

Professional Engineer



ASSOCIATION OF PROFESSIONAL ENGINEERS
OF THE PROVINCE OF MANITOBA

73rd ANNUAL GENERAL MEETING

OCTOBER 30, 1992 - HOLIDAY INN CROWNE PLAZA

AGENDA

- 7:30 a.m. Breakfast Meeting**
Speaker: Dave Sprynczynatyk, P.E.,
North Dakota State Water Commission
Topic: "Garrison Diversion Development Plan"
- 8:30 a.m. Registration**
- 9:30 a.m. Official Opening - President N. Pat Feschuk, P.Eng.,**
Notice of Meeting
Introduction of Councillors and Guests
Minutes of the Annual General Meeting of October 25, 1991
Declaration of Councillors Elected
Auditor's Report
Appointment of Auditors
1992-93 Budget
Nominating Committee Appointments
By-Law Amendments
Reports from Committee Chairmen
Greetings from CCPE and other Associations
- 12:00 p.m. Awards Luncheon**
Presentation of APEM Awards
Speaker: Dr. Axel Meisen, P.Eng., Dean,
Faculty of Applied Science,
University of British Columbia
Topic: "European Engineer"
- 2:00 p.m. Panel Discussion**
Topic: "Engineers' Duty to Report: The Issue of
Whistle Blowing"
Panelists: Dr. Art Schafer, University of Manitoba,
Stewart Whitley, ADM,
Attorney-General's Department, and
Debra Dileo, P.Eng., Deputy Registrar, Complaints,
Discipline and Enforcement, Association of
Professional Engineers of Ontario

(Bring this Agenda to the Meeting)

Sustainable Development On The Move

By: D.G. Osman, P. Eng.

Council adopted a Guideline on Sustainable Development earlier this year. It was arrived at after considerable time and effort by the Research and Development (R&D) Committee in developing a position to present to Council and considering the responses to an initial draft which was circulated to the membership in 1991.

The R&D Committee has now been charged with the responsibility of moving forward with the next phase of this sustainable development initiative. The next phase is to educate the membership in the principles of sustainable development, and to promote the concept both within the engineering profession and with other professions in the areas in which we interface.

The philosophy of sustainable development is not new to the engineering profession. Most of us have practised it throughout our professional careers. The challenge is to have the profession fully informed, taking it into consideration as a matter of course in their practice.

Recognizing the importance of this initiative, Council has authorized a Task Force, reporting to the R&D Committee, to carry out the implementation. Jack Atchison has accepted the assignment of Chairperson. Jack was a significant contributor to the development of the guidelines, and is familiar with the history of their development. We look forward to a much-enhanced awareness and understanding of sustainable development and environmental issues.

On another front, the R&D Committee will present APEM members with the results of the work of another committee, chaired by Ted Speers, focused on promoting and facilitating administration projects, oriented toward sustainable development. Projects are under consideration in the areas of energy from renewable resources, sustainable agriculture and sustainable use of underground water.

I would like to express the appreciation of the R&D Committee to all those who have provided their time and talents in support of the first (in Canada) Association policy on Sustainable Development. Despite the fact that it has been a long and arduous task, we are only at the first milestone. However, I am confident that the momentum in this initiative will help us to carry out our practice with appropriate environmental consideration and will result in an improved perception of the contribution of engineers. □

THE MANITOBA Professional Engineer

October, 1992

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Opinions expressed are not necessarily those held by the APEM or the Council of the APEM



Attention, Geoscientists!

It is now illegal for anyone who is not a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (APEGBC) to practise professional geoscience in British Columbia. Even the Vancouver Stock Exchange no longer accepts reports from non-members.

There is not, as yet, a similar law respecting the practice of professional geoscience in Manitoba.

**WITH DEEP REGRET THE
ASSOCIATION RECORDS THE
PASSING OF:**

B.P. Rempel

Engineers in the News

Dr. T.C.E. Cheng, P. Eng., Professor, Department of Actuarial and Management Sciences, University of Manitoba, received the Institute of Industrial Engineers' Young Industrial Engineer Award for his research and pioneering work in machine scheduling.

Dr. Cheng has authored two books in process concerned with international quality management and just-in-time manufacturing, and has published over 60 papers in refereed journals.

Bill McKay, P. Eng., retired past-president of UMA Engineering Ltd. and former editor of this publication, was recently named a member of the

Canadian Academy of Engineering.

Mr. McKay's many outstanding contributions to society and to the profession are well documented (see December, 1991 MPE).

Mr. McKay joined the Academy with such other notables as Dr. Monique Frize, P. Eng. and Marc Garneau, P. Eng.

Dr. Doug Ruth, P. Eng., Head, Department of Mechanical Engineering and **Dr. Slobodan Simonovic, P. Eng.**, Department of Civil Engineering, were recently promoted to the position of Professor at the University of Manitoba.

Letter to the Editor

With great disappointment, I noted that a luncheon seminar on Sustainable Development, sponsored by APEM, will be held at the Winnipeg Squash Racquet Club.

Personally, though I disagree with Winnipeg Squash Racquet Club's men-only athletic policy, I sympathize with the difficulties in changing it. I have attended functions at this facility before, but not without reservations.

However, continuing to condone restrictive associations or facilities just gives them permission to exist. Every time I am aware of an engineering-related function held at the Winnipeg Squash Racquet Club, I have to weigh the value of the event against the knowledge that normally, I would not be welcome in the facility. The recent report "More Than Just Numbers" by the Canadian Committee on Women in Engineering cites systemic discrimination, including inability to join restrictive clubs, as one reason the upward mobility of women is far behind that of men in engineering.

More importantly, the enduring public opinion is that engineering is not a woman-friendly profession. In January, 1992, I was interviewed by CBC regarding APEM's "A World In Motion" program. The journalist surprised me by focusing questions on the negative aspects of being a woman engineer, rather than the positive role models provided by the program. The APEM Public Relations Committee has tried to get positive media attention, but the media prefer to focus on the "old boys' club" mentality. The Association of Consulting Engineers received some bad publicity at their 1991 Annual General Meeting because of the use of the Winnipeg Squash Racquet Club, and has since indicated that they would no longer use that facility. Is APEM now giving the media a new opportunity for more bad publicity for engineers?

Most members of APEM are interested in improving the public's awareness and perception of engineers. Continuing to use this facility only damages the image we are trying so hard to improve. Maybe next time we will choose a facility at which all our members are welcome all of the time.

Carol Roberts, P. Eng.

NEW MEMBERS REGISTERED JULY, 1992

S.C. Alford	D.A. Ludwick
R.A. Chatoor	B.M. Lussier
M.H.W. Chiu	G.H. Matthews
W.R. Fenton	R. Medina, Jr.
N.A.P. Field	T.D. Pizzey
G.T. Friesen	A.L. Quiring
R.D. Giesbrecht	D.K. Roth
K.J. Hildebrand	G.U. Snider
M.R.J. Jeanson	E.M. Talsma
H.I. Kroeger	G.O. Trann
J. Li	B. Wood
J.M.C. Lorange	R. Zmavc

LICENCES ISSUED IN JULY, 1992

J.G. Agar (Alta.)	B.W. Maitson (Alta.)
W.J. Brockbank (Ont.)	B.F. Murdoch (Ont.)
A. Contant (Que.)	M.P. Patel (Ont.)
S. Ducotey (Texas)	G.S. Rahil (N.J.)
L.G. Farrant (B.C.)	Y.S. Ro (Ont.)
R.J. Gillis (Alta.)	J.B. Sawers (Alta.)
G.F. Godin (Ont.)	S. Shafai (Ont.)
G.M. Harding (Ont.)	H.A. Swanson (Alta.)
I.R.A. Harrington (Ont.)	W.T. Vaughan (B.C.)
G.C. McPhee (Alta.)	

WE HAVE LOST CONTACT. MAY WE HAVE AN ADDRESS?

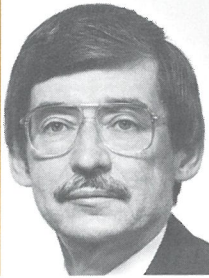
A.M.A. Mahmoud K.G. Roy

ENGINEER-IN-TRAINING MEMBERSHIP JULY, 1992

S.D. Fournier

President's Message

N.P. Feschuk,
P.Eng.



An active interest in the Association by each member is essential to self-governance. Unfortunately, as in every democratic organization, the majority of those who have the right to exercise a say, do not.

The APEM is no different. I am pleased at the response I received over the last year with respect to the President's Message, and the letters I received regarding other Association issues. Unfortunately, the comments, although gratefully appreciated, were from two or three individuals out of the 3,300 members of the Association. I have, in my addresses to various membership meetings, asked the members to bear in mind that members of Council need your input. A telephone call or a letter to a member of Council expressing your feelings on a matter would go a long way to assist in policy formulation. As in most organizations, the elected officials try to do their best, relying on their own experience.

Unfortunately, the majority of issues that they are

confronted with are outside their personal experience.

Generally, the assistance Council receives from committees on policy issues is limited. This is not intended as a criticism of the committees, but the committees' approach is usually to leave the hard decisions to Council. Unfortunately, in reviewing matters at Council, the "hard decisions" are not dealt with adequately - or not at all - because Council may not be aware of what they are. If the "hard decisions" are known, Council has less information and time to deal with these decisions than the committee.

What is needed is more membership input directly to Council. The best you can do for your Association is to telephone or write a member of Council about your concerns and issues facing the Association. If you are unaware of whom on Council your comments should be addressed, simply send your comments to Council.

This is my last President's Message. For me, the year has been far too short. Many of the things I wanted to accomplish are not done. The association has a built-in mega inertia. Few things, if any, get accomplished in a reasonable time frame. Many of the issues that existed when I was on Council 15 years ago exist today, and will undoubtedly exist into the future. Unfortunately, as I have stated in the past, the public may not be content to wait until we get into the "right gear" to make the changes that should be made, and will make them for us. □

Attention Curlers!



The next Annual APEM Curling Bonspiel will be held on Tuesday, January 12, 1993. Details to follow. **Mark your calendars now!**

CEHRB Predicts More Engineers Will Be Needed

Ottawa, March 22 – The demand for engineers in Canada is expected to grow from the 1991 figure of 102,000 jobs to 128,000 engineering positions by the year 2000. This, according to the latest forecast issued by the Canadian Engineering Human Resources Board (CEHRB).

