

PROFESSIONAL RELATIONS

BULLETIN

Division of Professional Relations

Box 286, Rahway, N.J. 07065



DENNIS CHAMOT, *Editor*
FRED OWENS, *Managing Editor*

No. 12
July, 1976

FROM THE EDITOR ...

Election Results

The results of the Division's latest election are as follows (* elected):

<i>Chairman-elect</i>	
Fred Owens*	147
Eugene Garcia	131
<i>Treasurer</i>	
Mike Linfield*	260
Stanley Kaufman	17
<i>Member-at-large</i>	
Attila Pavlath*	247
William Rebel*	218
Herbert Kagan	36
Joe Williams	30
Ballots sent:	540
Ballots received:	285

Report from New York

As usual, your Division and its Councilors were quite active at the ACS national meeting in New York last April.

Both Dennis Chamot and Norman Pinkowski participated in the executive session of the Committee on Professional Relations (Norm is now a full voting member of the committee; Dennis is a committee associate). Among other things, the committee approved Academic Guidelines for Employment, essentially by endorsing in the ACS Guidelines the Statement of Principles on Academic Freedom and Tenure of the AAUP. Furthermore, a report was issued (to be published later) on the layoff of faculty chemists at Tufts University School of Medicine. This breaks new ground for CPR, being the first academic layoff to be investigated by the ACS committee.

CPR made some other small changes in the Guidelines and rejected a few. Among those rejected was one that was submitted by this Division. The proposed guideline sought to protect chemists who preferred not to do production work during a plant strike, against their will (the proposal would not have affected any chemist who *voluntarily* chose to do so). The question was discussed vigorously, but a motion to table carried.

The CPR also discussed the Kepone mess and whether or not the individual chemists responsible should be censured by the ACS. Dennis Chamot sought to broaden the issue by suggesting that CPR go on record with a statement dealing with the ethical and moral respon-

sibilities of chemists to protect the health and welfare of both their fellow employees and the general public. There was much discussion of all the issues involved, and this will be looked into further.

Dennis Chamot, Gordon Nelson and Bob Olsen participated in a meeting of the Council Committee on Nominations and Elections, which was discussing guidelines for ACS elections (and a recently introduced petition on same). We had to spend a lot of time defending ourselves from several attacks by people who disagreed with our endorsement of Warren Niederhauser last year, even though similar actions have been taken in the past by other groups (such as local section executive committees) and even though no existing rules of the Society were violated. Both the attack and defense were spirited. Readers should note that not only would the proposed changes forbid any kind of endorsements but would also require disclosure of contributions by individuals and (according to the petition) would punish violators by expelling them from the Society! Gordon Nelson pointed out that such provisions could well result in lawsuits against the Society.

I am rather disturbed by the effort currently going into trying to put restrictions on ACS election procedures. It seems to be from the same crowd that tried to prevent petition candidates for President and Director by making the nominating requirements overly restrictive (these were finally modified). I am bothered for a couple of reasons. First, there have been no real abuses that would require massive changes in the way things have been done. Second, if anything, we have to make Society elections easier and more open, not more tightly controlled by a conservative clique. We need as much input into the electoral process as we can get, both in the form of information as well as qualified candidates.

The Council meeting on Sunday was short, as planned, and rather uneventful. Even so, the A. D. Little Report steamroller rolled on. About a half hour of this short meeting was given over to another series of reports on proposed changes in the structure and governance of the Society. Once again, these were simply repeats of written reports, and no discussion was permitted. If you have strong feelings on this subject, get them to every Councilor you know, division and local section. The first petitions derived from this report will be voted on in San Francisco in August.

Our Symposium on the Legal Rights of

Chemists was well received. All of the papers will be published in book form in the *Advances in Chemistry* series of the ACS. It should appear in a few months.

Attention

I would like to call your attention to the numerous small items of Division business that are contained in this issue of the *Bulletin*. In particular, I ask that you vote on the Bylaw amendment, and that you respond to Susan Collier's call for suggestions. Also, send any names you would like to propose for the next DPR election to the new chairman of the Nominating Committee, Gordon Nelson (you may address letters to the Division, at the address given in the masthead).

Important

Please note that the Division's official activities at the San Francisco meeting will be concentrated on Monday, August 30, 1976.

