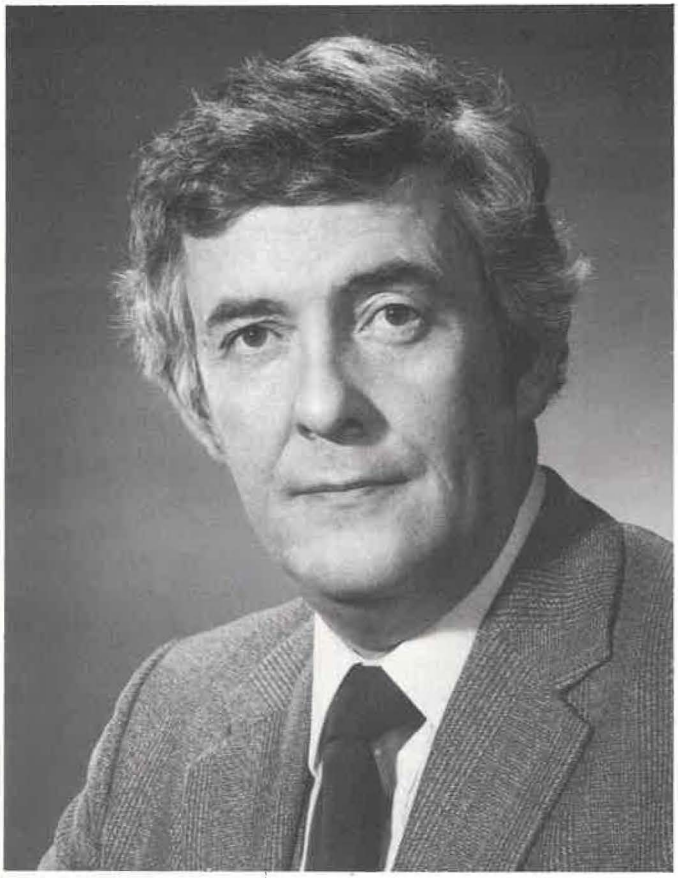
The Manitoba Professional Engineer
December
bulletin 85



E. W. J. (TED) CLARKE, P.Eng.
President
Association of Professional Engineers of Manitoba
Elected at the 66th Annual General Meeting
on October 18, 1985.

The Manitoba Professional Engineer
bulletin85

December, 1985

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UNCLE BILL NEEDS YOU! !

The above title, like much of what one reads these days (except in this Bulletin!) is only half true.

Bill Mackenzie, P. Eng., Genel Manager, Secretary and Registrar of the Association ... and ex-officio member of virtually every Association Committee ... is not particularly avuncular.

But he certainly needs to hear from you, because over and over again, Council and Committee Chairmen put Bill on the spot when seeking members for our Committees. Bill is expected to know, or at least requested to provide, the names, disciplines, aptitudes, preferences and inclinations of every A.P.E.M. member as they relate to the endless search for selfless, energetic, knowledgeable, and above all, available engineers to participate in resolving Association issues effectively through our Committee structure.

Unfortunately, Bill can't read your mind!

Therefore please read the 'President's Message' in this issue of Bulletin '85, and respond by filling in, and mailing, the reply form enclosed with this issue.

And thanks in advance for letting Bill know how best you can assist in resolving his ... and your, and our ... problems! □

Members Elected to Council (By-Law 6)

W. R. Newton, P. Eng.
K. A. Buhr, P. Eng.
E. W. J. Clarke, P. Eng.
O. Hawaleshka, P. Eng.

President's Message

Most members of A.P.E.M. fail to participate in the government of their professional association.

For example, only 25% of the Association's members voted in the recent Council election. This percentage is probably appreciably lower than in a typical general election — a surprising circumstance, since one would like to think that professional persons would be more interested and responsible and involved than the average citizen.

And while most Professional Engineers are aware that the Association's committees carry out many of the Association's most important functions, most engineers have nevertheless never served on any Association committee.

Members owe it to themselves and the Association to show much more interest and initiative.

Membership on certain of the Association's committees requires particular qualifications in addition to membership in A.P.E.M. For example, the Consulting Engineers' Committee consists of consultants and their clients; the Executive Committee is drawn from Council's membership; and the composition of the Nominating Committee is struck at the Annual General Meeting. However, on most committees, any member is eligible (and welcome!) to serve.

The Association's committees are listed below. In most cases, the titles clearly suggest the function and activities of the Committee, but any doubt you may have can quickly be cleared up by writing or phoning the Association offices.

Admissions Review Board
Practice and Ethics Committee
Awards Committee
Consulting Engineers Committee
Salary Schedule Committee
Annual General Meeting Committee
University Liaison Committee
Executive Committee
Board of Examiners
Safety in Engineering Practice Committee
Legislation Committee
Nominating Committee
Professional Development Committee
Bulletin Committee
Social Committee
Sports Committee

Ad Hoc Committee on the Ethical Use of the Engineering Seal
South-West Manitoba Professional Engineers Committee
Ad Hoc Committee on Act Enforcement

This column is not a desperate appeal, but rather a straightforward message to the membership. The Association is **not** in any danger of floundering through a total lack of participation — but certain committees, after losing a member or members, have had to suspend or delay their activity for prolonged periods because it has been a slow and difficult process to find replacements.