Other highlights from the forecast:

- The greatest number of new engineering positions are forecast to be in the electrical, civil and mechanical disciplines.
- Central Canada – Ontario and Quebec, will offer the greatest employment opportunities for engineers towards the end of this decade. New engineering jobs in Ontario are forecast to rise by 14,600, while in Quebec, 6,000 new engineering jobs will be created.

However, if current trends prevail, the supply of engineers in the engineering labour market is foreseen to increase by just 5,000 people – from 108,000 to 113,000 over the period, creating a shortfall of some 21,000 engineers at the end of this decade. □

The Professional Development (P.D.) Degree In Engineering

The University of Wisconsin-Madison, Department of Engineering Professional Development, announces an advanced engineering degree – the Professional Development (P.D.) degree in engineering. The unique aspect of the degree is that candidates complete the entire program without coming to the Madison

campus and design a program of study that utilizes distance-learning course formats such as correspondence, videotaped, satellite, and other telecommunications courses.

Admission to the program requires a Bachelor of Science degree from an engineering program approved by the Accreditation Board of Engineering and Technology (ABET).

Candidates may design their entire program of study or specialize in one of the focused P.D. degree programs. Focuses are available in several engineering areas: electrical engineering, energy management, disaster management, manufacturing engineering, public works engineering, and value-analysis engineering.

Summary

Degree	The Professional Development (P.D.) Degree in Engineering
Director	Cheri McKentley, Dept. of Engineering Professional Development, University of Wisconsin-Madison 432 N. Lake Street, Madison, WI 53706
Telephone	800-462-0876 or call direct 608-262-0133

Iron Ring Fall Ceremony

There will be an iron ring ceremony for Camp #8 on Tuesday, November 10, 1992, commencing at 8:00 p.m. in the Tartan Room, 2nd Floor of Pembina Hall - University of Manitoba Campus.

For additional information, please contact Dave Sexton, P. Eng., Camp Secretary at 945-7488.

Those wishing to be obligated should contact Mr. Sexton as soon as possible.

Don't Forget! APEM BARN DANCE SOCIAL

Saturday, October 17, 1992
Hitch 'n' Post Ranch
Get your tickets now!
Telephone: 942-6481

Fee Increase Explained

By: D.A. Ennis, P. Eng.

When members pick up the hand-out information at the Annual General Meeting on October 30th they will notice from the Schedule of Dues and Fees incorporated in the 1992/93 Budget that there is an increase in the 1993 annual dues (\$193 vs \$170 in 1992).

Council is cognizant of the financial pressures that continue to affect members and their employers and it was not without serious consideration of alternatives that the increase was adopted. However, the conclusion was that, in order to maintain a viable organization and fulfill the responsibilities of a self-governing profession, the increase was necessary.

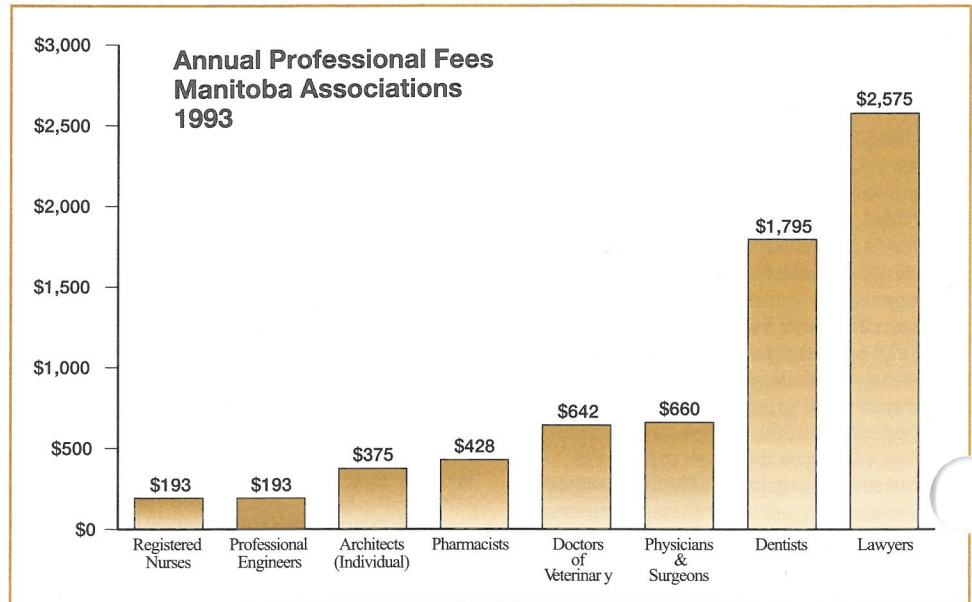
Members who have reviewed the Auditors Report for the year ending July 31, 1992 may be puzzled as to the amount of the increase in light of the \$48,000 (vs a budgeted \$2710) contribution to capital. The difference is largely attributable to three factors: unanticipated revenue from a higher number of out-of-province engineers taking out temporary licences; a \$10,000 grant from Industry Science and Technology Canada based on the Association's participation in the Innovators In The School program; and a reduction in expenses, due in large part to the deferral of planned expenditures (primarily on office equipment) and the fortuitous availability of lower travel costs. The surplus for the year brings the Association's reserve in line with the targeted ratio of 1.2 times the previous year's operating costs.

In considering the budget for the current year, Council cannot rely on the extended deferral of expenditures, unanticipated revenue or fortuitous developments, and must also recognize the reality of record low interest rates on investment income. Additionally, it must make provision for unusual expenses such as those attributable to hearings on applications for admission referred to elsewhere in this publication. Recognizing this and the

ongoing responsibilities of the Association, the Budget was approved and the dues set.

Members who wish to receive copies of the Auditors Report and Budget prior to the Annual General Meeting may obtain them by contacting the Association office by telephone (942-6481), FAX (942-3718) or mail.

In contemplating the annual dues, engineers may be interested to learn about the level of dues paid by other Manitoba professionals. The results of a recent survey are shown in the accompanying graph. □



New Direction for the CSCE

By: J. Patrick, P. Eng.

The Canadian Society for Civil Engineering will continue to be a very important component in a portfolio of organizations fostering technical excellence. It has been around in one form or another for over a hundred years although, in its present format, it was born in 1972.

We engineers practise in a volatile environment. We are faced with constant change in what we do, in how it's done and with lightning-quick response-times. It is easy to demand a different level of service from the Society. I believe the program and mandate of the CSCE have been adequate for the last 20 years; but new directions are appropriate.

Subsequent to the President's task force report on "The Future of the CSCE", changes are being developed which will improve the organization of the Society and the way it delivers services.

One of the strengths of the CSCE is its organization into 16 local sections throughout Canada, which include Regina, Saskatoon, and Winnipeg. These sections do most of the work in organizing

and delivering lectures, seminars and short courses which benefit the engineering community.

Given that the strength of the Society lies in the quality of its local groups, measures are being considered to improve communication and place greater control of the CSCE with those groups. A proposal will be tabled to modify the structure of the Society. Section Chairmen would replace Regional Vice-Presidents, Technical Activities Chairmen, and Standing Committee Chairmen on the Board of Directors. The net result would be a reduction in the size of the Board with a corresponding increase in efficiency and with greater local input.

A chronic problem for the CSCE has always been delivering useful information to practising civil engineers. To that end, changes are coming in the format of CSCE's bi-monthly magazine the "Canadian Civil Engineer". The magazine will take on a new look, similar to ACI's "Concrete International". Its focus will be the professional presentation of articles benefitting the membership. The success of this project will depend, to a large extent, on how the professional community responds, with the submission of less-technical papers featuring their projects, solutions to engineering problems and other useful information.

Not all members of CSCE are highly technical people. The Construction Division has rapidly

become an important element in CSCE programs. It will focus on supporting engineers involved in project management, engineering management and administration. This may involve a reorganization of the Construction Division to include these disciplines and provide services to civil engineers doing this type of work.

With a lot of hard work and, most importantly, the discipline and dedication of its members, the CSCE will continue to evolve and grow to fulfill its objectives. The Oxford Dictionary defines a society as "an association of persons united by a common aim or interest". The key thesis here is that the success of this association requires a united effort from its members to achieve that aim.

I think that CSCE will continue to maintain its status as a select organization that you simply can't afford not to belong to. It represents professionals who work together to contribute and to accomplish. In the spirit of this participation there are immeasurable and substantial rewards, including fellowship and the opportunity to meet the best engineers in this country and abroad.

Locally, there's an active Manitoba Chapter. You can contact the Chairman, Doug Kramble in Winnipeg at 956-0980.

In closing, I solicit your commitment to become involved and to be a real part of the solution to today's economic, social and environmental problems. □

Canada's Natural Mineral Heritage – A Dying Resource?

By: B. Stimpson, P. Eng.

A common perception in urbanized Canada, promoted or at least not vigorously rebuffed by media pundits, economic gurus and even government officials, is that our mineral resource industries are dinosaurs of a passing era. They are too "low tech" for this modern age of computers, robots, and digital electronics. Canada must develop knowledge-based industries and services - so goes conventional wisdom.

The current recession and the ongoing global economic restructuring have demonstrated the fragility of Canada's manufacturing industries that are supposedly the engine of growth and "high tech". By contrast, Canada's mineral industry, though also in hard times, has been one of the more solid performers in our economy. In 1991, mining increased its share of total economic activity. Minerals, including oil and natural gas, accounted for 27.1% of Canadian exports.

Canadian mining companies are using and developing the latest technologies for exploration, mining, mineral processing, and environmental control.

As for "high tech", Canadian mining companies are using and developing the latest technologies for exploration, mining, mineral processing, and environmental control. Visit any modern mine, and you will see evidence of "high tech" in every corner of the operation. Consortia of companies are working together to achieve the ultimate goal - the "miner-less" mine. R&D expenditures have grown to a point where the industry's share is more than its relative contribu-

tion to the overall economy would suggest - 5.8% of total Canadian industrial R&D.

Because mining is an international activity, Canadian companies are well-known and respected on the international playing field. At ExpoMin '92 in Chile, one of the largest mining trade shows in the world, 85 of the 1,120 exhibitors were Canadian companies, promoting products ranging from gold concentrators, mining and construction equipment, diamond drilling, to remote sensing.

