ACPA NEWS

The Newsletter of the Association of the Chemical Profession of Alberta

Volume 6 Number 1

Announcements

Professional development seminar
The professional development seminar will not be held in 2000 however the seminar in 2001 is already in the planning mode. There will be two topics: Forensic Chemistry and Industrial Espionage. We have two speakers lined up already. One is a former member of the RCMP and CSIS and the other is the Director, California Department of Justice, Forensic Training Center and formerly of the RCMP Forensic Laboratory Chemistry Section Vancouver. It is likely the seminars will be held both in Edmonton and Calgary during the Feb-Mar period. Mark it as a MUST on your calendar.

Annual General Meeting

The annual general meeting will be held in Edmonton this year on May 27 at the Alberta Research Council. (Confirmation of place is not available at this date). A list of nominees for the board is attached.
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Professional development credits

After reviewing the comments received from the last presentation, the Board has drawn up an amended version for your consideration. It is located as an attachment at the end of the Newsletter. Please comment in writing to Kevin Dunn.
e-mail : dunnk@cadvision.com
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Treasurers Report

The balance as of January 26, 2000 was $10,035 in checking and $10,236.55 in a T-Bill account.
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Registrars Report

The fee notices for the year 2000 were sent and response is on track.
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Bio Corner

Kevin Dunn, B.Sc.

Association of the Chemical Profession of Alberta and is Vice President, Environmental Management Systems at Jacques Whitford Environment Limited. In 1977, he graduated from the University of Calgary with a bachelors degree in chemistry and has since obtained a Certificate in Business Management from the Canadian Institute of Management.

Kevin has had a varied and interesting career. In chronological order he has been:

- a quality control chemist and an industrial research chemist, for a potash mine in Saskatchewan,
- an ICP and atomic emission spectrometer salesman,
- an instrumental analytical chemist in a commercial environmental laboratory,
- an industrial hygienist,
- an environmental auditor, accredited as a Certified Environmental Auditor since 1996, and
- an environmental management systems specialist.

Kevin is an active member of the Canadian Standards Association Technical Committee on Environmental Management Systems. He has also returned to his alma mater, the University of Calgary, to instruct professional development courses on environmental auditing and environmental management systems in the Faculty of Continuing Education, and at the Faculty of Extension at the University of Alberta.

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Don White, B.Sc.

Don received his degree from the University of Calgary and began his career in 1970 as a lab technician with BJ Services in Edmonton. He later moved back to Calgary as a chemist with Agriculture Canada's Feed and Fertilizer Laboratory. With Agriculture Canada, Don was involved in analytical method development and finished up as the Supervisor, Drugs, Antibiotics and Mycotoxins Unit. In 1980, He joined Core Laboratories as supervisor of the oil, water and chemical analysis laboratory. This group was involved with oil and water quality analysis, air monitoring, product analysis and as well as general chemical analysis. In 1987, Don transferred in to the Sales group at Core Lab and in 1990 became the Manager, Environmental Technology Services. He left Core Lab in 1991 to join Laidlaw Environmental as Laboratory and Service Manager at the Ryley, Alberta landfill and transfer station. Don served as Technical Manager for the Ryley facility before assuming his current position as Operations Manager in 1997. During his time with Laidlaw now known Safety-Kleen, he has been involved with waste analysis programs, environmental impact assessments, groundwater and surface water monitoring activities and now the day-to-day operation of a hazardous waste transfer station and of Alberta's first Class 1 landfill.

Don has been active in the Environmental Services Association of Alberta. He is a member of the Air and Waste Management Association. He recently received certification as a Qualified Environmental Professional (QEP) from Institute of Professional Environmental Practice. He has been a member of the Board of Directors of the ACPA for three years.

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From the Editors

All contributions from members to the newsletter will be welcome. Please send them to Robert Swingle at Maxxam Analytics 2021-41 Avenue N. E., Calgary, Alberta T2E 6P2 or fax them to 403-2919468. If you prefer electronic mail address them to the internet at roberts@internode.net. It would be nice if you could send any lengthy material on disk in PC format using Microsoft Word.

