



A public airing of Lake Erie's woes

MS
Aardor
Toxicity
M

Severity of Lake Erie's pollution debated

AIChE calls expert panelists, opens meeting to the public, to air the problems of the sickest Great Lake

Lake Erie has its pollution problems, but an epitaph is premature. This is the impression that must have traveled home with chemical engineers and others who attended a program billed as a panel-audience dialogue, held during the 65th national meeting of the American Institute of Chemical Engineers in Cleveland. They also probably left with the unsatisfied feeling that much basic information about Lake Erie and its problems is far from known.

These were the dominant impressions that emerged from the panel discussion, titled "Lake Erie—sick, dying, or dead?" The panel session itself was a test effort by the institute to conduct an open, public discussion at a national meeting. To this end, the meeting was open without charge or registration to all interested parties. It drew, in addition to 200 engineers attending the meeting, some 200 other persons—mostly members of civic, conservation, and allied groups.

Remarkably restrained in these days of confrontation, the panel-audience discussion nevertheless brought out the differences of opinion that exist among experts viewing the same information. The panel was deliberately designed to present different points of view, according to session chairman E. H. Bollinger of B. F. Goodrich. It consisted of George Harlow of the Federal Water Pollution Control Administration, Herbert Allen of the U.S. Bureau of Commercial Fisheries, consultant John Kinney, and J. E. Richards of the Ohio Department of Health.

Points of view were indeed wide-ranging in many areas. For example, panel comments indicate agreement that Lake Erie is polluted along the shorelines and that there is a severe algae bloom problem in the lake's shallow western basin. Beyond this point, unanimity breaks down.

One reason for different interpretations of pollution severity in Lake Erie is a paucity of data from the past on which to determine trends. Even some of the data that are available seem open to question. For example, Dr. Allen cites the changes in fish species and the conventional interpretation that change in water quality is at least a major cause. Mr. Kinney, however, points out that there is some question of whether this is due to pollution or simply to poor fish management in the past.

Mr. Kinney, representing the view most divergent from the more conventional one, is particularly concerned about the effects of confusion over what he terms the three types of pollution: actual pollution, political pollution, and hysterical pollution. Already, he says, areas adjacent to the lake are beginning to feel the effects on industrial development, as other areas in the U.S. exploit the idea that Lake Erie will shortly become a swamp, a condition he says the lake is far from.

Mr. Kinney calls for a reversal in the approach to the problems that exist—not to delay action, he says, but to put the most effort where it will do the most good. He would put the emphasis on the effect of discharges on lake water quality, rather than on the waste load aspect.

This difference in emphasis shows up strongly on the question of where to dispose of dredgings from lake harbors which in the past have been disposed of in the lake. FWPCA's Harlow says that the quantity of pollutants carried to Lake Erie in dredgings is considerable, and that they should not be dumped in the lake.

Mr. Kinney agrees that the dredgings are polluted. But, he questions whether this necessarily means that they cause pollution in the lake. Certainly, he says, polluted dredgings



Panel chairman Bollinger

Quiet debate in an age of confrontation

should not be dumped in shallow areas where the shoreline can be affected. However, studies by the U.S. Army Corps of Engineers, he says, have indicated that when put in proper disposal sites in the lake, there is no effect on water quality. He is concerned that political and public pressure will push the Corps of Engineers into a costly dike building program, which would have little if any effect on overall lake water quality.

Although Lake Erie has been most prominent in the national spotlight on Great Lakes pollution and control, the beleaguered lake seems likely to escape, at least for the time being, the controversy over DDT now boiling up around Lake Michigan, among other areas (C&EN, May 12, page 28). Figuring prominently in hearings before the Wisconsin Natural Resources Department on a petition to ban DDT was seizure by the Food and Drug Administration of 34,000 pounds of coho salmon from Lake Michigan. The fish contained 13 to 19 p.p.m. of DDT.

First analyses for DDT in Lake Erie coho were made just two days before the AIChE panel discussion and were reported there by Dr. Allen. Performed on 2- to 3-pound fish, the analyses showed a level of 1 p.p.m. on a whole fish basis and 0.6 p.p.m. on filet steaks. The FDA limit on fish for sale is 5 p.p.m.

Dr. Martin Stiles named editor of JACS

University of Michigan professor succeeds
Dr. Marshall Gates, who has held the post since 1963

The *Journal of the American Chemical Society* will have a new editor July 1. Dr. Martin Stiles, professor of chemistry at University of Michigan, Ann Arbor, Mich., succeeds Dr. Marshall Gates, professor of chemistry at University of Rochester, Rochester, N.Y. Dr. Gates is resigning after six years as JACS editor and 13 years as associate editor.