Canada has a natural advantage over many countries in its rich geology, a geology which is fixed and cannot be transported elsewhere. By contrast, in many other businesses, Canada has no natural advantage. Manufacturing plants and companies can move wherever there is commercial advantage. Why then, do we, as Canadians, seem intent on turning our backs on the mineral resources of this country and trying to compete in areas where we have no natural advantage?

I think there are several reasons. First, Canada has become highly urbanized and therefore susceptible to second-hand and, too often, incorrect knowledge about mining. "Pick and shovel" concepts about the industry still persist. Second, mining is especially picked out as an environmentally destructive activity and as the "bad boy" on the block. Despite the millions of dollars companies have spent and are spending on environmental controls and protection, and the commitment of the industry to the principles of sustainable development, the idea of pillaging mining companies persists. Without denying the obvious impact of mining on the environment, I suggest that this particular focus on one industry is a case of selective blindness.

The truth of the matter is that every citizen of

Canada is implicated in environmental disturbance. For example, let us consider just one aspect of the environmental impact of the urban dweller. Less than 2.5% of the total area of Canada is prime agricultural land. Much of the best of this resource is found lying under the gardens, houses, shopping malls, swimming pools, schools, sports stadia, offices, and manufacturing plants of cities like Montreal, Winnipeg, Calgary, Vancouver, St. Catherine's, and Toronto. Despite regulatory efforts to control urban sprawl, 58% of the area used for urban expansion between 1966 and 1986 was prime agricultural land. From the top of Toronto's CN tower on a clear day one can see 37% of Canada's best agricultural land. These statistics are all the more striking when one realizes that almost 90% of Canada's land area cannot support any kind of agriculture, and only 5% of the remaining 10% is free of severe physical limitations to crop production.

What am I trying to suggest here? It is simply this - the mineral resources of Canada have the potential to play a continuing and important role in the Canadian economy. Even the know-how, gained from learning how to mine in as environmentally benign a fashion as possible, provides opportunities for Canadians to market these skills around the world. Our natural advantages as a country lie in these resources. What Canada did not do sufficiently well in the past was to develop new products and new industries based upon the richness of its mineral endowment. We were content to collect the rent.

While the world will not beat a path to Canada's door for its minerals as it did in the past, industrial policy should recognize the natural advantage of Canada's geology, and stimulate the development of "high tech" exploration, mining, processing, value-added products, new technologies of production, mining equipment, new materials, and environmental technologies for mineral resource development. In addition, efforts must continue to provide the public with a more balanced view of mining and its environmental impacts. □

Engineering Awareness Day 1992

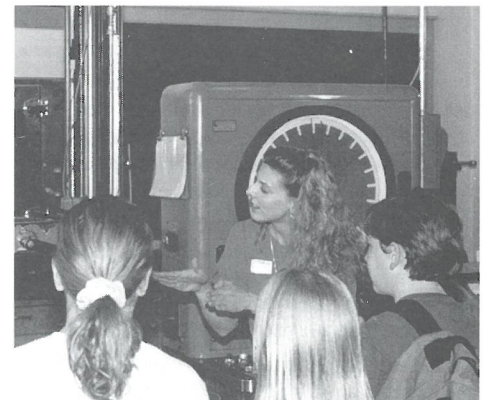
By: R.P. Hoemsen, P. Eng.

On June 15, 1992, 40 students and 10 teachers participated in the third annual Engineering Awareness Day. Four students and one teacher from each elementary school in the Fort Garry School Division were selected to learn about engineering by visiting the Faculty of Engineering at the University of Manitoba. After a



presentation by Dean Laliberte, the students and teachers visited demonstration stations. The stations, which were hands-on in nature, allowed the students to participate in what they were seeing and learning. Manitoba Education was present to videotape portions of the events for use in future training programs.

The Mini-University and Sports Camps assisted by organizing some of the demonstrations, providing tour guides, and donating two two-week Mini-University Engineering Camp Scholarships. At a subsequent presentation at the Fort Garry School Division Board Meeting, these scholarships were awarded to draw winners Christine Wilson (Chancellor School) and Mike Wood (Ryerson School). The APEM Public Relations Committee made a \$1000 financial contribution to the event. This money was used



to provide substitute teachers so that the regular science teachers could attend with their students.

The day's events were coordinated by Maureen Hodges of the Fort Garry School Division and Ray Hoemsen, P. Eng. of the Faculty of Engineering, Institute for Technological Development. □

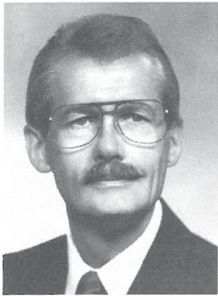
STAFF REPORTS

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D.A. Ennis

Executive Director's Report

As Executive Director, my responsibilities fall into four general categories of the Association's activities. Therefore, I report by category.

Registrar

The primary responsibility comes under the function of Registrar. This responsibility is divided into two broad areas: processing admission to the profession, and administering the disciplinary process.

In the area of admissions, the Association is very ably and diligently served by the Director of Admissions, Shirley Matile, P. Eng. Her report is elsewhere in this publication.

Over the past year there was a very slight increase in the total number of members in the various categories and, despite an increase in new members, the number of engineers entitled to practice engineering was static.

The changes in membership are as follows:

Membership as of July 31, 1991	3,341
Plus - registrations	129
- transfers-in	34
- reinstatements	<u>11</u>
	174
Less - resignations	74
- transfers-out	6
- written-off (June 30)	55
- deceased	<u>6</u>
	<u>139</u>
Total Membership as of July 31, 1992	3,376
It is comprised of the following categories:	
Full Members	2,732
Non-Practising and Non-Resident Members	593
Life Members	<u>23</u>
Total	3,376

Additionally, 195 temporary licences to practise engineering were issued to non-resident engineers. Most of those licences were renewals, and 16 were issued to Professional Engineers registered in the USA.

The low number of persons registering as EIT's, 49 in 1992 as compared to 129 first-time registrants, is an indication that both Council and the membership need to place greater emphasis on the internship aspect of entry to the profession.

In the area of the disciplinary process, 1992 marked the introduction of a set of procedures through the revised By-Law to expedite the handling of complaints and concerns. The report of the Investigation Committee, also elsewhere in this publication, is an indication of the high level of activity in this area over the year.

Secretary-Treasurer

As Secretary to Council, I report that the business of Council has been recorded as required and that the required notices have been sent to the membership.

Council has considered a number of matters which relate to the responsibility of a self-governing profession to be open, accessible and accountable. At the time of this writing, it is in the process of dealing with two hearings on refusals to grant membership in the Association.

Hearings to review a denied application are, if requested by the applicant, required by the Act. They are quasi-judicial in nature and require a very significant commitment of time and resources by Council.

Council has also embarked on a strategic/long-range planning process. Two additional meetings were held to identify the key issues, strengths and weaknesses and to establish objectives and goals. Action plans are currently being developed for 13 of the 19 goals identified.

As treasurer, I can report that the Association continues to operate on a sound financial basis.

Director of Admissions' Report



S.M. Matile

The past year was a busy one for the Association's Admissions Department.

From August 1, 1991 to July 31, 1992, we registered 418 members. Of these, 34 were transfers in from other provinces, 11 were reinstatements, and 129 were first-time registrants. We also issued 195 temporary licences to practise engineering in Manitoba, and we gained 49 new engineer-in-training members. In addition, 18 applications for registration were reviewed and referred to the Admissions Review Board, while 33 applications for assessment of academic qualification were referred to the Board of Examiners.

Two applicants for registration appealed the decision of the Board of Examiners, and Council is expected to hold hearings into both cases before the end of 1992.

Admissions policies implemented during the past year included the mandatory submission and review of transcripts from all applicants; a new policy and set of procedures for reinstatement to

The reserve was increased again and is in keep with the Council policy of targeting a reserve ratio of 1.2 of the previous year's operating expenses. None of the reserve is allocated for purposes such as an equipment or building fund. However, one of the action plans referred to earlier is to develop a financial policy and a financial management system.

The sharp drop in interest rates over the last year has significantly affected the revenue generated from investment income and is one of the factors leading to the increase in annual dues for 1993.

"The Office"

The Association office serves the needs of Council and the various boards and committees of Council, and maintains a liaison with the 150 volunteers who sustain those committees. Over the year there were approximately 250 meetings to schedule, send out notices and agendas for, record minutes of and generally respond to the decisions taken. When this is superimposed on the activity involved with 450 applications, processing the dues and recording changes for 3,300 members and producing a magazine, the staff has most assuredly been busy.

Continued on page 9

membership (including the requirement for references); and revised application forms and reference forms for all types of membership.

By-Law changes are being proposed to correct inequities in fee payments, and Council is expected to approve the pro-rating of all fees on a semi-annual basis for the 1993 fee year.

The Ad Hoc Committee on Admission Standards has almost completed its review of the Association's Admission Standards, which will be placed before Council for approval (hopefully!) before the end of 1992. Council has already approved one of the committee's initiatives: the creation of a Registration Board, which will have final approval authority for all applications, and which will consider all Admissions-related appeals.

The Board of Examiners has completed the first draft of its revised (in fact, completely overhauled!) policy manual. This manual incorporates the new CCPE 1992 Syllabus of Examinations, along with many new APEM initiatives. It is hoped that the revised policy manual will be adopted and implemented by January, 1993.

I had the pleasure of attending my first Canadian Engineering Accreditation Board (CEAB) meeting this spring, and observing the re-accreditation of existing programs and the accreditation of new engineering programs at universities throughout Canada. The CEAB is now in the process of ratifying CCPE's Mutual Recognition Agreement with New Zealand. (To date, APEM has adopted CCPE's Mutual Recognition Agree-

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Ad Hoc Committee on Admission Standards



K.M. Jardine, Chair

Members:
K.A. Buhr
D.A. Ennis
N.P. Feschuk
Wm.M.A. McDonald
W.B. Mackenzie
S.M. Matile
W.R. Newton
E. Ryan

The objective of the Engineering Profession Act is the protection of the good and welfare of the public of the Province through ensuring that only those persons fully qualified through education and experience are permitted to practice as, and present themselves as, professional engineers. Towards the realization of this objective, the Association of Professional Engineers of Manitoba was granted the mandate to govern the profession and to regulate the admission of those who would practice.

Recognizing the increase in complexity of the profession, the Council of the Association established the Ad Hoc Committee on Admission Standards to review existing procedures and standards and to recommend changes in procedures and standards required to ensure the fulfilment of the Association's mandate.