In this issue is a attached a guest editorial written by Dr. Harald Thimm who has just been elected to the board of directors of the American Institute of Chemists (AIC). It was first published in the July-August 1999 issue of *The Chemist*.

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Discussion Document

Declaration of Professional Practice and Professional Development for Re-Registration as a Professional Chemist

Professional Practice:

I, _____, hereby declare that I have been active in the Practice of Chemistry for at least 1000 hours in the past year, or alternatively, 3000 hours in the past three years.

_____ _____

Signature Date

Professional Development:

Activities Approved for Credit[1]	**Allowable Credits**	**Credits Claimed**[2]
Relevant work experience in the practice of chemistry	1 PDC / 40 hours (max 30)	
Coaching & mentoring on-the-job	1 PDC / day (max 10)	
Development and documentation of in-house test methods	2 PDC / method	
Reading relevant professional or technical literature	1 PDC / 2 hours (max 10)	
Attending relevant courses, conferences, seminars & workshops	1 PDC / hour duration	
Presenting or chairing a course, seminar or workshop	3 PDC / hour presenting or chairing	
Researching and presenting a learned paper or poster at a local/regional meeting	5 PDC / paper or poster	
Researching and presenting a learned paper or poster at a national/international meeting	10 PDC / paper or poster	
Writing published paper or article – peer reviewed	10 PDC / paper or article	
Writing published paper or article – not peer reviewed	5 PDC / paper or article	
Organizing or assisting ACPA activities or special events (Chemistry Week, Science Fairs)	1 PDC / hour (max 10 per event)	
Attending ACPA meetings (eg. AGM)	4 PDC / meeting	
ACPA Board Member or Executive Position	1 PDC / hour (max 10 per position)	
Active membership in other relevant associations or societies	4 PDC / society (max 12)	
Executive position or organizing activities for other relevant associations or societies	1 PDC / hour (max 10)	
	Total PDCs earned in this credit year	
Carried forward from two credit years previous	Available PDCs: _____	Claimed PDCs: _____
Carried forward from previous credit year	Available PDCs: _____	Claimed PDCs: _____
	Total PDCs claimed in this credit year	

1 Relevant activities other than those listed will be considered for credit on application to the ACPA.

2 Credit may be claimed only for those activities undertaken in the "credit year", being the calendar year immediately preceding the year for which re-registration is requested.

I, _____, hereby declare that the information provided above is factual and correct. I acknowledge that the information is subject to independent verification. I commit to maintain records to support the information provided.

_____ _____

Signature Date

Summary of PDCs carried forward to next year:

Eligible Year	Method of Calculation	Carry-Forward Claimed
Two years ago	No carry forward allowed	Nil
Previous credit year	Available PDCs less Claimed PDCs	
This credit year	Earned PDCs less 50	

Request for Extension

A Professional Chemist must have been active in the Practice of Chemistry for 1000 hours in one year or 3000 hours in three years and have obtained 50 PDCs in one year or 150 PDCs in three years to be eligible for continuance of registration. If a Professional Chemist is unable to claim the required number of hours or PDCs, the deficit may be made up for in either or both of the subsequent two years. To do this, the Professional Chemist must complete and sign the request provided below.

I, _____, hereby request to exercise my option to accumulate the hours of professional practice and/or the PDCs required for re-registration over the three year period commencing with this credit year.

I declare that the deficit in the number of hours I have been active in the Practice of Chemistry is _____ hours in this credit year.

I declare that the deficit in the number of PDCs I have claimed for this credit year is _____ PDCs, which has been calculated in accordance with the following formula:

PDC deficit = 50 - Total PDCs claimed in this year.

I declare that it is my intent to make up for the declared deficit in the hours of professional practice and/or the number of PDCs within the next two credit years. I commit to show the PDC deficit as a negative carry-forward on next year's return.

_____ _____

Signature Date

Please retain a copy of this declaration for your records.

Guest Editorial.