In short, the Association would benefit from a greater number of volunteers for committee membership. For this purpose, the Association needs a list of those members who would **consider** serving on a committee or committees.

If you have ever wanted to influence Association policy, or felt out of touch with Association affairs, or found fault with (or even merely been curious about) the manner in which the Association carries out its role, you have a reason to fill out the reply form enclosed with this issue and mail it promptly to the Association offices. The address is on page 2. All it will cost you at this time is a 34 cent stamp. It may subsequently cost you much more (largely in time volunteered) if you eventually serve on an Association committee, but it will be time well spent from the Association's viewpoint, and from yours as well. Most engineers can benefit from improved human relations skills, and participation in the activities of a committee can enhance such skills to no small degree. Thus, not only does serving on an Association committee help the Association substantially, but also it is often a genuine worthwhile (not to mention interesting learning experience.

Your reply will be considered not as a firm offer but rather as an expression of interest, which we will try to match with the Association's current needs.

Members of the Association outside Winnipeg should not hesitate to submit a reply. If enough interest is shown, ways will be found to involve such members — for example, by mail, or as members of a regional committee such as the active and worthwhile South-West Manitoba group.

So please take a moment to complete and mail your response. The information that you provide will assist the Association's staff, executive, and committee chairmen immensely when forming or replenishing committees, and will save valuable time. Your response will form part of a very important resource for your Association.

There is no obligation; obviously it will be your decision as to how to respond when we phone you. Thanks for your cooperation. □

Council Meeting

August 12, 1985 and August 15, 1985

Editor's Note: This Council Meeting Report was not received in time for inclusion in the last issue of the Bulletin, however, due to the importance of Council's position in connection with the O.P.E.E.P.M. strike, it is included in this issue.

President Roger Kane called the meeting to order at 3:30 p.m. With the exception of Marshall Haid, all councillors were present. W. B. Mackenzie, J. C. McKinley, and the Bulletin reporter V. J. Thielmann were also present. The matter of the O.P.E.E.P.M. strike was added to the agenda. The agenda and the minutes of the Council meeting of July 8, 1985 were then reviewed and approved.

Eleven applications for registration, four for reinstatement, four for transfer, five for Engineering Graduate membership, and eight for temporary licence were considered and approved.

The list of accounts for the month of July were considered and approved.

A number of items from the Executive Committee minutes of their meeting of July 30, 1985 were then considered. The proposed 1986 budget and fee schedule as prepared by the Registrar and the Executive Committee's recommendations pertaining thereto were discussed at some length and, with certain changes, approved. The item of most interest to the membership was that of annual fees and these will remain unchanged in 1986.

Roger Kane was appointed A.P.E.M. Director of the Canadian Council of Professional Engineers for the 1985-86 period.

The question of assessment of Engineering Graduate applications for membership was considered by Council and the decision reached that applicants for Engineering Graduate membership holding Computer and Industrial Engineering degrees from the University of Manitoba must be assessed individually. The $200 assessment fee, however, would be waived in their case. The applicants would be required to pay out of pocket expenses for examinations that might be required by the Board of Examiners.

Councillor Ted Speers submitted proposed Terms of Reference for the Social Committee and these were amended and approved.

Certain matters in relating to the O.P.E.E.P.M. strike were then considered by Council. A letter from O.P.E.E.P.M. dated July 29, 1985 was considered and the question of whether or not the withdrawal of services by members of O.P.E.E.P.M. constituted a breach

of the Code of Ethics was discussed at great length. The question was not resolved and the meeting was adjourned until Thursday, August 15, 1985.

On August 15, the matter was further considered and after lengthy discussion, a motion was carried reading "Council does not consider the withdrawal of services by members of O.P.E.E.P.M. to be explicitly in violation of the Code of Ethics, but the actions by members of O.P.E.E.P.M. could give rise to specific violations of the Code and the members of O.P.E.E.P.M. should be mindful of this. The withdrawal of services in contractual disputes by members of A.P.E.M. is not in the long term best interests of the public and is not in keeping with the spirit of professionalism and Council encourages O.P.E.E.P.M. and the Provincial Government to settle this matter as soon as possible." "The communication of Council's position on this matter is in no way intended to be construed as a view either in favour of or against the positions taken by parties on either side of this contractual dispute." The Registrar was requested to convey Council's position on the matter to O.P.E.E.P.M. with the request that it be disseminated to all members.

The meeting adjourned at 1:55 p.m., on August 15, 1985. □

October 7, 1985

By James McKenzie, P. Eng.

President Roger Kane presided over the October 7th Council Meeting. Nine members were in attendance. The Minutes of the September 9th, 1985 Council Meeting were reviewed and approved with minor changes.