The Ad Hoc Committee, through 18 meetings, is presently working on the preparation of a Manual of Admissions for ultimate approval by Council. This manual will provide guidelines for the staff and those committees involved in application for admission to the profession and for license to practice, as well as for Council, which is the final authority in the approval process. It is anticipated that the resultant manual will standardize requirements of candidates for admission, firm up and streamline procedures and assist in the maintenance of the integrity of the profession.

In fulfilling its obligation to establish solid guidelines for admission, the committee is cognizant of, among other things,

- The need for applicants to demonstrate an appreciation of the tenets of professionalism.
- The importance of the applicant's understanding of the Code of Ethics and the requirement for a strict adherence to its terms.
- The importance of the practicing professional having an appreciation of the place and importance of the engineer in matters pertaining to the environment and of social importance.

The committee is satisfied that these matters

are dealt with in judging qualifications for admission.

To date, the committee has addressed, and is proposing such things as:

- Removing from the Act the so-called "Grandfather" clause. This means of admission to the profession is considered redundant in this day and age.
- Increasing the minimum period of work experience to four years. It is generally accepted that four years of work experience in a concentrated engineering environment is essential for the aspirant to acquire the necessary skills to attain the attitude and commitment to operate as a professional.
- Clarifying and more clearly defining the requirements for those persons from outside Manitoba or those whose education and experience was acquired outside of Canada.
- That all candidates for registration write a definitive Professional Practice Examination.

In line with its continuing commitments, the committee, at the specific request of Council, has reviewed and advanced its recommendations in the matters of:

- The CCPE guideline for the Professional Practice Examination.
- Terms of Reference for the proposed Registration Board.

The members of the Committee, being conscious of the fact that the admission of qualified persons to practise as Professional Engineers is the sole reason for the existence of the Association, are seriously concerned that the guidelines ultimately drafted completely recognize this onerous responsibility, and thus tend to deliberate at length and in minute detail over each item. The result is apparent slow progress. However, it is hoped that the committee will complete its deliberations by mid-1993.

The committee wishes to recognize the assistance of the staff of the Association- their aid, advice and opinions in various areas is much appreciated. □

Ad Hoc Committee On Technologists



Wm.M.A. McDonald, Chair

Members:
W.D. Christie
E.W.J. Clarke
N.P. Feschuk
C.L. Stewart
J.A. (Jim) Thomson

The Ad Hoc Committee on Technologists met once during the year in order to review the current status of relations with the Technologists both in Manitoba and in other provincial jurisdictions.

A recommendation was made to Council in response to a suggestion from MANSCEIT that a joint-committee, consisting of two APEM representatives and two MANSCEIT representatives, be struck to investigate the licensing of technologists and others under the Engineering Profession Act. The representatives of MANSCEIT are Rick Hunter and Bernie Smith, APEM is represented by Dave Ennis and Bill McDonald. The discussions of the joint-committee are presently underway and ongoing.

I would like to acknowledge the contributions of G.E. Laliberte and K.A. Buhr who left the committee after a number of years, welcome new members Jim Thomson, Cathy Stewart and Pat Feschuk and thank the members of the committee and staff of APEM, especially Dave Ennis and our committee secretary Heather Kitchen, for their valued assistance during the year. □

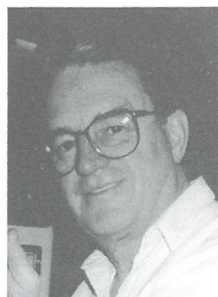
To the end of August, no charges had been brought before the committee.

In accordance with Council's instruction, members of the Discipline Committee were appointed by the Chair to assist in determining penalties to be imposed in three cases before the Investigation Committee.

The Discipline Committee's legal counsel, Mr. Robert A. Dewar, drafted an outline of practice and procedures along with a lucid summary of the basic elements of jurisprudence. The document will be used in the preparation and conduct of future hearings.

The new Discipline By-Law can be judged a success in that complaints have been ably and expeditiously dealt with by the Investigation Committee, with the concurrence of the accused members, and without the necessity of formal hearings before the Discipline Committee. □

Discipline Committee



R.E. Scouten, Chair

Members:
K.A. Buhr
N.P. Feschuk
R.A. Kane
D.M. Kilgour
Major B. King
W.R. McQuade
Dr. G.A. Morris
E.L.J. Rosinger
J.M. Symonds

Council appointed 10 members to the Discipline Committee on January 13, 1992.

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Research and Development Committee



D.G. Osman, Chair

Members:

*J.T. Atchison
D.G. Chapman
D.J. Fedirchuk
E.F. Glass
R.J. Hamlin
R.P. Hoensen
C. Katopodis
E.J. Klein
M. Paryniuk
E.L.J. Rosinger
E.A. Speers
J.B. Thorsteinsson*

The Research and Development Committee was successful in completing the task of preparing the Policy on Sustainable Development. It was approved by Council and distributed to the membership in January, 1992.

Through collaboration with the Canadian Construction Research Board (CCRB), seminars

on "Light and Colour" (September 27), "Acoustics" (October 25), and "Controls" (November 22) were jointly sponsored. These seminars were well-attended and provided some current and advanced technology needed by those in attendance.

A very timely seminar on Demand-Side Management was convened on October 2, during the Science & Technology Days in collaboration with Manitoba Hydro and the Electric Service League of Manitoba. Mr. John Elizalde, Director of the Bonneville Power Administration, provided the keynote address.

Emerging Technologies, a seminar jointly sponsored by the CCRB, MHBA and the University of Manitoba, presented the subject of Structural Applications of Advanced Composites by Craig Ballinger, Advanced Construction Materials by Dr. Sami Rizkalla, and an advanced asphalt paving machine by Lavern Palmer (NRC/IRC).

On April 10, 1992, Dr. Ludmila Ilyina was the guest speaker for the seminar on Canada/Russia Engineering Opportunities. The session was well-attended and received a very favourable assessment.

Dr. Bob Hecky of the Department of Fisheries and Oceans Freshwater Institute provided a very enlightening presentation on the Changing Chem-

istry of the Atmosphere and Its Effects on Canadian Aquatic Resources at the luncheon seminar on June 23.

Mr. Ted Speers has been appointed to represent the Association on the Technical Advisory Committee on Waste Minimization with the City of Winnipeg.

Dr. Arthur Hanson of IISD will be making a presentation September 15, on the Earth Summit in Rio de Janeiro.

Plans are being finalized for an October 15, 1992 seminar on the Sustainable Use of Underground Water in Manitoba - pollution of the aquifers and other related topics.

A Task Force on Sustainable Development has been established, and Mr. Jack Atchison appointed as Chairman. The full slate of Task Force members is to be announced in September.

I would like to express my considerable gratitude to all the members of this committee for their unstinting efforts and enthusiasm. The success of this committee has been made possible due to the involvement of Heather Kitchen, Dave Ennis and Doug Chapman. Meetings were convened approximately every three weeks, and I think all are to be satisfied with their efforts. Once again, thanks to all involved.

Ad Hoc Committee on the Code of Ethics Review



C.R. Bouskill, Chair

Members:

*K.A. Buhr
B. Cape
E.W.J. Clarke
D.A. Ennis
F.M. Fowler
J.S. Hicks
F.A. Jost
W.R. McQuade
W.B. Mackenzie
R.E. Scouten*

The Ad Hoc Committee on the Code of Ethics was established by Council, in the spring of 1987, on the recommendation of the Practice and Ethics Committee, to undertake an in-depth review of the Association's Code of Ethics. The Code had been last reviewed over 20 years ago, having been adopted by Council on February 28, 1968.

The recent clause-by-clause review was undertaken with assistance and advice from the Association's legal counsel, some councillors, some Association staff members and a manuscript writer (or specialist). The Codes in use by each of the other Canadian Professional

Engineers Associations/Ordre were also examined, as were the Model Code prepared and issued by CCPE, Codes in use by selected State Boards for Professional Engineers in the USA, and Codes of Ethics published by other engineering organizations.

In the final stages of this review, the proposed Code was distributed to the membership of the Association in October, 1991, at which time each member was encouraged to review the proposed Code and invited to submit constructive comments in writing to the APEM office. Twelve submissions were received from eleven members of the Association. In all, 45 individual comments or suggestions were submitted, some of which were duplicates. Each of these comments and suggestions was reviewed in detail by the Ad Hoc Committee, and a number of amendments was made to the proposed Code. The amended proposal was submitted to Council, and adopted by Council on April 13, 1992.

I welcome this opportunity to extend my personal thanks to the members of the committee, each of whom has devoted considerable time, thought, effort and support on your behalf throughout this protracted review.

We all join in expressing our sincere thanks to all members of the Association who reviewed the proposed Code of Ethics, and in particular to those 10 members who expressed interest and concern about the Code by taking the time and trouble to submit their comments and suggestions.

Annual General Meeting Committee



T. Holden, Chair

Members:

*K.H. David
R.R. McKibbin
K. Puckall
E.A. Speers
B.R. St. Amant*

During the past year, the committee has developed and directed activities related to the Annual General Meeting. The activities have covered a wide range, including program development and arrangements, selection of guest speakers and topics for presentation, budget and development of the format for the Annual General Meeting.

In addition, the committee has organized a social function, to be held at the Hitch'n'Post Ranch, for APEM members, staff and guests.

To the members of the committee and staff, particular Dave Ennis, Pat Feschuk and Joan McKinley, the Chairman owes a debt of gratitude for the enthusiasm, uncompromising debate, and unstinting hours of work.

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Safety in Engineering Practice Committee



F.A. Roberts, Chair

Members:
D.E. Cross
A.O. Dyregrov
Dr. M.J. Frye
R.E. Gottfred
B.W. Gulay
W.L. Pawlikewich
C.L. Stewart
L.P. Williams
J.V. Weiszmann

The issues before the Safety in Engineering Practice Committee this past year have predominantly related to the interface with engineers, government, standards committees and regulatory authorities. Presently, our most active sub-committee is studying safety-related concerns with the building envelope. We also have committee members as representatives in discussions on life safety systems in buildings, commissioning of buildings and electronic sealing of documents. Other matters put before the full committee for discussion and comment were the new Ontario guideline covering "A Professional Engineer's Duty to Report" and concerns over the adoption of the 1990 National Building Code in Manitoba, since the older 1985 Code remains in force.

Executive Director's Report

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To the staff, I express my sincere appreciation.