Our major symposium, "Professionals in Unions: Yes or No," will begin at 2:00 pm. We will have six speakers, three from professional unions (engineers, college professors and actors) and three chemists not associated with unions (including the chairman of the ACS Professional Relations Committee and a past chairman of the Economic Status Committee). The program will allow a full hour after the short talks for general discussion and question.

This will be followed by our **ANNUAL BUSINESS MEETING**.

All Division members are urged to attend.

Finally, we will have our popular Social Hour. Hope to see you all there.

—Dennis Chamot

RESPONSIBILITY OF PROFESSIONALS

IN THE REGULATORY PROCESS

John Clement Kolojeski*
U. S. Environmental Protection
Agency
Washington, D. C. 20460

I am a lawyer by profession. My perspective of the role of scientists in general and chemists in particular in the regulatory process comes from my intimate involvement over the past three and a half years with regulatory standard setting and environmental litigation involving the U.S. Environmental Protection Agency. I know that there are quite a few scientists who feel that if there were fewer lawyers involved in the environmental and occupational safety area that we would be a lot better off. On the other hand, I can recall vividly the comments of EPA's Chief Administrative Law Judge in the midst of last year's suspension hearing involving the pesticides, Aldrin and Dieldrin. During the testimony of one particularly recalcitrant scientist who had refused on cross-examination to concede even the most minor technical point, the Judge threw up his hands in frustration and said that it was fortunate that the decision in that case would not be left up to the scientists.

Not all EPA decisions are, of course, decided in the context of adversary hearings. However, whether a particular chemical is to be banned following an adversary hearing or whether a limitation on the discharge or use of that same or another chemical is to be made by means of a staff recommended regulation, in either situation the cooperation of industry and agency scientists and the lawyers is, in my view, indispensable to responsible regulatory action. The role of chemists, in particular, (a subject I will address in great detail later) has become absolutely critical to the success of the regulatory process.

I can recall several instances in my own experience in which the responsibility or lack thereof of certain scientists has become a major issue in the regulatory field of public health. Among lawyers in the regulatory process much attention has been given to the reaction of Mr. Justice Clark in the vinyl chloride case (*Society of Plastics Industries, Incorporated vs Occupational Safety and Health Administration*, 509F.2d 301 (1975)) to the series of events leading up to the recognition of the hazards associated with exposure to that chemical. In upholding the Secretary of Labor's worker exposure standard in that case Justice Clark began his opinion by describing rather bitterly and critically certain details of the background events in the vinyl chloride history. He stated:

"We need not outline in detail the morbid *Vinyl Chloride Chronology*, published by an industry spokesman, the Manufacturing Chemists Association (MCA), in a 1974 press release in order to illustrate the mounting evidence of VCM's carcinogenicity. Indeed, the record shows what can only be described as a course of continued procrastination on the part of the industry to protect the lives of its employees. In 1967, when the industry had not reached its thirtieth anniversary, upon receiving recurring reports of the softening of the finger tips and bone of VCM/PVC workers, the Manufacturing Chemists Association had the University of Michigan study the causes of this abnormality. Three years later, in 1970, when it was advised that research could not pinpoint the cause of the malady but recommended a VCM/PVC ceiling of 50 ppm VCM, nothing was done. And in March of the same year, Dr. P. L. Viola of the Regina Elena Institute of Cancer Research in Rome, Italy, published a report that 30,000 ppm VCM exposure for four hours per day, five days per week for a year caused cancer of the skin, lung, and bones of rats, and a few months later at the Tenth International Cancer Congress, described observations of malignant tumors in the ear canals of rats subjected to the same exposure. Apparently relying on Dr. Viola's comment at the close of his abstract that: "No implications to human pathology can be extrapolated from the experimental model reported in the paper," the industry did nothing."

