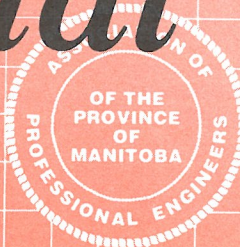


Professional Engineer



October, 1989

A SHARED ENTERPRISE

by G.A. Morris, P.Eng.

Governments and universities welcome the opportunity to work with the private sector in stimulating economic activity and developing productive physical plant. The current project to construct the new Structural/Construction Research and Development Facility at the University of Manitoba is an example of public-private sector cooperation at its best. Manitoba consultants, contractors and suppliers are working closely with the University of Manitoba and three levels of government to carry out the \$1.8 million project.

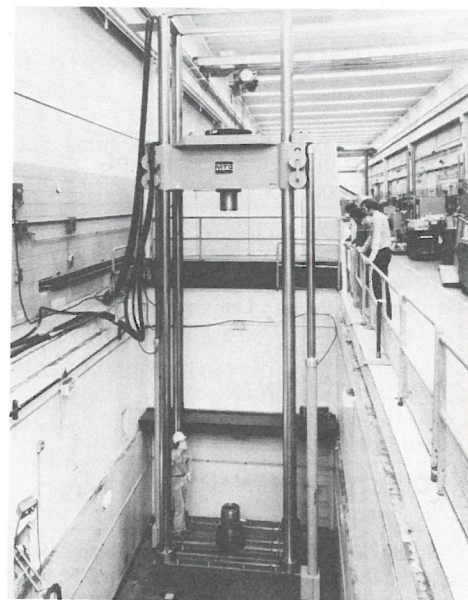
It all began in 1987, when Ray McQuade, P.Eng. undertook to raise \$1 million in private-sector donations of goods and services for the construction of the new facility. In response from the Manitoba engineering and construction communities was overwhelmingly positive and construction was begun in the fall of 1988.

Anticipating that there would be costs that could not be covered by private-sector donations, the Faculty of Engineering applied for and received a \$78,000 grant from the

Western Diversification Fund. As well, Mr. McQuade approached Premier Gary Filmon, a graduate of the Faculty of Engineering, who arranged to rebate the retail sales tax on all materials used in the project. Mayor Bill Norrie was approached next and the City of Winnipeg made a grant to cover the costs of all permits for the project.

From the inception of the project, it was recognized that the facility would be incomplete without a large-scale dynamic loading system. Accordingly, once construction was under way, staff members in the Faculty of Engineering made application to the Natural Sciences and Engineering Research Council for a grant to cover the cost of a 1.1-million-pound-capacity universal closed-loop dynamic loading system. The Council recently announced a \$750,000 grant to the University of Manitoba to cover the cost of the equipment. In the announcement, it was noted that the strong support of the private sector, the Government of Manitoba and the City of Winnipeg were positive factors in the Council's decision. The Uni-

versity of Manitoba subsequently made a grant to the project to cover the cost of technical staff to operate the equipment.



One Million Pound Capacity Dynamic Loading System.

Construction of the facility is now well advanced, with architectural, mechanical and electrical components yet to be completed. The current, and still growing, list of donors is a virtual who's who of the Manitoba business community. It includes, in alphabetical order:

- ABCO Supply & Service Ltd.
- Abesco Ltd.
- Accurate Glass Ltd.
- B. A. Robinson Ltd.
- Bailie Surveys
- Basar Heating & Air Conditioning Ltd.
- Betz Inc.
- Boge & Boge
- Building Products and Concrete Supply
- City of Winnipeg
- CML Northern Blower Ltd.
- Comstock Canada/Constructors
- Con-Force Structures Ltd.
- Cowin Steel Co. Ltd.
- Crane Canada Inc.
- Crosier Kilgour & Partners Ltd.

(continued on page 2)

ASSOCIATION OF PROFESSIONAL ENGINEERS OF MANITOBA 70TH ANNUAL GENERAL MEETING OCTOBER 27, 1989 — Holiday Inn Downtown Winnipeg

AGENDA

- | | |
|------------|---|
| 8:00 a.m. | Breakfast Meeting |
| 9:00 a.m. | Registration |
| 10:00 a.m. | Official Opening by President |
| | Notice of Meeting |
| | Introduction of Head Table |
| | Introduction of Guests |
| | Minutes of Annual General Meeting of October 28, 1988 |
| | Declaration of Councillors Elected |
| | Auditor's Report |
| | Appointment of Auditors |
| | 1989/90 Budget |
| | Nominating Committee Appointments |
| | Reports from Committee Chairmen |
| | Resolutions |
| | Greetings from C.C.P.E. and other Associations |
| 12:00 noon | Pre-Luncheon Reception |
| 1:30 p.m. | Luncheon with Guest Speaker — Premier Gary Filmon, P.Eng. |
| | Presentation of APEM Scholarships |
| 6:30 p.m. | Cocktail Reception |
| 7:30 p.m. | Awards Banquet & Dance |
| | Presentation of APEM Awards |

(Bring this Agenda to the Meeting)

THE MANITOBA

Professional Engineer

October, 1989

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- W. D. Christie, P.Eng., **Past-President**
- K. A. Buhr, P.Eng., **Vice-President**
- W. R. Newton, P.Eng.
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- J. R. McDougall
- W.M.A. McDonald, P.Eng.
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W. B. Mackenzie, P.Eng.