Enforcement

Act Enforcement activities are directed at preventing contravention of both the practice and title provisions of the Engineering Profession Act. This year, a number of representations seeking voluntary compliance with these provisions were made to various persons.

As was reported in an earlier issue of this publication, a member of the public pleaded guilty, in Provincial Court, to unlawfully engaging in the practice of engineering and also provided the Association with a written undertaking not to represent herself as an engineer entitled to practise in the Province of Manitoba.

On another matter, the Association has filed a request with the RCMP to investigate a case of alleged fraud concerning the unauthorized use of the seal of a member by a developer. The outcome of this matter will be reported, as information becomes available. □

The sub-committee studying the Building Envelope has approached the issue from the concern over the safety of the public from faulty or deteriorating building facias and curtain walls and, of course, the continuing problem of deterioration of balconies. Although this is a North-America-wide problem, our situation in Manitoba is unique as a result of the extremes of temperature and humidity.

The Building Envelope sub-committee includes not only engineers, but architects and representatives from the construction industry in order to achieve as broad a perspective as possible. The make-up of this sub-committee reflects the fact that not only must sound designs of the building envelope be achieved from a structural and performance aspect, but they must accommodate user functions and take into account the problems and limitations during the construction process.

Neither engineers nor the public have to go very far to witness graphic evidence of building envelope failures which require expensive rework and, in extreme cases, could present a danger to the public.

To date, the Building Envelope sub-committee has considered what should be done in the area of building standards, education and technical resources in order to arm professionals with the best available information on materials, construction techniques and performance criteria. The sub-committee will be considering aspects of design, interaction between various disciplines and professions, and standards for inspection.

The full committee concluded its review of the Province's proposal to institute letters of confirmation of compliance along with the reduced role of plan examination and the elimination of inspection. The committee affirmed, through Council, the concept of letters of confirmation of

compliance, along with a system of occupancy permits, but strongly urged the Province not only to maintain a full system of plan examination, but to enhance this role and apply it more uniformly across the Province. The committee also stressed the need for the Province's presence in the process of inspection, and argued that although an engineer may visit the job site, perform inspections and report on the compliance or noncompliance of the work, he or she has no authority to issue stop work orders. Stop work orders can only come from a jurisdictional power with legislative authority.

A guideline titled "A Professional Engineer's Duty to Report" published by APEO was referred to the committee for comment. The committee highly recommends that such a guideline be implemented in Manitoba, since it describes under what circumstances an engineer is compelled to report an ethical or safety problem and lays out the mechanisms in place to deal with such issues. The guideline goes a long way toward outlining how to practically apply the principles of the Code of Ethics in this area. The Ontario guideline is available upon request through the Association office.

I invite any of our Association members who may become aware of potentially unsafe engineering practice to pass on such information to the committee or to the Registrar. Enquiries or submissions will be dealt with in confidence, where requested.

On behalf of the committee, I wish to extend my sincere thanks to Dave Ennis and Heather Kitchen for a tremendous amount of work during the year, which they managed to squeeze into an otherwise heavily loaded schedule. I am grateful to every member of the committee and sub-committees for their active participation, true dedication and hard work. □

Legislation Committee



B.D. MacBride, Chair

Members:
G.S. Cooper
D.W. Gunter
W.C. Harrison
J.S. Hicks
E.E. Lach
D.N. Spangelo

This year, the Legislation Committee predominantly worked on the development of a proposed new Act, which dealt primarily with recognizing group practice. The proposed Act

also includes suggestions for a number of general improvements such as: a new definition for the practice of engineering; a notation that the purpose of the APEM is to regulate its members, as well as to serve and protect the public; a provision to permit the establishment of policies and procedures; and a revision to the grace period for paying APEM membership dues, down from six months to two months. The report submitted to Council also offered a number of suggestions pertaining to a method for reviewing the proposal.

The committee wishes to acknowledge Don McIntosh for his four years of excellent service as Chairman and to welcome long-time member Barry MacBride as the committee's new Chairman. The liaison councillor, Walter Harrison, was very active in the committee's deliberations, and his participation was very much appreciated.

In the coming year, the committee intends to commence a review of the By-Laws, in order to identify the changes needed to recognize the concepts envisioned in the proposed new Act. □

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Admissions Review Board



C.E. Anderson, Chair

Members:
C.R. Bouskill
W.D. Christie
N.P. Feschuk
S.H. Rizkalla
D.I. Waldman

The role of the Admissions Review Board is to consider, for APEM registration, those applicants who meet the educational requirements as set out in the Engineering Profession Act, but whose professional work experience is in question.

During the 1991-92 term, the Board will have met six times. Twelve applications were reviewed at the first five meetings, with five applicants accepted for registration, and five assigned an additional work period.

Two of the applicants fell into categories where our admissions criteria need to be better defined so that we can more effectively address them. Both applicants had engineering degrees but were not working under the direct supervision of professional engineers. One had a degree recognized by the Association, and the other was a graduate in surveying engineering.

The Board is hoping for a resolution of the issue of work experience that is not under the direct supervision of a professional engineer through the development of a Log of Experience/Mentor Program.

The September meeting of the Board will involve the review of at least two more applications.

With regards to surveying engineering, the Board is developing a better definition of when work experience is clearly engineering as opposed to clearly surveying.

Our Director of Admissions, in her work with CCPE, has developed for them a draft CCPE Guideline on the Professional Practice Examination. This draft is presently under review by the Board and by Council.

I would like to thank the members of the Board; Shirley Matile, Director of Admissions; Dave Ennis, Executive Director and Registrar; APEM staff; and all those APEM members who assisted the Board in reviews. □

Salary Research Committee



J.M. Symonds, Chair

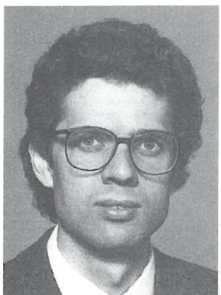
Members:
B.G. Bettess
L.R. Ferchoff
C.E. Ireland
B.F. Klaponski
L.J. Kuczek
R.R. McKibbin
E.G. Parker
R.J. Prepes
H.M. Soliman

The Salary Research Committee conducted the annual membership and an employer's salary survey this spring and summer. The results were published and distributed with the July mailing of the Manitoba Professional Engineer.

The comparison between the members' and the employers' surveys continues to be constant; that is, the employers' returns are about 5% greater than those reported by the membership. The really significant feature of the survey, however, was that the data showed that 37% of the membership did not receive any raise in pay during the year.

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Professional Development Committee



J.G. Hildebrandt, Chair

Members:
R.J. Bruce
M. Cornell
V.L. Dutton
R.C. Gupta
K.J.T. Kjartanson
E.J. Klein
D.J. Kramble
P.E. Lagasse
A. Permut
S.S. Rihal
W.D.A. Rose
S.L. Ursel

Your Professional Development Committee has been active in developing opportunities for personal professional improvement and monitoring professional development in other organizations.

Professional Development activities organized by the committee undertaken in the past year were as follows:

1. Breakfast Meetings

- Structural Concrete Rehabilitation in Eastern Europe
- English as a Second Language for Engineers
- Changes to Environmental Legislation
- T.Q.M. Study for Industry

Attendance for these meetings averaged in excess of 65 people, with the T.Q.M. presentation exceeding 130 members.

The attendees at these meetings propose subjects that they think may be of interest to the profession in general. This committee then develops the presentations and obtains the speakers. This method of presenting topics of interest to members appears to be one of the most successful formats of any of the major professions.

2. Seminars

- Concepts in Professionalism

This was directed at new members of the profession and was attended by 42 members. The comments were such that it was decided to conduct another seminar in the fall of 1992.

- Engineering Management

This was the first management seminar conducted by the APEM, directed at engineering management. It included such diverse subjects as motivating your team, client and contractor

expectations of the professional engineer, managing diversity, and a preliminary report of total quality management in Japan, Germany, USA and Canada. Sixty members attended this seminar. The comments received from participants indicate that another seminar is required.

- Fortran 90

This seminar was held in Winnipeg and Pinawa on May 25 and 26, 1992 respectively. The attendance at these seminars, particularly in Pinawa, demonstrated the need to present professional development in rural areas where we have sufficient members.

It should be pointed out that almost all of the above presentations were video-taped, and the tapes are available in the Association office.

Your committee is continuing to explore alternate methods of presenting professional development topics by reviewing activities in other jurisdictions and professions. The committee is also reviewing a recommendation that new members of the Association be required to attend the Concepts in Professionalism Seminar prior to registration as Professional Engineers in Manitoba.

The committee wishes at this time to thank the staff, and particularly Shirley Matile, for their assistance and efforts in support of this committee. □

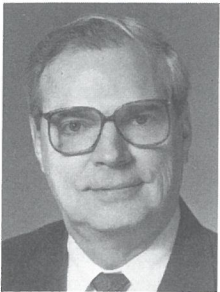
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Investigation Committee



D.R. Grimes, Chair

Members:

*C.R. Bouskill
F.M. Fowler
R.C. Isaak
R.A. Johnson
E.I. Lexier
A.M. Lohse
Wm.M.A. McDonald
J.R. McDougall
I.H. McKay
R.H. Russell
W. Saltzberg*

This is the first annual report of the Investigation Committee. This committee's responsibilities are defined in the revised Discipline By-Law 43 which became effective November, 1991. The committee replaces the Practice and Ethics Committee and was formed with a nucleus of members from that committee.

The discipline process consists of the investigation of complaints or concerns by this committee and where necessary, the recommending of a formal hearing before the Discipline Committee. Under the new By-Law, the committee has the power to resolve many complaints without the necessity of a formal hearing. The Investigation Committee can issue a formal recorded caution or, with the written consent of the member, formulate a charge and register a conviction. These powers have enabled the committee to be more effective than the former Practice and Ethics Committee and, in its first 10 months, the committee has disposed of 15 files, issued five formal cautions, invoked one suspension and issued one reprimand. In two other cases, a reprimand and a suspension have been proposed but not yet finalized. Other complaints were dismissed or withdrawn.

Penalties other than formal cautions are reviewed with a member of the Discipline Committee prior to being proposed to the member complained about.

The Practice and Ethics Committee had recommended to Council that a hearing be held into a matter arising out of the suspension in another province of the right to practise of a Manitoba member. That recommendation was accepted and the responsibility to prosecute the matter has been delegated to the Investigation Committee.