Council then listened to a plea by two professional engineers, Derek Wilson and Charlie Bennett, to have a resolution placed on the agenda of the upcoming annual general meeting. The resolution called for the formation of a sub-committee of the Practice and Ethics Committee with the following mandate: to consider the role and needs of engineers in the nuclear age; to prepare a brief for distribution to all members before the 1985 Annual General Meeting; and, to make recommendations and submit motions for consideration at the next Annual General Meeting. Mr. Wilson indicated that guidelines were required to solve moral dilemmas faced by engineers involved in military work. He also urged Council to allow the general membership an opportunity to voice their opinion on the resolution.

Comments from Council focused on two main issues: should professional groups discuss moral issues; and whether the presentation of the resolution at the Annual Meeting could be seen as a political statement whether or not it was carried. The inclusion of the resolution on the 1985 Annual General Meeting was unanimously rejected by Council.

Council, after a few questions, approved the licences, engineering

graduates, transfers and registrations and the accounts.

The subject of de-registered engineers was then discussed. The question discussed was whether or not the Association should notify employers of the de-registration of professional engineers. After much discussion, Council concluded that a de-registered engineer is no longer the responsibility of the A.P.E.M. and therefore, no action will be taken to notify employers. A.P.E.M. however, will ask de-registered engineers to notify their employers of their de-registration.

John Bachmann, a longtime member of the Professional Development Committee, was appointed chairman of the committee.

Finally, Council considered the purchase of an original painting entitled "The Engineer" to adorn the A.P.E.M. office walls. The only objection voiced was that the engineer depicted in the painting was a male and was, therefore, not truly representative of the association membership. The purchase of the painting was approved with one dissenting vote.

The meeting adjourned at 5:15 p.m. □

Association of Professional Engineers of Manitoba

New Admissions Standards

On May 13, 1985 Council approved new A.P.E.M. Admission Standards which outline procedures to be followed by applicants for registration and reinstatement.

Copied herewith are excerpts which are important to certain applicants related to:

a) graduate engineers working in a job where no registered engineers are employed and;
b) reinstatement:

GRADUATE ENGINEERS WORKING WHERE NO REGISTERED ENGINEER EMPLOYED:

Satisfactory engineering experience

a) shall be of an engineering nature throughout and show progression into greater work complexity and increased responsibilities. Routine or sub-professional work, in itself, will normally not satisfy this requirement.
b) may be as defined in the Act, (1), "Definitions" as the "practice of professional engineering" under the immediate and direct personal supervision and guidance of a professional engineer who assumes all responsibility for the technical quality of the work, or may be the equivalent to such practice in technical complexity and the development of responsibilities as long as the safety of the public is not threatened thereby.

In the latter case, the following conditions apply:

i) The applicant shall have been enrolled as an Engineering Graduate throughout the period for which satisfactory experience is claimed.

ii) The applicant shall have maintained a log of experience

covering the period for which experience is claimed, of such form as designated by the Council and submitted for inspection at the time of application for registration and at such other times as may be required by the Registrar.

iii) The applicant shall comply with such other requirements as the Council may from time to time require.

Potential applicants should seek the advice of the Registrar in advance of undertaking such responsibilities to ensure the safety of the public and to confirm his intention as an Engineering Graduate to satisfy all applicable conditions. The Registrar shall report to the Council on all such discussions and advice, with a copy to the applicant.

All candidates in this category are alerted to all the requirements of Section 2 that apply to their situations.

c) shall have been gained throughout at least twenty-four months' activities, normally continuous, at least twelve months of which shall have been in Canada or in the United States.

d) may have been gained, in part (but in addition to the twelve months' experience in Canada and the United States), through postgraduate study attested to by a professional engineer and of a nature acceptable to Council.

e) shall be up-to-date, i.e. normally obtained in the twenty-four months immediately preceding the application.

f) shall normally be in the discipline of graduation.

All applicants must provide the Association with an acceptable summary of all engineering experience which they wish to be assessed as satisfactory engineering experience and with the names of a sufficient number of professional engineers as may be required by the Council who are able to attest to the duration and nature of those experiences.

All cases in which the Registrar is not satisfied that the experience claimed has been attained under the direct supervision of a professional engineer shall be referred to the Admissions Review Board for assessment, affirmation and recommendation to the Council.

In the case of an applicant for transfer or for a licence, proof of duly registered membership in good standing and valid at the time that the disposition of the application is considered by Council, in an association of engineers in any other jurisdiction in Canada or otherwise acceptable to Council, shall normally be accepted as proof of completion of satisfactory engineering experience.

REINSTATEMENT

The Registrar may refer applicants for reinstatement to the Admissions Review Board.

Applicants to be considered by Council must be:

1. Residents of Manitoba, and
2. Recommended for reinstatement by the Association Review Board on the basis of the following:
   a) at least three letters of reference from registered professional engineers
   b) an interview, if called for, by the Admissions Review Board, and

c) confirmation by the Registrar that all other standard requirements for registration including payment of fees, successful completion of the professional practice examination on the Act, By-Laws and Code of Ethics, etc. have been met.

Anyone can obtain a complete copy of the Admission Standards by contacting the Association office.