Harald F. Thimm

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The Need for Professionalism

In the last environmental issue of The Chemist, James Smith and Leslie Eng very eloquently put the case that chemists in the environmental field tend to be marginalized, and that "*…junk science has obtained a stranglehold on current environmental chemistry. We are in a society where junk science prevails in policy, advertising, and the courtroom".*

I dare say a large majority of us can recall similar instances. For example, it is disconcerting to be told by regulators that the laws of thermodynamics do not apply to environmental contaminants and their fates.

On the broad scale, once a particular subject has caught the attention of the media and our politicians, the chorus of ignorance can become deafening. Any scientist who has the temerity to raise questions about the support of some favoured theory is likely to be shouted down or have his/her motives called into question. The recent preoccupation with anthropogenic global warming has unfortunately reached such a stage.

Several years ago, a well-known British scientist pointed out that the simple absorption-emission scenario for infrared absorption of CO_2, on which the models of the Intergovernmental Panel on Climate Change (IPCC) are based, appeared to be incorrect. The vibrationally excited states of gases at atmospheric pressures are much more likely to relax by molecular collisions.

The excited state this elicited in researchers associated with the IPCC, writing in subsequent issues of the same journal, was predictable enough. However, this was not the end of the matter. In a Danish-made television "documentary" not too long ago, I saw this scientist's name, in a long list of presumably similarly unworthy fellows, for whom the producers of the "documentary" had discovered a conspiracy linking them to not only the coal industry, but also the moonies. I am not aware that the issue raised by the scientist in question, the relaxation of vibrationally excited states in the gas phase by fluorescence, has yet been addressed.

It should not be too surprising that many professionals in the chemical field simply do not consider it worth the effort to raise pertinent questions about such public issues, in light of responses of this kind. Therefore, one should not be too overwhelmed by the proliferation of junk science in general.

However, the spread of misinformation cannot be laid at the doorstep of engineers (as a chemist with qualifications in two disciplines of engineering, I freely admit to a bias). The widespread marginalization of chemists, and their relegation to environmental analytical measurement, while it no doubt contributes to the spread of misinformation, is in my view part of a cycle that has other roots. Even as analysts, chemists are occasionally marginalized. A recent report to the Government of Ontario, precipitated by some goings on with respect to mining stocks at the Toronto Stock exchange, recommended that the mineral analysis data used in any mining stock promotion must be certified by professionals. The professionals apparently deemed most appropriate were engineers and geoscientists, in spite of the existence of a professional association of chemists in that province.

It is true that, in the perception of the public, chemists are little more than analysts. A vicious cycle exists in this respect, with universities being unable to attract new students to the discipline. Chemistry is still seen as a pure science, with applications in diverse areas such as engineering, pharmacology, soil science and other fields. Most university chemistry departments now teach chemistry service courses to engineers and agrologists, but no reciprocal arrangements exist. This appears to be the main way in which the growing multidisciplinarity of work in chemistry is recognized. What is lacking is a recognition that chemists need to be regarded as professionals in their own right, and to be trained to fulfil that role in industry. The new graduate today is in most cases not well prepared in this sense.

In recent years, there has been an increasing trend in the need for responsible care programs in industry, the environment, and in public policy. This is evident in the need for industry to have in place programs relating to materials safety, due diligence in environmental matters, and waste management. Likewise, public policy relies more heavily on an understanding of chemistry than ever before.

Given this increasing trend, it is no accident that government will look to the existing self-governing professions for solutions. These professions have defined scopes of practice which to some extent overlap with chemistry, and therefore

appear on superficial examination to be the organizations to which one should turn for remedies, as in the case of the commission in Ontario. Such self-governing professional organizations also have the power to discipline their members for unprofessional or unskilled conduct in quasi-judicial proceedings, and this fact enhances their appeal to governments.

The real problem is that organizations such as engineering bodies are not all appropriate to judge whether good and competent use has been made of chemical knowledge. Both industry programs and government policies could, in my view, be substantially improved by greater input from qualified professional chemists. As an example, current U.S and Canadian waste management guidelines require extraction of waste with an acetic acid/acetate buffer and determination in the extract as discrete species such substances as nitro-hydrochloric acid (i.e. aqua regia), acetyl chloride, ammonium sulphide and acetic anhydride in part per million concentrations. The nonsense inherent in this is evident to most of us.