The committee has held full committee meetings monthly and innumerable sub-committee meetings. It has dealt with 12 files carried over from the Practice and Ethics Committee and to August 1992, has opened an additional 16 files. There are 13 files active at the time of writing this report.

The committee has again recommended to Council that it approve a levy of \$5.00 per member for 1992-93 to replenish the reserve for the Discipline By-Law. Funds are used to pay for professional services.

The committee has advised your President that the committee may wish to use the Discipline By-Law funds to engage professional services on a part-time basis, to supplement those services already available from the Association office. Council has concurred, subject to receiving reports from the committee.

Space limitations do not permit a detailed description of the files acted on by the committee. A brief overview is as follows:

- There were six cases where one engineer was concerned with the actions of a fellow engineer, and a complaint made.
- Thirteen complaints were brought by members of the public, largely to do with residential buildings.
- Four actions were taken on the basis of information from public agencies with authority to approve plans for buildings.
- Structural failures resulted in investigations in five cases.

For those readers interested in mathematics, the numbers are not all additive as some files include more than one of the above points.

The committee was also consulted by a member on an issue of proper professional conduct. Advice was provided and the matter

reported to Council.

Many of the complaints received involved questionable business practices by a small minority of our members who deal directly with the public, usually on residential building inspections. It appears that education of some members in dealing with the public is required and the committee is considering recommendations to Council in this regard.

The process of investigating complaints and disciplining our members must be undertaken carefully and is time consuming. A flow-chart showing the process has been produced for the information of those who are involved in the discipline process. The chart is complex and contains some 40 steps.

As you will appreciate, the work of the committee requires a heavy time commitment by its members. Its members serve the profession well. This year, we reluctantly received the resignation of Vice-Chair Ray McQuade who has taken on responsibilities with the Discipline Committee. We have received notice of the retirement of Dick Russell after many years of hard work. A lay member, Jack McDougall, has been added to the committee and he has brought a refreshing new perspective to our deliberations.

The staff supports the committee enthusiastically. Some meetings are held at sunup and others after sundown and during annual vacations. Nevertheless, Heather Kitchen and Dave Ennis are always available for support. It is appreciated. □

University Liaison Committee



R.J. Partridge, Chair

Members:

*P.A. Dalkie
E. Garfinkel
V.D. Gupta
G.O. Ouellette
S.H. Rizkalla
A. Trupp
R.J. Waddell
K. Wright*

In providing liaison between the Council of our Association and the engineering concerns of the University of Manitoba, we have addressed a number of issues over the past year.

We began by expanding our scope to include liaison with the engineering students as well as

Faculty. This includes student representation on our committee, as well as at our annual meeting of Council, Faculty and this committee. At that meeting, the discussion topics on matters of mutual concern included: increasing the number of women in engineering; the practicality of industrial experience for professors; and the possibility of increasing the duration of the engineering curriculum to five years.

Our next project was to arrange for engineers to make presentations on campus to provide students with an understanding of the various disciplines. These "Careers in Engineering - Meet the Professionals" sessions ran twice each night for four nights earlier this year, and were well-attended and highly rated by the students. Many thanks to the organizers and speakers who helped make this event a success.

Throughout the year we also reviewed and prepared our committee report on "The Future of Engineering Education in Canada" issued by the Canadian Council of Professional Engineers and the National Committee of Deans of Engineering and Applied Science.

My thanks to the committee and Shirley Matile for their dedication and extra effort throughout the year. □

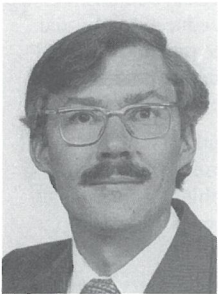
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Public Relations Committee



D.C.H. Prowse, Chair

Members:

*W.H. Brant
M. Cornell
M. De Wiele
R.J. Eden
R.P. Hoemsen
B.G. Lawlor
J.T. Linnen
C.A. Nieuwenburg
R.G. Payne
C.S. Roberts*

The new logo, adopted after a somewhat lengthy process, is now being utilized on APEM documents and correspondence. We believe it conveys a stronger and more dynamic image than the seal used previously.

The Public Relations Committee arranged a one-day media awareness workshop to help develop a better understanding of the environment in which the media operate. During National Engineering Week, articles appearing in the Free

Press as well as the booth at Portage Place mall staffed by 17 enthusiastic volunteers helped to raise the public's awareness of engineering. The "World In Motion" program conducted training courses and a press conference to describe efforts to convey physical principles to elementary school students. Carol Roberts appeared on the television program 24Hours to describe her "World In Motion" activities at a school.

The committee helped to co-ordinate speakers who spoke to students at several schools and to a meeting of the Manitoba Association of Physics Teachers. Presentations by Queens University engineering students on a Canada-wide speaking tour at the Planetarium Auditorium as part of the "Women of Invention" exhibit and at two high schools were also co-ordinated by the committee. The "World In Motion" display at the "Women of Invention" exhibit demonstrated how students can be involved in a fun exploration of physics. That display was particularly successful.

APEM has an agreement with Industry Science and Technology Canada to participate in the "Innovators In The Schools" program. We anticipate that our database of engineers who have volunteered to speak in schools will help teachers reach engineers to speak to their classes.

Once again registrations to engineering modules of Mini-University summer camp were

awarded as prizes for projects at the Manitoba Schools Science Symposium (MSSS). Engineers who volunteer to be judges at school science fairs and at MSSS make important contributions.

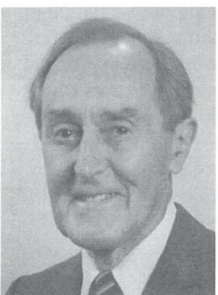
While MSSS tends to have predominantly Grades 4 - 9 students involved, the Science Olympics in Portage La Prairie had challenges for teams of high school students. Several engineers were involved in judging at Science Olympics.

APEM continued to support the Fort Garry School Division's Engineering Awareness Project, which familiarizes both students and teachers in grades 4, 5 and 6 with engineering at the University of Manitoba.

Two APEM career information pamphlets for junior high and for high school students were published. Anyone speaking in schools can now rejoice that the 1950's-style pamphlets used previously have finally been replaced. The cooperation of APEO in allowing us to modify material developed for its pamphlets is appreciated. Copies of the CCPE pamphlet "Engineers - Creators of Tomorrow" are also available from the APEM office.

Major contributions to the work of the committee by S. Parent-Pulak, who moved to British Columbia, and by R. Britton, who is assuming Senate and other responsibilities at the University of Manitoba, are recognized. □

Consulting Engineers Committee



**D.B. Whittaker,
Chair**

Members:

*H. Haak
R.P. Hoemsen
R.J. Houston
J.O. Klein
R. Menon
R.S. Morrison
B.J. Rossen
E. Weiszmann
J.D. West
T.L. Stratton - ACEM
liaison - observer*

The committee held seven meetings in the past year and completed its work on nearly all of the matters referred to it.

On the question of possible ramifications for engineers in Manitoba of the Station Square Shopping Center roof collapse in Burnaby, B.C., in 1988, the committee recommended to Council that a questionnaire be circulated to the membership outlining the issues and asking for an indication as to the importance of those issues. This was considered by Executive Committee, who preferred that a sub-committee review the document prepared by APEGBC. The committee agreed to work with that sub-committee.

Discussion continued on a proposal by the Community Development Branch of the Provincial Department of Rural Development regarding a model Administrative Policy Guide for the application of the Manitoba Building Code. A meeting was held with a representative of the Branch and the Safety in Engineering Practice Committee. The latter committee then drafted a letter which it recommended for submittal to the Branch and the Consulting Engineers Committee agreed with that letter.

The matter of actual and potential problems in relations with architects received further attention. It was noted that the President and members of the Executive of APEM and MAA met for informal discussions and it was considered that these could provide the liaison for awareness of possible problems. APEM and ACEM also met on an informational basis.

The committee supported Draft No.5 of a Proposed Guideline of Professional Practice in Canada issued by CCPE in 1991.

Appendix A of the Guide for the Engagement of a Consulting Engineer was revised to take into account the 1991 Salary Survey and was made available.

The question of a possible adverse effect of the GST on engineering fees was discussed and further information was requested from concerned parties. Some, but not much, information was received and the matter appears to be resolved.

The committee agreed to have a representative on a committee established by the Safety in Engi-

neering Practice Committee to consider the matter of building envelope systems. Colin Gibbs, P. Eng., though not a member of the committee, was asked to be that representative. He was selected because of his experience in that field.

Once again our sincere thanks to all the APEM staff members and especially to those who have been the most closely associated with the committee during the past year, Heather Kitchen and Dave Ennis. □

Salary Research Committee

Continued from page 10

ing the period 1 April, 1991 to 1 April, 1992. This is by far the greatest number of zero increases reported in the eight years I have been on this committee. It does not seem to be as a result of any collective bargaining cycles but, rather, a reflection of the general fiscal climate.

The generation of these surveys is becoming easier due mainly to the dedication and hard work of the committee members. I, however, made an enormous mistake and left one of them off the credits at the end of the Survey report. I would like now to atone for that error by recognizing the work of Lloyd Kuczek (I hope he will still come to the next committee meeting!). I must also mention the continuing support of Dave Ennis and Joan McKinley, without whom the task of conducting the surveys would be very much more difficult. □

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

Board of Examiners



F.R. Kaita, Chair

Members:

C.D. Anderson
D.T. Anderson
E. Bridges
J.R. Cahoon
D.G. Chapman
A.M. Clayton
G.P. Fyfe
A.D. Gerrard
R.P.S. Han
D.S. Jayas
R.W. Menzies
D.W. Ruth
A.B. Sparling
M. Yunik

The Board of Examiners assesses the academic qualifications of applicants who are graduates from programs not accredited by the Canadian Engineering Accreditation Board (CEAB), to determine the academic eligibility of such applicants for registration. The Board may require an applicant to pass assigned examinations in order to academically qualify for acceptance into the profession.

The Board assessed 33 new applicants, reassessed 26 applications and administered 56 examinations. Of the 33 new applicants, 28 were assigned examinations (five qualifying, seven confirmatory and 16 programs), and five were qualified. Of the 26 applicants re-assessed, 13 were considered qualified based on successful completion of the assigned examinations, three were assessed additional examinations, and ten were reviewed for various requests, including changes in the numbers of assigned examinations and course substitutions. A total of 37 candidates registered for 56 examinations and 38 passes were recorded.