W. B. Mackenzie, P.Eng.
General Manager & Registrar □

W. D. (Bud) Christie, P. Eng.

By K. J. Hearson, P. Eng.

To summarize the 28 year career of Councillor W. D. Christie in one concise article is no small feat, as Bud has compiled a lengthy list of accomplishments in that time span. After graduation in 1957 from the University of Manitoba with a Mechanical Engineering degree, Bud began three years of employment with Manitoba Hydro. The three years were spent supervising construction of the mechanical components of the Brandon and Selkirk thermal generating stations. In 1960, Bud joined W.L. Wardrop & Associates Ltd., where he now holds the position of Director of Engineering.

During the 25 years with Wardrop & Associates, Bud has contributed to a vast and impressive array of projects. He served as executive engineer for numerous facilities for Atomic Energy of Canada Limited and has considerable engineering and managerial expertise in the nuclear industry. Bud was project manager for the $1 billion CANDU Wolsung-1 Nuclear Power Plant in Korea, and the on-site project manager on the CIDA - funded Ghana Upper Region Rural Water Supply Project. The latter project probably rates as most memorable for Bud, as he spent two years in Bolgatanga, Ghana supervising the installation of 2500 groundwater supply facilities in an 11,000 square mile area. Bud and his family have many fond memories of the refamiliarization they underwent afterwards. Imagine — fresh milk and cornflakes whenever you wanted them!

Bud's career has also included engineering management of such notable project as Winnipeg's North End Sewage Treatment Plant, Winnipeg's Imperial Oil Refinery, the water supply system for Cape Dorset, N.W.T., the water supply and distribution system for Churchill, Manitoba, Labatt's Winnipeg Brewery, and the conversion of a Manitoba distillery to ethanol production for use in "gasohol", as well as numerous others.

Most recently, Bud has been project director for the City of Winnipeg District Heating Study and a member of the steering committee for Manitoba Hydro's Thermal and Nuclear Generation Development Programs.

Bud and his wife Marion have two sons; Brett 13 and Duncan 15. Both boys are presently attending school in Winnipeg.

Bud is a welcome addition to the A.P.E.M. Council. He brings to Council the same excellence and commitment that is so evident in all his work.

Awards Conferred at A.P.E.M. Annual General Meeting Awards Luncheon

L to R: Dave Cross, Awards Committee Chairman; Jeff Rempel; Major J. L. Charles; Glenn W. Swift; Richard W. Haywood; Dennis A. Woodford.

MERIT AWARD: The terms of reference upon which Merit is judged are:

1. A contribution to engineering literature showing scholarly achievement.
2. Magnitude of engineering works successfully completed.
3. The pioneering achievement in the field of engineering application.
4. Outstanding public service.

In recognition of his outstanding career as scholar and educator, the Association's **MERIT AWARD** is conferred on **DR. GLENN SWIFT.**

For his outstanding contributions to research and development and to his pioneering achievements in the fields of electromagnetic transient simulation and electrical power transmission, this recognition is extended to **DENNIS WOODFORD.**

OUTSTANDING SERVICE AWARD: is intended to recognize outstanding service rendered to, or on behalf of, the Association of Professional Engineers of the Province of Manitoba by a member of the Association.

The Association is grateful for the work done by **RICHARD WILFRED HAYWOOD** over the years and feels that he is a most deserving recipient of the **OUTSTANDING SERVICE AWARD.**

The **CANADA NORTHLANDS DEVELOPMENT AWARD** was presented by Major J. L. Charles in memory of his son, the late Flight Sgt. John Hamilton Charles, R.A.F. to **JEFF REMPEL,** 4th year engineering student at U. of M.

Outgoing President, Roger A. Kane, presents gavel to Incoming President, E. W. J. (Ted) Clarke.

Numbers on the "Engineering Team" Vary Among Nations; International Survey Finds

During 1984, the Canadian Engineering Manpower Council circulated a questionnaire to national engineering organizations around the world to gather information about the engineering and technologist populations. The purpose of this exercise was to develop a rough data base on each nation's engineering workforce, what was the ratio of engineers to technologists and how prevalent were engineers among the general population. Because the definition of what is a professional engineer varies considerable from country to country, the data reflected in the accompanying tables should be considered as "benchmark" figures, not precise tabluations. The accompanying tables reflect data that were collected over an eight month period during 1984.

A familiar statistic used by science policy advisors, but more often by speech writers, is the relative number of engineers in each country compared with the total population. The table reflects this relationship and shows that among countries surveyed, and based on the population figures provided to the CEMC, there are 43 engineers, on average, for every 10,000 members of the general population.

The reliability of the data is open to question because of the various ways in which engineers are defined and categorized in each country. While some figures reflect the number of engineers with licenses, others reflect the number of engineers belonging to technical societies. For these reasons the data should be **used with caution.** By the same token, the relative proportion of engineers should not be construed as being an indicator of technological competence because each country has a distinct economic profile and consequently has a different requirement for engineers. As well, national economic and fiscal policies can have a considerable impact on the influence exerted by professional engineers in a given economic setting.