After almost 20 years with the journal, Dr. Gates says, "It's time JACS had younger and more aggressive leadership." He also admits that editing JACS has been taking more of his time each year, with the result that there is too little time, he feels, to do an adequate job of teaching.

Dr. Stiles joined the University of Michigan faculty in 1954, after receiving his Ph.D. from Harvard University. The 47-year-old chemist is a member of the executive committee of the ACS Division of Organic Chemistry and was, for three years, an assistant editor of *The Journal of Organic Chemistry*. His primary area of interest in organic chemistry has been reaction mechanisms. Dr. Stiles was a fellow of the Alfred P. Sloan Foundation 1961-65 and a John Simon Guggenheim memorial fellow 1962-63.

Teaching device. Dr. Stiles feels that a fundamental journal such as JACS is, basically, a teaching device. Two things it must not become, he notes, are a repository for data that accumulate for future reference only, and a news sheet devoted to reporting the latest tentative conclusions about the "hottest" problem in some narrow field of research. Previous editors of JACS, he points out, have wisely steered a course between these two pitfalls, with the result that a high percentage of the most important research papers are submitted to the journal.

Most chemists want their papers placed before as wide an audience as possible, he says. At the same time, he also feels that chemists are stimulated by seeing original accounts of important findings outside the area of their own current efforts. Thus, it's not surprising, he notes, that JACS, with its broad scope, is not only highly regarded but is also very popular among the world's chemists.

The editor's task in such a broad enterprise is very demanding, he says,



Photo by C&EN's Ernie Carpenter

Dr. Martin Stiles
Takes over July 1

and the editor cannot be expected to singlehandedly select papers for publication on such a broad spectrum of topics. Dr. Gates has done a "remarkably fine job" of getting effective review of manuscripts, while working with a very small editorial staff, Dr. Stiles says.

As new editor, however, Dr. Stiles has formed a board of editors consisting of eight prominent chemists, chosen to represent as many fields in chemistry as possible. Dr. Stiles plans to assign to each of these working editors many papers submitted for publication. The editors will choose reviewers and make the difficult decision whether to publish.

The board of editors will comprise Dr. Robert G. Parr, Johns Hopkins University; Dr. B. Seymour Rabinovitch, University of Washington, Seattle; Dr. Thomas Dunn, University of Michigan; Dr. Kenneth B. Wiberg, Yale University; Dr. Nelson J. Leonard, University of Illinois; Dr. Robert L. Letsinger, Northwestern University; Dr. Robert W. Parry, University of Utah; and Dr. Jack Halpern, University of Chicago. Dr. Carl H. Brubaker, currently associate editor for JACS under Dr. Gates, will continue in that position.

Careful review. An important element in the JACS tradition is the careful review of manuscripts prior to publication, Dr. Stiles notes. Editors vary in the relative weights they assign to the opinions of reviewers vs.

authors of controversial papers, but experience indicates, he feels, that careful reviewing increases a journal's usefulness.

Finding experts who can advise the editors on questions of originality, scientific rigor, and the quality of writing in a given paper is not too difficult, Dr. Stiles says. Achieving high standards in such matters requires hard work and good communication among authors, editors, and reviewers, he points out, but these people usually try to be objective and the framework for evaluating a paper on these points is fairly clear.

However, he says, there are two main problems of editing JACS that result from applying "nonscientific" criteria in deciding which papers to accept for the journal. These problems, he says, are most difficult to cope with. One of these problems is to decide which papers should appear in a general journal, such as JACS, and which should appear in more specialized journals. In rejecting a paper on such grounds, Mr. Stiles points out, the editor may both anger the author and create suspicion among editors of other journals to which the author may turn. A generation ago, he notes, almost all fundamental research papers by American chemists appeared in JACS. Today, it would be physically impossible to publish them all in one journal.

The other problem in which nonscientific criteria must be applied is in choosing which research results should be published as a "Communication to the Editor" in addition to, or instead of, appearing as an article with full details in a later issue. When a paper is rejected from the communications section, the editor is saying that the work lacks the urgency and novelty traditionally represented in that section of JACS. The author, of course, has a strong bias in both situations in which nonscientific decisions are made, Dr. Stiles points out.

For both problems, Dr. Stiles and his team of editors hope to find reasonable solutions. In doing so, they will maintain cognizance of an important fact—chemists today cannot afford time to read more than a small fraction of the published material that lies outside their immediate research efforts.