The Board has reviewed a number of significant Canadian Council of Professional Engineers (CCPE) initiatives. These included the 1992 Edition of the Examination Syllabus; the 1992 List of Foreign Qualifications (draft); the Guideline on Admission to the Practice of Engineering in Canada (draft); and the ongoing CEAB ratification of a six-nation (Canada, Australia, Republic of Ireland, United States, United Kingdom, New Zealand) Mutual Recognition Agreement.

The Manual Review Sub-Committee, under the leadership of Doug Chapman, has completed a draft of the revised Board of Examiners' Policy Manual. The revision includes APEM and CCPE initiatives, particularly the recommendation included in the 1992 Edition of the Examination Syllabus.

During the year we thanked Walter Pawlikewich (liaison councillor) for his valuable contribution to the Board and welcomed his replacement, Gail Fyfe.

I wish to extend my personal thanks to all

Publication Committee



J.W. Bogan, Chair

Members:

A.E. Ball
B.A.K. Danielson
B.A. Dobran
V.L. Dutton
N.P. Feschuk
L.Y. Ganetsky
D.S. Jayas
J. Lucas
W.G. McKay
H.S. Zbigniewicz

Since last year's report, the Publication Committee has welcomed one additional member, Bev Dobran. Bill Mackenzie joined us a year ago and has recently resigned from the committee. Due to his many commitments, Bill McKay has moved from the Chairman's role, but still remains an active committee member.

Correspondents Dick Menon in Brandon and Rob Cotterill in Thompson continue to cover the Westman and Thompson Chapter activities. They keep those of us within the confines of the Perimeter informed.

The membership may (or may not) have noticed a new banner. The committee feels it is attractive and incorporates the Association's new logo (others have debated this). Alas, beauty is in the eye of the beholder.

Awards Committee



K.A. Buhr, Chair

Members:

E.F. Glass
V.D. Gupta
R.P. Hoemsen
F.R. Kaita
W.G. McKay
W.E. Muir
W.L. Pawlikewich
D.C.H. Prowse

The Awards Committee is responsible for all matters relating to awards of the Association and awards requiring participation by the Association, including the CCPE Awards. As

members of the Board for their time and efforts. We all join in expressing our sincere thanks to the APEM staff and in particular Dave Ennis, Shirley Matile and Joan McKinley for their valuable and capable assistance in organizing the meetings, being the source of information at meetings and keeping the minutes. □

Wherever possible, the committee relies on its own members or other Association members to cover events or assignments of interest. The committee would like to express its appreciation to all of those who have taken the time and effort (we apologize for nagging some of you) to submit articles during the year.

In general, the committee attempts to concentrate on local events or Manitoba issues as much as possible.

Overall, we sense that there has been an increase in reader interest by some of the recent responses we have received. The Publication Committee's efforts may be the most visible and the membership is welcome to express its views, including constructive criticisms. Internally, committee members will review all submissions prior to publishing, without exception.

The committee learned during the year that our publication does not hold the same legal standing as a newspaper. As a result, certain opinions on some issues could not be published. However, we still try to be open while shouldering our responsibilities. Through the year we've also reviewed using re-cycled paper and various colour schemes.

New members are welcome. We encourage those who feel so inclined to join us.

The committee extends its appreciation to the Association staff for their efforts, especially Shirley Matile and Donna Bilodeau. Personally, I'd like to thank the committee members for their work and participation. □

well, the committee is responsible for the terms of reference of the Association awards, including the establishment of new awards.

Nomination forms were sent out to the membership in February of 1992, soliciting names of potential candidates for four CCPE Awards and two APEM Awards.

The committee met seven times in 1992 to consider the names of the potential candidates nominated by the membership, names of potential candidates recommended by the 1991 committee and names suggested by the 1992 committee. In addition, the committee recommended the names of candidates for the APEM Outstanding Service Award and Honorary Life Membership.

The recommendations for the CCPE Awards were presented to Council on May 11, 1992. The recommendations for the APEM Awards were presented to Council on July 13, 1992.

The committee will be meeting again in the fall to consider a number of issues related to the terms of reference of the APEM Merit Award, as well as the addition of several new awards.

I would like to acknowledge the work of Joan McKinley and the members of the committee for their work in recommending an excellent slate of candidates for the 1992 Awards. □

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

Sports Committee



J.F. Lavergne, Chair

Members:

*D.G. Bell
W.B. Mackenzie
K. Miller
M.D. Vanderpont
H. Wilson*

The Sports Committee maintained the two traditional events this year while it attempted to organize a couple of new things.

Attempts to organize a ski trip to Frost Fire have been put to rest, and no other attempts will be made at this time.

The number of members entered in the 13th Annual Manitoba Marathon exceeded expectations. We were able to increase the number of participants by 300%. A total of 15 runners

braved the 26.2 mile (42.2 kilometre) relay on a cool cloudy Sunday morning in June. The committee is hoping for five or six teams next year, and that in time, this may become "the third traditional event". If nothing else, it's a great way to get in shape, and an even better way to promote the profession.

Not wanting to break with tradition, the curling bonspiel was again held at the Granite and featured a slate of 22 rinks. This year the rink of Sean Quigley, Rhonda Orr, Dave Nicholls and Charlie Lew took to the podium with top honors. Again, a "closest-to-the-button" competition was held with proceeds being donated to charity. Special thanks to Bill Saunders for his skills as draw-master.

Few golfers, including yours truly, were able to keep dry as this year's golf tournament at the Selkirk Golf and Country Club was interrupted by a long, torrential downpour. Nonetheless, the 120 or so golfers still managed to enjoy themselves, with a few holes of golf, a "cold one" or two and a fabulous steak dinner. By the day's end, Rob Borody had netted his name on the Landon Cup by shooting the lowest score, and Irv Sandule took top honors for low gross.

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Nominating Committee



Wm.M.A. McDonald, Chair

Members:

*M.G. Britton
K.A. Buhr
D.G. Chapman
J.G. Hildebrandt
R.A. Johnson
F.R. Kaita
W.B. Mackenzie
W.L. Pawlikewich
C.L. Stewart*

The Nominating Committee is responsible for providing a slate of candidates for election to Council. This year's committee, comprising 10 members of the Association, met twice and considered a total of 24 possible candidates. From this group, eight candidates agreed initially to run for Council.

Nomination forms for the candidates were completed and the completed slate presented to Council for formal approval.

Since that time, one of the candidates withdrew his nomination.

Under the By-Laws of the Association, there may still be additional candidates proposed by the membership.

Five councillors are to be elected this year.

I would like to express my thanks for the work and input of the committee members, the assistance and guidance of Dave Ennis, and the secretarial support of Joan McKinley.

I am confident that from the proposed slate the membership will be able to elect councillors who will make solid contributions to the management of the affairs of the Association.

engineers on APEM's assessment and registration processes. A follow-up evening presentation was made late in August.

The coming year promises to be equally busy, with the final revision and adoption of our new Admission Standards, the adoption of the new Board of Examiners' policy manual, the implementation of a completely new system of assessments, the complete overhaul and implementation of a new Professional Practice Examination and, if time permits, the review and adoption of the draft procedures manuals for the Admissions Review Board and the Admissions staff!

I am extremely grateful for the capable and competent assistance of Donna, Joan, and Syl who worked sometimes frantically but always without complaint last year, and who will really have their work cut out for them in the coming year - again!

Director of Admissions' Report

Continued from page 6

ments with the engineering accreditation bodies in the USA, Ireland, and Australia, and with some of the institutions in Great Britain. Graduates of programs accredited by these bodies since 1989 are considered academically equivalent to graduates of accredited Canadian programs.)

The Canadian Engineering Qualifications Board (CEQB), another standing committee of CCPE, produced a revised Syllabus of Examinations and a new list of foreign qualifications in 1992. It also prepared a draft national guideline for the Professional Practice Examination, which is expected to be finalized in November, 1992. The new Syllabus and list of foreign qualifica-

tions are expected to be adopted by Council for use by the Board of Examiners. The guideline for the Professional Practice Examination (the examination written by all applicants for membership or licensure with APEM), if adopted by Council, will result in the formulation of an examination that is a great deal more comprehensive than this Association's current "test".

The CEQB, in conjunction with admissions officials throughout the country, is currently looking at ways to facilitate the inter-provincial mobility of engineers. One of the major issues in this area is the proposed increase to four years of the engineering work experience requirement for registration. Other issues include the modifi-
operandi of the various Boards of Examiners, and the variety in both nature and application of the Professional Practice Examinations.

Much of my time during the past year was spent reviewing immigrant issues. The provincial government released its Working Group on Immigrant Credentials report, to which we contributed. As a result of this report, a new government branch, the Immigrant Credentials and Labour Market Branch, was created under the Citizenship department; and we have been working closely with that Branch. We have also worked closely with Market Connections, a consulting firm which has set up a pilot program to provide unemployed immigrant engineers with language, computer and job-searching skills, as well as information on APEM's assessment and registration procedures. We also attended a weekend accreditation conference, sponsored by the International Professional Association, and made a workshop presentation to some 50 immigrant

Notice

This is Notice that on August 31, 1992 the registration of T.R. Grimshaw, P.Eng. was suspended for a period of 30 days following a conviction, in accordance with section 43.4.8(e) of By-law 43, on a charge of conduct in the practice of engineering detrimental to the public interest with respect to the design of a bridge over the Scott Drain Northeast of Section 23, Township 21, Range 16 West in the R.M. of McCreary in the Province of Manitoba.

Council Report

July 13, 1992

By: B.A. Dobran, P. Eng.

AT WHICH COUNCIL DECIDES ON ELECTING FIVE NEW COUNCILLORS AT THE 1992 AGM, AND SETS 1992/93 FEES AND DUES

The July 13, 1992 Council meeting was chaired by President Pat Feschuk. Approvals of licences, EIT's, transfers, and registrations were handled in a routine fashion.

By-Law Interpretation - Council Elections

After considering a report prepared by councillor Chapman, Council rescinded its June 15, 1992 motion to have three Council vacancies filled in 1992. It was decided that Council advise the Nominating Committee that there will be five vacancies for elected councillors to be filled at the Annual General Meeting in 1992.

1992/93 Budget and 1993 Schedule of Dues and Fees

Council considered the 1992/93 budget summary and worksheets and the schedule of fees and dues. Dave Ennis gave a brief introduction to the budget, and then proceeded to discuss the 1993 proposed expenditures. Council recommended that the Association examine and attempt to reduce the costs of printing and courier services. Council then approved the 1993 schedule of fees and dues, and the 1992/93 budget.