During this calendar year, the CEMC will be circulating these population figures among the countries surveyed to have them critiqued and updated so that these data can be upgraded for next year.

Source: Canadian Engineering Manpower Council

POPULATION STATISTICS FOR ENGINEERS

Country	Population	P. Eng.	Eng./Pop. of 10,000	Year
Australia	13.6 M	52,000	38	1979
Austria	7.6 M	16,500	22	1984
Canada	26.0 M	120,000	46	1985
Denmark	5.1 M	16,000	31	1984
Finland	4.8 M	21,900	46	1984
Germany (West)	61.5 M	485,000	79	1984
Hungary	10.5 M	74,464	71	1980
Ireland (South)	3.4 M	11,000	32	1984
Japan	112.2 M	405,561	36	1980
Korea (South)	37.4 M	27,418	8	1983
Norway	4.1 M	23,800	58	1984
Sweden	8.3 M	23,559	28	1980
Switzerland	6.4 M	15,169	24	1980
United Kingdom	55.8 M	201,623	36	1984
United States	234.2 M	1,204,000	51	1982

SHELL FUELATHON

1985 Mechanical Engineering Class.

The 1985 Mechanical Engineering class of the University of Manitoba participated in the Shell Fuelathon held May 29th and 30th at the Shell Research Centre in Oakville, Ontario and the Society of Automotive Engineers competition at Marshall, Michigan held June 7th and 8th.

The project began in September 1984 as part of the Mechanical Engineering Design Course with forty students participating. Fifteen students elected to continue with the project as their undergraduate thesis. Design principles were reviewed by Faculty members and representatives from local industry.

The design proposed a safe, light, aerodynamic and fuel efficient vehicle. The vehicle's space frame was fabricated out of aluminum and provided a good strength to weight ratio. The frame allowed mid-engine mounting which was isolated from the driver by a firewall. Power was supplied by a specially modified Briggs and Stratton engine. Steering was provided by mounting the front wheels on a centre pivoted axle. The drive train was designed to optimize engine and drive cycle efficiencies. A manual clutch brought the vehicle to its ideal operating speed; power was further transmitted using a chain and sprocket drive. The brake, throttle and engine stopping controls were mounted on the steering column at the driver's fingertips. An on-board computer provided readouts of instantaneous and average velocity and elapsed time. Braking was made using a bicycle type side-pull caliper brake mounted on the rear wheel. The body of the vehicle was designed to provide the lowest possible drag coefficient. Major contributions for the project were made by: Bristol Aerospace; Boeing of Canada Ltd.; Manitoba Hydro; Park Pontiac; The Society of Automotive Engineers, Manitoba Chapter and the University of Manitoba Student Union and Alumni Association.

The University of Manitoba entry placed seventh out of seventeen entries at the Shell Fuelathon with a fuel mileage rating of 771 mpg. A drive train malfunction at the SAE competition prevented the U.M. entry from competing. However, the entry tied for the "Best Design" award. The University of Saskatchewan entry won both competitions. At the Shell Fuelathon, the U of Sask. achieved a fuel mileage rating of 2980 mpg. Now, if you could only get the same mileage while including your wife, two kids, dog and enough luggage for a week at the beach.

Submitted by: J. W. Bogan □

Letters to the Editor are the opinions of the authors and not necessarily those of the Bulletin Committee or Council.

Letters

October 16, 1985

Dear Sir:

I take very strong exception to the article beginning on Page 17 of the October issue.

To quote "Is the legal system such that ways are always found to assign liability to any deep pocket whenever the truly negligent party (e.g. the contractor) has no insurance and is impecunious".

It is unacceptable that the contractor should be singled out for guilt, by imputation as the 'truly negligent party".

Consulting Engineers do make mistakes. If they didn't, there would be no need for Professional Insurance.

Owners contribute to the problem. They always buy the cheapest product on the market, by accepting the low bid.

I question the business sense, and ethics of a publisher permitting this sort of slur on the many members of the Association who work for Contractors, or own or operate Contracting firms.

In the case of my company, it has been a responsible member of the business community for 81 years. Considerably longer than the Engineering Association has been around.

K. W. Macaw, P.Eng.
President,
Macaw & Macdonald Limited

EDITOR'S NOTE:

The quote that Mr. Macaw refers to in his letter is taken from the following paragraph:

"Members of the public, who ultimately foot the bill, will soon start asking disturbing questions. Are our courts too plaintiff oriented? Is the legal system such that ways are always found to assign liability to any available deep pocket whenever the truly negligent party (e.g. the contractor) has no insurance and is impecunious? Are our court systems and legal process too burdensome and expensive?"

The opinions expressed by the article's author, Mr. Claude Mercier, are not necessarily those held by the A.P.E.M., its Council, or the Bulletin Committee. On the particular point Mr. Macaw takes exception with, we assume Mr. Mercier did not intend to single out one party as being negligent in all instances, but was simply citing an example. Perhaps the substitution of 'as an example' rather than the contraction 'e.g.' would have made the article less objectionable to Mr. Macaw. Certainly, no slur was intended. □

Penalty For Late Payment of Fees

The payment of annual fees, the penalties for late payment and the procedure necessary for reinstatement are matters covered in our Act, our By-Laws and our regulations.