My purpose in mentioning the vinyl chloride case is not to assign blame or castigate industry for footdragging or Dr. Viola for his conclusion that no implications to human pathology were to be drawn from his carcinogenicity experiment in rats. In this regard, I should state that I am aware both of the AAAS Committee on Scientific Freedom and Responsibility's report on this very subject as well as the response to that report by the Manufacturing Chemists Association published recently in *Science*. My purpose in mentioning the vinyl chloride case is to illustrate the enormous responsibilities on scientists in cooperating fully with the regulators where public health is at issue. To be sure, it likewise is the duty of the regulator to comprehend and explicate fully the ramifications of standard setting in the regulatory process. The stakes can be and often are enormously high in the regulatory

process, which concomitantly heightens the responsibility of involved scientists. The threat of cancer in the case of VC exposure, for example, was the known human risk. On the other hand, the costs of reducing worker exposure to vinyl chloride in the plant as well as the cost of reducing ambient levels in communities nearby plant areas, which will be borne both by industry and the consumer, have been estimated in the multi-millions of dollars.

The responsibility and role of the chemist, often the industrial chemist, in the regulatory process has become increasingly apparent. The "best available technology" standard is currently being employed by EPA in regulating the discharge of hazardous pollutants into the environment. Often, however, the full extent of the "best available technology" for the reduction of discharge of such pollutants is known only by the scientists working for the manufacturer. It is certainly not surprising to learn, for example, that the most accurate method of analytical detection of a particular chemical and its breakdown products has been devised by chemists working for the company that may have patented the compound and have been manufacturing it for some ten to twenty years. When it becomes necessary, under one or several of our environmental statutes, to impose discharge standards on such a compound, it is obvious that there is a great degree of public responsibility required of the regulated industry in disclosing all relevant and pertinent technical information to the appropriate regulatory agency. In some instances the difference between permitting the emission of, or worker exposure to, 10 as opposed to 100 ppm of a toxic chemical may mean the difference between 10 and 100 million dollars in costs to a large national industry. It may also, of course, mean the difference between 10 and 100 deaths or some chronic ailment among workers or those living nearby a plant.

I was asked recently in an interview whether I felt that the pesticide industry, in particular, was capable of self regulation as opposed to EPA imposed reporting and safety testing requirements. My own reaction was simply that Congress had already addressed that issue and had responded responsibly by authorizing EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to require safety testing for all suspect compounds and, moreover, by imposing civil and criminal sanctions against any pesticide registrant failing to disclose "factual information regarding unreasonable adverse effects on the environment of the pesticide." Thus, a chemist or toxicologist employee or any other individual employed by a pesticide regis-

*The views expressed herein are those of the author and do not necessarily reflect the views of the U.S. Environmental Protection Agency.

trant must disclose such information to EPA under penalty of law irrespective of internal pressures or likely costs and consequences to the manufacturer.

I should note that there are comparable strict reporting provisions in the proposed "*Toxic Substances Control Act*," an area in which such requirements are probably most applicable and needed. Indeed, Section 8 of the most current version of that Act requires any person "who manufactures, imports, processes, or distributes in commerce any chemical" to report to the Administrator of EPA: (1) a list of all health and safety studies in progress on the date of enactment of the Act, (2) a list of all health and safety studies conducted by or for such person within the 40-year period prior to the date of enactment of the Act, and (3) any and all health and safety studies conducted by such person or known to such persons which indicate that any chemical substance being manufactured, imported, processed, or distributed in commerce may have adverse effects on human health or the environment. Unfortunately, a powerful industry lobby has thus far prevented the passage of this important piece of legislation.

Let me make it very clear that my endorsement of these statutory provisions should in no way be interpreted as an expression of mistrust of the motives and actions of thousands of honorable scientists and corporations currently bound by such provisions, who have cooperated fully with our Agency over the years. I look upon such statutory provisions much in the way I, as a lawyer, look upon statutory authorized subpoena power. The legal authority to compel testimony and the production of documents is a time honored and valued method of obtaining information. Subpoena power likewise can be used protectively to permit an individual who is willing to testify but who may, because of occupational or other circumstances, not be in a position to testify voluntarily. In the case of the FIFRA reporting provision, Congress made the value judgment that EPA should have all the

information bearing on the adverse environmental effects of a pesticide under penalty of law. Undoubtedly, the Congress has put high priority on public disclosure of possible public health and environmental threats when toxic substances are involved.