The 1993 annual dues have been increased by \$23. The cheque that the member will write will be \$193 in 1993 vs \$170 in 1992. First-time registrants will pay \$288 in 1993 vs \$260 in 1992 (registration fees were increased by five dollars).

Investigation Committee Proposal

Council adopted an interpretation of By-Law 43.4.6 which authorizes the

Investigation Committee to use the By-Law 43 fund to engage temporary staff assistance, in addition to any required service of experts or professionals, to assist in carrying out its duties. Council will ask the Investigation Committee to report at the May, 1993 meeting of Council on the assistance obtained and funds utilized under this interpretation.

Registration Board

Council considered the revised terms of reference for the proposed Registration Board, as presented by the Ad Hoc Committee on Admissions Standards. The committee had deferred to Council the question of lay representation on the Registration Board. Council decided that there be one voting lay representative on the proposed Registration Board. Council then accepted the terms of reference in principle, and formed a sub-committee of Council to develop an implementation plan for consideration at the September Council meeting. President Pat Feschuk agreed, in the absence of volunteers, to appoint the sub-committee.

Awards Committee Recommendations

Ken Buhr, P. Eng. presented the recommendations of the Awards Committee. Council approved the committee's recommendations for the following awards: APEM Merit Award, APEM Outstanding Service Award, APEM Honorary Life Membership and the APEM Certificate of Engineering Achievement. The winners will be announced at the Annual General Meeting, October 30, 1992.

August Council Meeting

There is to be no August Council meeting. The existing term of the temporary licenses expiring in the month of August has been extended to September 30, 1992. Council delegated its authority to approve registrations, transfers, and licences to the Executive Committee during the month of August 1992.

Council decided that its next meeting would be held September 14, 1992 and that the October meeting would be held October 13, 1992. □

News From Other Associations

By: L.Y. Ganetsky, P. Eng.

Saskatchewan

APES Program Encourages Science in Schools

A program designed to encourage student interest and awareness in science is off to a good start in Saskatchewan schools.

Spearheaded by the Association of Professional Engineers of Saskatchewan, "Innovators in the Schools" takes practising scientists, engineers, mathematicians and technologists into the classroom. The visiting professionals make science fun for students through demonstrations and hands-on activities specifically geared to their interests and grade levels.

The project was recently launched on a pilot basis in six Saskatchewan schools in cooperation with Saskatchewan Economic Diversification and Trade, Saskatchewan Education, and Industry, Science and Technology Canada. Province-wide implementation is planned for the fall.

Trevor Harle, P. Eng., of the APES Student Liaison Committee, says response to the program has been favorable. Among the initial school visits, two engineers in Regina spoke to a class studying bridges; one discussed fibre optics, and one talked about the ozone layer.

Harle says planning is well underway toward launching the full program in the fall.

"The Department of Education will be sending out copies of our brochure to all schools in the province with its June mail-out," Harle said. "Interested schools can then contact the Association office and I'll line them up with someone suitable."

Harle says approximately 150 speakers have agreed to participate in the program for the coming school year.

Ontario

U of W Team Develops Data Microchip Card

The cashless society may be one step closer. University of Waterloo researchers have developed the world's first data encryption microchip using elliptic curves. The microchip's compact design makes it suitable for use in secure smart cards, which could be used for banking, personal identification, access control and medical record-keeping.

Gordon Agnew, P. Eng., University of Waterloo, Associate Electrical Engineering Professor, says the microchip acts as a public key data encryption device, using two separate keys to

scramble and unscramble data, which are protected by a mathematically complex elliptic-curve system. The microchip's algebraic system, based on plotting points on an elliptic curve, is complex enough to achieve security with smaller blocks of stored numbers, he says.

Ontario Engineer May Hold Key to Glaucoma Cure

An Ontario engineer investigating the human eye's fluid drainage mechanisms has found that a tiny layer of cells near the cornea may be key in causing glaucoma, a disease that gradually blinds sufferers. His engineering approach to the study is a Canadian first.

"Canadian engineers have not previously been involved in glaucoma research" according to C. Ross Ethier, P. Eng., Associate Professor, Department of Mechanical Engineering and Institute of Biomedical Engineering, University of Toronto. He says most research to date has not used engineering principles.

In healthy eyes, aqueous humor, the clear liquid that fills the front of the eye - exists freely through a meshwork of tiny pores located where the cornea and iris meet, and then down a pathway known as Schlemm's canal. When this outflow is hindered, pressure builds up, damaging the optic nerve and resulting in a condition called primary open angle glaucoma. More than two

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News From Other Associations

Continued from page 15

million North Americans are currently affected by the disease.

Using human eyes from donors, Ethier and a team of researchers altered drainage mechanisms in the eye, including the porous cells lining Schlemm's canal, by infusing drugs such as N-ethyl maleimide. The drugs increased the number and size of pores in the canal's lining, which reduced fluid resistance and allowed for easier outflow of the aqueous humor.

"We then measured the flow resistance of the tissue, which was a difficult thing to do, because the flow rate is very slow - about two microlitres per minute," says Ethier. "We had to come up with an accurate method of measuring the flow rate, which is six or seven orders of magnitude less than a typical flow rate measured in standard engineering applications." To accomplish this, the team developed a device that has a flow rate resolution of 0.1 microlitres per minute. By comparison, a drop of water has a volume of about 20 microlitres.

The investigation also included porous materials research. "We treated the tissue as a biological, porous material," says Ethier. "We used standard engineering techniques to relate its flow resistance to its composition and structure, as determined by image analysis of tissue specimens." Ethier found that in eyes with glaucoma, the number and size of pores in the lining are smaller than those in healthy eyes. Eyes with more and larger pores allow a jelly-like substance in the meshwork to seep out, lowering flow resistance and releasing pressure.

Ethier says the team is now investigating whether altering the lining of Schlemm's canal using drugs could contribute to eventual treatment and prevention of glaucoma. The research is funded by the Medical Research Council of Canada. □

Attention, Speakers!

APEM is recruiting volunteers for the Innovators In The Schools program, designed to encourage children of all ages to study science and mathematics and to consider careers in science and engineering.

Engineers and other scientists will assist schools throughout Manitoba by serving as speakers, role models, science-fair judges, career days presenters and World in Motion volunteers.

Under this program, you will receive training, educational material, ideas for presentations, moral support...whatever you need to help you become a first-class role model for the profession.

If you are interested in helping influence a child's career choice, please leave your name, address, telephone and fax numbers with the APEM office (Telephone: 942-6481, Fax 942-3718). □

Coming Events

DOWNSIZING EXPO CANADA

October 19-21, 1992
Sheraton Centre, Toronto, Ontario
Contact: Digital Consulting, Inc.
Telephone: (508)470-3880
Fax: (508)470-0526

DESIGN OF LOW RISE STEEL FRAMED BUILDINGS

Canadian Institute of Steel Construction
October 26-27, 1992
Winnipeg, Manitoba

Contact: Brenda Williamson
Telephone: (800)268-3104
Fax: (416)491-6461

NATIONAL ENVIRONMENTAL REGULATION UPDATE

October 26-27, 1992
Toronto, Ontario
Telephone: (212)645-8689

WRITE WINNING PROPOSALS

October 27-28, 1992
Winnipeg, Manitoba
Contact: Alexa Campbell
Telephone: (204)489-5471

WOOD PRODUCTS FOR ENGINEERED STRUCTURES

November 11-13, 1992
Las Vegas, Nevada
Contact: Forest Products Research Society
Telephone: (608)231-1361
Fax: (608)231-2152

DESIGN AND OPERATION OF WATER FILTRATION SYSTEMS SEMINAR

November 19-20, 1992
Winnipeg, Manitoba
Contact: Manitoba Water and Waste Association
Telephone: (204)339-3330
Fax: (204)334-9813

HOT AND COLD WEATHER CONCRETING

ACI Manitoba Chapter Fall Seminar
November 25, 1992
Winnipeg, Manitoba
Contact: Michael Hatch, P. Eng.
DS-Lea Consultants Ltd.
Telephone: (204)943-3178
Fax: (204)943-4948

Sports Committee

Continued from page 14

A special thanks to all the members and their corporate affiliates for the unsolicited prizes donated for these two events.

The Sports Committee is always looking for new members who have ideas for new events and suggestions on how to improve our traditional events. Interested parties are simply asked to contact any member on the committee. □

TRANSFORMING SCIENCE AND TECHNOLOGY: OUR FUTURE DEPENDS ON IT

7th Biennial GASAT (Gender & Science & Technology) Conference
July 31- August 5, 1993
University of Waterloo, Waterloo, Ontario
Contact: Ann Holmes,
Ontario Women's Directorate
Telephone: (416)597-4587
Fax: (416)597-4594

COLD REGIONS ENGINEERING - A GLOBAL PERSPECTIVE (ISCORE '94)

7th International Conference
March 7-9, 1994
Edmonton, Alberta
Telephone: (403)450-3300
Fax: (403)450-3700

CONSTRUCTION SPECIFICATIONS CANADA (CSC)

Home Study Course for Construction Specifiers
Telephone: (416)777-2198
Fax: (416)777-2197

Calls for Papers

"WATER AND THE WILDERNESS: DEVELOPMENT, STEWARDSHIP, MANAGEMENT"

CWRA 46th Annual Conference
June 16-19, 1993
Banff, Alberta
Submit 250-word abstracts to Dr. David Manz,
University of Calgary, by November 1, 1992
Telephone: (403)220-5503
Fax: (403)282-7026

"1993 CSCE ANNUAL CONFERENCE AND 11TH HYDROTECHNICAL SPECIALTY DIVISION CONFERENCE"

July 8-11, 1993
Fredericton, New Brunswick
Submit 500-word abstracts to Dr. John Christian,
P. Eng., MCSCE,
CSCE'93 Annual Conference, by October 16, 1992
Telephone: (506)453-4521
Fax: (506)453-3568

My thanks to the Sports Committee members who all sacrificed their time and efforts to ensure that this year's events were all successful. Thanks also to Elliott Garfinkel who left our committee to join the University Liaison Committee and David Foerster who has decided to retire from the profession and enter a career in medicine. Good luck to both of you. Finally, a special thanks to Murray Vanderpont who resigned as Chairman this year. Your leadership and dedication were greatly appreciated. Thanks, Murray. □