatography, which was held on June 4-7, 1967 in Boulder, Colorado, was truly outstanding. The 230-page syllabus which was assembled by Professor Donald R. Washington and others on his committee is a very valuable reference for persons in research and teaching in Sanitary Engineering. Surely many universities will want a copy in their library for use of graduate students. Many AAPSE members probably would like a copy also.

Several copies of the syllabus are still available. The cost of the syllabus in the special AAPSE binder is \$15.00. It is also available in a plastic binder for \$12.50. All AAPSE members are eligible for a \$5.00 discount, however. Please send orders to:

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