Let me conclude by touching on one additional area in which the chemist, in particular, plays a key role in the environmental and occupational areas of the regulatory process. My earlier comments dealt largely with the appraisal and disclosure of information generated by the chemist and the need for the cooperation of scientists in investigations which may affect the regulation of a particular chemical. There are instances where the adverse effects of certain hazardous, though useful, chemicals are well known to both the manufacturer and to the regulatory agency. In general, most of the environmental legislation administered by the EPA permits a balancing of societal costs, benefits, and available technology in determining the permissible discharge level. In the case of new chemicals and certain highly complex multi-compound chemicals, we have found that the methods of detection or the minimum level of detection are sometimes inadequate for purposes of making public health decisions that can afford the general public "an ample margin of safety."

An example of such a situation took place a little more than a year ago when EPA announced that it would not proceed with a hearing to determine whether a particular pesticide, containing a highly active teratogenic contaminant, should continue to be used on certain food crops. The reason given was that methodological problems in the analytical detection of the substance prevented an accurate assessment of residues in the food chain. It was my feeling at the time, and it remains so today, that in such a case the responsibility for developing reliable, accurate analytical methods for detecting even very low residues should be placed on the party manufacturing and disseminating the particular

chemical. In areas such as teratogenicity, carcinogenicity, and mutagenicity, for example, where we are still on the frontiers of scientific knowledge, and do not know if or at what level a threshold may exist, it is important to be able to detect with the greatest precision possible the qualitative and quantitative presence of chemicals in the environment which are known to cause such serious adverse effects. I think this is a great challenge to chemists in both private industry and in the public sector. Thus, even though there may be no statutory requirement compelling the manufacturers to develop increasingly refined analytical methods, I believe that responsible industry should give a high priority to this area and make every effort to develop and implement refined monitoring methods.

Finally, let me say that while I believe chemists and other scientists owe a high degree of responsibility to the general public within the context of the regulatory process, I believe that the regulatory agencies have broad responsibilities too. The integrity of the process must be demonstrated to all those affected by it. I believe that, when the law permits, economic costs must be evaluated and considered fully and ultimately be communicated to the public when a regulatory action is taken. Likewise when EPA permits the continued discharge or use of a chemical which is known to cause adverse health effects in man or test animals, I believe that the risk, even though it may be small, should similarly be made known to the public or to affected workers. I have advocated the adoption of such a philosophy within EPA. Our regulatory actions will never completely satisfy all the segments of society. In fact, when our Agency ceases to receive criticism simultaneously from industry and environmentalists, I will be concerned whether our actions are serving the best interests of society as a whole.

RESOLUTION ON C&EN

At its meeting on April 4, the DPR Executive Committee discussed and passed the following resolution:

"A \$3.00 increase in basic membership dues, to be allotted in its entirety to *C&EN*, was voted by the ACS Council at its Philadelphia meeting on April 9, 1975. The Hagen Report on attitudinal study and *C&EN* involvement showed that only half of the respondents felt that "*C&EN* does a good job of advancing the professional and economic interests of the average ACS member," and more than one third feel *C&EN* "is losing contact with its readers."

"The Executive Committee of the Division of Professional Relations notes with regret, a year later, both the continued poor coverage of professional issues and the lack of correspondence in *C&EN* dealing either with professional matters or with the governance of the ACS.

"Now that the various bodies of the Council are seeking membership input on the ADL Task Force proposals and on Election Guidelines, it is unfortunate that *C&EN* has to date discour-

aged a lively exchange on these topics in its "Letters to the Editor" section.

"Therefore, be it resolved that the Executive Committee of the Division of Professional Relations urges the Editorial Board of *C&EN* to initiate the following:

"1. Encouragement of discussion in "Letters to the Editor" of professional and economic issues as well as of problems of governance of the ACS, now under discussion by the ADL Task Force.

"2. Emphasis on publication of letters from Councilors bearing on substantive issues before their Committees and the Council. (*C&EN* should offer a forum of communication between Councilors and the membership at large).

"3. Invitation of editorial comment representing a wide spectrum of opinion within the ACS, while de-emphasizing the frequency of personal contributions by the Editor.

"4. Increased coverage of articles and surveys bearing on the economic and professional status of chemists in industry, government and academia."

REQUEST

We seek member suggestions for new programs. The Division of Professional Relations has presented symposia at national meetings and has published articles in this *Bulletin*, on a variety of subjects. Future symposia are now being planned for the 1977 and 1978 national meetings.