How does one best solve this problem? In my view, the marginalization we are subjected to as chemists is, in many ways, self-inflicted. Attempts by the profession to become more vocal, and visible, and attempting to educate the politicians, the public, and attorneys on the scientific process have been tried before in many countries, and have mostly failed. We will never be perceived as more than analysts (no denigration of analysts intended), unless chemistry graduates are seen as capable of making more than a peripheral contribution to industrial decision-making by virtue of their training.

In the end, I believe, the answer lies in attaining the status of a self-governing profession, not only with restricted use to title, but with a restricted right to practice within a defined scope of activity. The ability to discipline and de-register would necessarily be a part of this status.

There are a number of quite considerable difficulties associated with such a task. One is that the relevant jurisdiction for such bodies tends to be at the state or provincial, rather than federal level (at least this is the case in Canada). Another is that it inevitably requires the cooperation of the academic sector, because self-governing professional bodies tend to have considerable influence on university curricula. Defining a scope of practice without major opposition from entrenched professional bodies that rely on chemistry, and might see their scope of practice infringed upon, will also not be easy. In addition, a federal body that coordinates the regional ones will be required, in order to maintain portability of professional status. There are more such difficulties. In some regions, where few chemists are active, it might be preferable for chemists to be accorded status as engineers, for example.

Until self-governing status is a reality, I can only agree with Smith and Eng that environmental chemists must become conversant in other areas that comprise their multi-disciplinary field of choice. However, I would extrapolate this need to all chemists. If chemists find they do not have the training to make more than a marginal impact in their industries, they will find their careers enhanced significantly by making the extra effort to obtain that training after receiving their chemistry degrees. The key is to be a versatile professional. The alternative to the education of our chemists for a professional role is stagnation of the profession, and the proliferation of junk science by unqualified people, because our profession will have defaulted.

ACPA ANNUAL GENERAL MEETING

MAY 27, 2000
2:00 p.m.

ALBERTA RESEARCH COUNCIL AUDITORIUM
250 KARL CLARK ROAD

NOMINATIONS FOR

ACPA BOARD OF

DIRECTORS

The following members of the ACPA have consented to let their names stand for election to the ACPA Board of Directors at the Annual General Meeting on May 27, 2000.

Stan Backs

Frank Bachelor

Erv Callin

Kevin Dunn

Koshy Malayil

Mary Mayes

Trent Parks

Trevor Satchwill

Andy Schmidt

Ken Schmidt

Duncan Stanners

Bob Swingle

Dixon Thompson

Don White

Anyone wishing to submit additional candidates for the Board of Directors must have their nomination into the Secretary by April 10, 2000. (**ACPA, P.O. Box 22320 Banker's Hall, Calgary, AB T2P 4J1** or e-mail trevor.satchwill@gov.calgary.ab.ca)

1999 ACPA Board of Directors

Name	Position	Affiliation
Kevin Dunn	President	Vice President, Environmental Management Systems Jacques Whitford Environment Limited
Frank Bachelor	Vice-President	FWB Chemical Consulting
Andy Schmidt	Secretary	Instructor Red Deer College
Trevor Satchwill	Treasurer	Chemist, Waterworks Division The City of Calgary
Norman Gee	Registrar	General Chemistry Lab Coordinator, U of A
Arthur Bollo-Kamara	Director	Scientist, Investigations Branch Alberta Environmental Protection
Erv Callin	Director	Envirotest
Andrew Masters	Director	Vice President, Environmental Sciences, Maxxam Analytics Inc.
Bob Swingle	Director	Manager, Scientific Services Maxxam Analytics Inc.
Don White	Director	Operations Manager Safety-Kleen Environmental Services
Koshy Malayil	Director	Kaizen Environmental Sampling Inc.
Trent Parks	Director	Radian International Canada Inc
Duncan Stanners	Director	Shell Canada