Facts:

1) Fee invoices for 1986 annual fees have been mailed to all members.
2) Payment is due on or before January 1, 1986 (By-Law 38).
3) If payment is not received **before March 1, 1986** a $35 late payment penalty is assessed. (By-Law 38.)
4) If payment is not received **before July 1, 1986** the persons's name is removed from the register and he/she shall cease to be a member (By-Law 38).
5) The date of payment is the date it is **received in the Association office;** not when it is mailed; nor when the envelope is postmarked.
6) If a professional engineer is de-registered she/he can no longer practice engineering, cannot use the engineering seal, cannot use the appendage "P. Eng." on business cards, stationery, correspondence or on the office door. There is no further grace period.
7) No exceptions to the procedures laid down in the By-Laws are made for any reason.
8) The new A.P.E.M. admission standards prescribe a reinstatement procedure that may take up to two or three months to complete.
9) In 1985, 42 registered Manitoba engineers had their names removed from the Association Register for non-payment of dues. Of this number, 21 were out-of-province residents and cannot be reinstated to membership.

It is in your own self-interest to pay annual fees when they are due. It is also the professional thing to do.

W. B. Mackenzie, P. Eng.
Registrar □

COMING OF AGE: The CSCE Incorporates

Almost 100 years after a group of distinguished engineers formed the first learned society for Canadian civil engineers, the Canadian Society for Civil Engineering has become an incorporated body. It is the coming of age of an idea that has matured over many years of careful planning and deliberation into a desire for self-definition and autonomy. The incorporation of the CSCE liberates the Engineering Institute of Canada from the responsibility for the affairs of the Society to now actively engage in matters of national political and public interest on behalf of the engineering profession as a whole.

NEW ENGINEERING GRADUATE MEMBERS

L. G. Chambers
W. J. S. Crawford
G. James Foley
J. K. Leszkowicz
R. D. Nehring
D. R. Strang
W. L. Tse
E. H. Wright

"Crazy Judgements Must Be Challenged by the Profession", Says Featured Speaker at the A.P.E.M. Annual General Meeting

By Len Ganetsky, P. Eng.

President Roger Kane opened the 66th Annual General Meeting at 9:00 a.m. on Friday, October 18, 1985 in the South Ballroom of the Holiday Inn Downtown. The Secretary and Registrar, Bill Mackenzie, read the Notice of the Meeting and Roger Kane introduced the members of Council seated at the head table.

Also present at the meeting were the Presidents of the CCPE, APEO, APES and APEGGA. Each brought greetings from their respective associations.

Norm Johnson, President of the CCPE, mentioned that the 50th Annual Meeting of CCPE will take place in Vancouver next year and the event will be tied in with Expo '86.

Mr. Kane announced that Edward W. J. Clarke, Ken A. Buhr, Ostap Hawaleshka and William R. Newton had been elected to Council, with a 24.4% response to the ballots. The Auditors Report was received and Sill, Streuber, Fiske & Company were appointed as auditors for the coming year. The recommended salary schedule was approved, as was the proposal to amend By-Law No. 2.

Attendance was good and the general business was completed quickly, adjourning for coffee at about 9:40 a.m.

PANEL DISCUSSION:

The meeting reconvened at about 10:00 a.m. for a panel discussion on "Professional Liability". Two guest speakers were featured; Mr. William Kushneryk of Pitblado & Hoskin, Barristers and Solicitors, and Mr. Claude Mercier, President of Encon Insurance Managers Inc. Mr. Kushneryk spoke on where and how legal liabilities arise and on the limitations of liabilities for the professional. Mr. Mercier dealt with the present situation in the insurance industry. He advised of expected insurance rate increases in the area of several hundred percent.

This was followed by a question period. An interesting comment made by Mr. Mercier during this discussion was that there is a need for all professional people to lobby at a national level against the "crazy" judgements being made against engineers and thereby hopefully eliminating the need for sky rocketing insurance premiums.

The panel discussion concluded at approximately 11:50 a.m. and the meeting adjourned for lunch.

After lunch the awards portion of the meeting began. Glenn Swift received the Merit Award in recognition of his outstanding career as Scholar and Educator.

Dennis Woodford was recognized for his outstanding contributions to Research and Development and to his pioneering achievements in the fields of Electromagnetic Transient Simulation and Electrical Power Transmission.

The Outstanding Service Award

was given to Richard Haywood for all his work done over the years for the Association.

Carson Templeton was awarded an Honorary Life Membership by Council and became the first member in the Association's history to have received all three Association Awards. □

I.A.M.C. —A Small Manitoba Enterprise

Today we are in the midst of a revolution. The explosion in microelectronics technology has led to the successful development of a diverse array of computers and an expansion of computer applications. The area of microelectronics is changing the complexities and shape of our very society. The emergence of the silicon chip has made it possible to put the microcomputer in a maze of electronics products and systems in industrial tools, automobiles, communication systems and household appliances.