The Executive Committee of DPR would like your input on new forms of programs for our division. We are interested not only in suggestions for symposia subjects, but even more, in getting your ideas for new *types* of programs. For example, would you be interested in topical group discussions that would meet after the scientific sessions are over? How can we help local professional relations committees improve or develop their programs? Etc.

Suggestions should be sent to:

Dr. Susan Collier
DPR - ACS
Box 286
Rahway, N.J. 07065

POSTMASTER: IF UNDELIVERABLE AS
ADDRESSED, PLEASE RETURN TO
UNIVERSITY OF PENNSYLVANIA,
DEPARTMENT OF CHEMISTRY, ROOM
236 SPRUCE ST. WING, PHILA., PA. 19174

Published by the
Division of Professional Relations
American Chemical Society

Nonprofit Organization
U.S. POSTAGE

PAID

Philadelphia, Pa.
Permit No. 404

THE ECONOMIC STATUS OF THE PROFESSIONAL IN CHEMISTRY

Madeleine M. Joullie, Ph. D.

Philadelphia, Pa.

The ACS Office of Manpower Studies conducts several surveys on the economic status of chemists and chemical engineers: a comprehensive survey on all aspects of remuneration of ACS members to determine both the characteristics and economic status of the profession; a starting salary survey; a survey of academic departments to determine enrollments in chemistry, degrees granted and short term projections of these figures; and an annual report compiling and analyzing statistics on chemists and chemical engineers. More recently special studies on the economic status of women and postdoctoral fellows have been included (Surveys are available at nominal cost from the ACS Special Issues Sales Office).

At the last New York meeting (April, 1976), the Council Committee on Economic Status received preliminary information on a survey just completed by the Office of Manpower Studies at the request of the Board Committee on Public, Professional and Member Relations. A questionnaire was sent in February to the heads of all chemistry departments that grant masters and

doctors degrees and have been approved by the ACS Committee on Professional Training. They were asked whether they planned to add any academic staff for the 1976-77 school year. The primary purpose of the survey was to substantiate or refute the rumors that such openings are very scarce.

The 317 chairmen who responded (322 polled) reported a total of about 300 positions available, of which approximately 250 are tenure-track positions. This represents about 5% of the current chemistry faculties at these schools and could be considered primarily replacement of attrition losses. The largest number of openings are in analytical and organic chemistry.

Nevertheless, if one examines the recent data (which will be published in the 1975 "Professionals in Chemistry"), it appears that the availability of jobs for all chemists is still going to be tight for the foreseeable future.

Last year, the market absorbed 23% of B.S. graduates and an additional 30% obtained financial support for graduate studies. Although this is a small improvement over 1971-72, profes-

sional attrition of B.S.'s is extremely high. Furthermore, fewer M.S. recipients obtained jobs and more continued their graduate studies.

Nearly half (47.5%) of last year's Ph.D. recipients went into postdoctoral positions. This is higher than the previous year (43.1%), and continues a steady increase from 15% in 1960.

The National Science Foundation and the U.S. Bureau of Labor Statistics each predict, in separate, recently completed studies, an oversupply of chemistry Ph.D.'s (10-20%) over the next ten years. The oversupply in other fields is predicted to be even greater, and may force people towards chemistry.

A surplus of Ph.D.'s depresses salaries across degree levels, and it erodes the B.S. market, which is not very good. The forecasted surplus of Ph.D.'s could eliminate as many as half of the B.S. positions, or about 2,000 jobs.

Salaries of ACS members increased for all degree levels from Spring 1974 to Spring 1975. Adjusted for inflation, however, 1975 salaries continued a downward trend that has persisted for several years.

BYLAW CHANGE

The recent decision by the national ACS to create National Affiliates mandates that we should make a minor change in our own bylaws. The Executive Committee of DPR suggests the following change, Article II, Sec. 4.b. (delete underlined, and add in bracket):

"A Division Affiliate (Any affiliate of the Division) shall retain such status only so long as payment is made of Division dues and the affiliate's name shall be stricken from the rolls as soon as dues are in arrears."

BALLOT - BYLAW CHANGE

- Approve above change
 Disapprove above change

Name _____

Signature

Print

Address _____

Return to: Robert Olsen
Secretary, DPR
Box 286
Rahway, N.J. 07065