The Microelectronics Centre has been established to serve the industry of Manitoba and Canada, helping them to apply and capitalize on the developments in microelectronics technology. It is incorporated as a non-profit organization and strives through the combined effort, industry, government and the University to become a self-supporting facility. The specific aims of the Centre are:

1. to transmit knowledge of the applications of microelectronics to industry through industrial training programs;
2) to develop and consult with industry on product development and productivity enhancement projects and;
3) to conduct basic and applied research to stimulate advanced applications of microelectronics.

What makes the Microelectronics Centre unique in the world is this combined operation of engineering services, industrial and research in one organization. The synergism created by these three activities enables the Centre to act as a catalyst — to bring new companies to Manitoba and to improve the economic outlook of existing firms.

The Industrial Applications Division of Microelectronics Centre (IAMC) has recently acquired **Optimate** printed circuit wiring board (PCB) design software. This software runs on an **Apollo** colour workstation DN660, with 4 Mbytes of Ram, 2 Mbytes of display memory and 167 Mbytes of Winchester disk. The Apollo workstation is on loan to the University of Manitoba from the National Research Council and is also used by IAMC. The IAMC printed circuit wiring board (PCB) design methodology includes design activities in functional, physical and fabrication areas. The functional design includes circuit partitioning, schematic symbol creation, circuit schematics entry, design verification and netlisting.

The physical design activities include component symbol creation, board data entry, floorplanning, constraints setup, critical component pre-placement, component placement and optimization, selective net routing, and routing overflow handling.

The design for fabrication activities include machine readable output for precision artwork generation on a Gerber Scientific photoplotter, and silkscreen masks, solder masks, NC drill tapes, and parts lists.

IAMC has been encouraging a Manitoba PCB manufacturer to develop photoplotting and manufacturing capabilities in this province. At present these are available only in Ontario.

Any member interested in obtaining further information on the activities or capabilities of the Microelectronics Centre can contact them at the Engineering Building, University of Manitoba, Winnipeg, Manitoba R3T 2N2. □

ANNUAL WINE & CHEESE PARTY

Every year, on the evening before the Annual General Meeting, a delightful social event takes place — the Annual Wine and Cheese Party. This year, the event was hosted by President Roger Kane and his lovely wife Kerry.

Everyone who has served on a Committee or on Council, nominees for Council, past presidents, Association award winners and out-of-town guests to the Annual General Meeting are invited to this affair. All these people, accompanied by husbands, wives, etc. enjoyed a relaxed, pleasant evening renewing old acquaintances, making new acquaintances and partaking of an interesting variety of wines and cheeses.

The highlight of the evening was a presentation to Kerry Kane by Vice-President Ted Clarke on behalf of the Association. Ted thanked Kerry for the large amounts of Roger's time which she had sacrificed while he was attending to Association business.

The convivial proceedings terminated shortly after the closing of the bar at 10:30 p.m. □

One out of every 215 persons in Canada's total population is a registered professional engineer.

LICENCES ISSUED

G. A. Aldworth (Ont.)
H. Balodis (Ont.)
G. K. Bell (Sask.)
M. Berezowski (Sask.)
J. P. A. Bertens (Alta.)
J. L. Child (Alta.)
B. L. Coates (Alta.)
J. C. Draper (Que.)
B. R. Emery (Ont.)
A. A. Friedman (Ont.)
R. E. Harder (Alta.)
G. W. Ilott (Que.)
D. J. Lyzun (B.C.)
R. E. McCallum (Alta.)
G. G. Powell (Ont.)
J. T. Scarlett (Alta.)
K. W. Short (Ont.)
R. G. Skrentner (Minn.)
G. W. Spratt (B.C.)
P. Szana (Que.)
J. J. White (Sask.)

By-Law Amendment

The recent letter ballot on the amendment to by-law no. 2 is complete. A majority of those voting were in favor of the amendment. Accordingly, by-law no. 2 is amended and now conforms to Clause no. 7 of the Act.

W. B. Mackenzie, P.Eng.
Registrar □

NEW MEMBERS

B. P. Berestin
L. B. Birdsell
D. B. T. Davis
M. A. J. Desharnais
G. W. DeVal
W. C. Gilraine
G. J. Greer
G. D. Guest
T. Hansen
E. R. Hoare
D. A. Johnston
G. K. Kristiansen
A. Kung
G. A. LeMoal
K. G. Matieshin
B. W. McGillivray
M. D. C. Muzyka
J. Parkitny
D. J. Petrick
G. K. Romanetz
J. E. A. Sagman
G. S. Samant
K. B. Simonsen
T. D. M. Starodub
S. B. Topley
W. A. P. Warnhammar
R. G. Winkler

ANNOUNCEMENTS

Member of A.P.E.M. Council appointed to CAB

GARLAND E. LALIBERTE, P.ENG. of Winnipeg is the Canadian Accreditation Board Vice-Chairman for 1985-86. Dr. Laliberte is Professor and head of the Agricultural Engineering Department of the University of Manitoba. An agricultural engineering graduate from the University of Saskatchewan, Dr. Laliberte has been with the University of Manitoba since 1967.

Prior to coming to the University of Manitoba, Dr. Laliberte held positions at Colorado State University, the Canada Department of Agriculture, and the University of Saskatchewan. He obtained his Ph.D. from Colorado State University.

Dr. Laliberte is a member of the Association of Professional Engineers of Manitoba and has been a member of the CAB since 1982. He is active in many professional organizations, including the Association of the Faculties of Agriculture in Canada, the Agricultural Institute of Canada, the Canadian Society of Agricultural Engineering and the National Research Council of Canada. Dr. Laliberte has authored many technical publications.

Consulting Engineers (ACEC) 61st Annual Meeting

Still months to go, but already ACEC, in association with Consulting Engineers of British Columbia, is suggesting that members book hotel space early for ACEC's 61st Annual General Meeting to be held in Vancouver June 3-6, 1986. Expo '86 will be in full swing, so hotel accommodation for the meeting and for any extra days you may want before or after the meeting is going to be in short supply.

A pre-booking form was sent out by the association with the August 15th issue of the ACEC Information Bulletin. If, by chance, you didn't receive a copy and want a book, call or write the Association of Consulting Engineers of Canada, 130 Albert Street, Suite 616, Ottawa, Ontario K1P 5G4 (613) 236-0569.

U of M ENGINEERS, CLASS OF '76 HOLD REUNION

The 1976 Graduates from the Faculty of Engineering of the University of Manitoba are holding a class reunion to mark their tenth anniversary of graduation. The reunion is to be held in Winnipeg on June 28, 29, 30, 1986, and includes events for the graduates and their families. Graduates are urged to immediately contact the organizing committee through Mr. Jim M. Nostedt, P.Eng., 42 Montclair Bay, Winnipeg, Manitoba R3T 4B3.

PROFESSIONAL DEVELOPMENT

UNIVERSITY OF MANITOBA

Technical Report Writing — February 18th and 20th, 1986.
Selection of Variable Speed Drives — February 25, 26 & 27, 1986.
Plant, Machinery and Equipment:
Replacement & Liability — April 23, 24 & 25, 1986.

Brochures pertaining to the above will be mailed to the membership shortly. For further information contact: Professor G. S. Bains at 474-9921.

SHORT COURSE ON LIVING WITH SOIL MOVEMENT

The Winnipeg Branch of the Canadian Geotechnical Society is sponsoring a short course on Living with Soil Movement at the Masonic Memorial Temple (420 Corydon Avenue) on Wednesday, February 5th, 1986.

Topics outlined are as follows: Pavements, Shallow Foundations, Bridge Structures, Slopes & Excavations and Case Histories.

The course will provide engineers, owners and local contractors with an overview of the problems related to soil movement. As well, related design requirements and remedial measures will be discussed.

Please direct all inquiries to: E. Pudsey, P.Eng., Chairman, Organizing Committee, Manitoba Hydro, 1190 Waverley Street, Winnipeg, Manitoba R3C 3X9 (204) 474-3148.

CANADIAN STRUCTURAL ENGINEERING CONFERENCE

February 24 & 25, 1986, Vancouver.

Contact: Canadian Steel Construction Council, 201 Consumers Road, Suite 300, Willowdale, Ontario M2J 4G8. Telephone (416) 491-9898.

4th CANADIAN MASONRY SYMPOSIUM — 1986

June 2-4, 1986

Sponsored by Dept. of Civil Engineering, University of New Brunswick and the masonry industries of the Atlantic Provinces.

Contact: Dr. J. L. Dawe, P. Eng., Dept. Civil Engineering, University of New Brunswick, P.O. Box 4400, Fredericton, N.B. E3B 5A3. Tel: (506) 453-4523.

RENEWABLE ENERGY CONFERENCE '86

Call for papers — SESCI '86 and BEI Conference

June 23 to 26, 1986 — The University of Manitoba

Conference Theme is: Renewable Energy for Life.

For more information contact: Prof. R.E. Chant at (204) 474-9463 or Peter Winter (204) 257-3891.

50 GOLDEN NUGGETS

1936-1986

"Milestones tell us two things worth the knowing — where we've been and where we're going!"

On February 15, 1854, the first course of study in engineering at a Canadian University was begun at the University of New Brunswick (then King's College). Twenty-six male students enrolled in the course. Classes were given by McMahon Cregan who prior to joining the College was engaged on the survey of the European and North American Railroad.

Students of the College were able to enrol for a fee of ten shillings while all others paid a fee of two pounds. No other college in Canada had successfully implemented engineering as a regular course prior to 1854 and it was not until 1857 that University College began its first Civil Engineering program as a part of the curriculum of the University of Toronto.

Today, the total reported undergraduate enrolment in engineering programs for 1984-85 is 36,345 and in 1984 the universities awarded 6,668 bachelor's level engineering degrees. Over the period 1985 to 1988 it is expected that an average of almost **7,000** students will graduate each year.

Engineering education has come a long way since 1854! □