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Opinions expressed are not necessarily those held by the A.P.E.M. or the Council of the A.P.E.M.

Iron Ring Fall Ceremony

There will be an iron ring ceremony for Camp #8, on Tuesday, November 14, 1989 commencing at 8:00 p.m. in the Tartan Room 2nd Floor of Pembina Hall — University of Manitoba Campus.

For additional information contact Dave Sexton, P.Eng., Camp Secretary at 945-7488. Those wishing to be obligated should contact Mr. Sexton as soon as possible. □

MEMBERS ACHIEVING 100% ON THE PROFESSIONAL PRACTICE EXAM

- Peter John Willms
- Jordan James McMahon
- Lance M. Fridfinnson
- Ronald E. Pelkey
- G. James Foley
- Richard Wayne Hiebert

A Shared Enterprise

(continued from page 1)

- Crossroads Insulation Ltd.
- Diamond Ready Mix Concrete Ltd.
- Dominion Bridge Co. Ltd.
- Dow Chemical Canada Inc.
- Drummond McCall Inc.
- Dyregrov and Burgess
- E. H. Price Ltd.
- EMCO Limited
- Empire Iron Works Ltd.
- Federal Pioneer Ltd.
- Finmac Lumber Ltd.
- GBR Associates
- GRL Concrete Ltd.
- Government of Canada
- Government of Manitoba
- Great West Ventilation Inc.
- Honeywell Limited
- Hugh Monroe Construction Ltd.
- Hughes-Owens (Manitoba) 1985 Ltd.
- IVC Ltd.
- ITT Fluid Products
- K & H Concrete (Ready Mix) Ltd.
- Lindell-Jones
- C.T. Lowen Ltd.
- Luke's Machinery Co. Ltd.
- M. A. Stewart Ltd.
- Manitoba Redi-Mix and Concrete Association
- Manitoba Rolling Mills
- Manitoba Hydro
- Master Roofing Ltd.
- McCaine Electric Limited
- Mid-Canada Truck Services Ltd.
- Monarch Industries Limited

NEW MEMBERS REGISTERED AUGUST '89 and SEPTEMBER '89

- | | |
|-------------------|-------------------|
| K. Anspikian | G. A. Klimenko |
| P. A. T. Ayiku | S. I. Kulbaski |
| D. J. Barkman | C. G. S. Lew |
| R. F. Brown | P. G. McLaren |
| M. F. Buchko | D. M. McLeod |
| M. T. M. Caners | W. M. McTaggart |
| G. Chen | G. MacGregor |
| J. L. E. Coles | L. Mackie |
| M. J. Darbyshire | J. M. R. Marshall |
| E. F. deArcos | L. P. Pelletier |
| S. M. Dowhanik | S. M. Popovits |
| J. Dubrow | B. M. Peter |
| T. Duckworth | C. B. Rist |
| V. R. Dyer | B. Roberts |
| K. L. Falk | W. A. Rode |
| N. I. Faruqui | W. J. Russell |
| D. R. Foerster | P. J. Thatcher |
| J. A. Geib | M. Tirandaz |
| R. F. Gilbey | B. I. Toole |
| G. D. Gordon | E. J. Trost |
| J. N. Harvey | S. D. Ursel |
| B. E. Hulvershorn | A. W. L. Wan |
| H. R. Hulvershorn | C. W. T. Webb |
| R. W. Hiebert | P. L. Wilson |
| B. S. Hnatishin | A. D. Woodbury |
| G. D. Irwin | K. R. Zurek |
| H. S. Jhinger | |

- Nelson River Construction (1984) Inc.
- Perimeter Concrete
- P. M. & L. Reinforcing
- Randall Plumbing & Heating Ltd.
- Retrofit Systems Inc.
- Rick's Sheet Metal (1986) Ltd.
- Scouten Mitchell Sigurdson & Associates
- Stelco Inc.
- Steldor Hardware Ltd.
- Subterranean (Winnipeg) Ltd.
- Supercrrete Ready Mix Concrete
- Titan Foundry Ltd.
- Tom Beggs Agencies Ltd.
- Trane Canada Inc.
- UMA Spantec Ltd.
- United Westburne Inc.
- V. K. Mason Construction
- W. L. Wardrop and Associates
- WESCO Westinghouse Sales and Distribution Inc.
- Xerox Canada Inc.

Once completed, the facility will be unique in Canada. Admittedly there are perhaps a dozen laboratories of comparable size. There are even three or four with comparable modern loading equipment. None, however, embodies the shared enterprise that is our Manitoba facility. We can be very proud of it. □

LICENCES ISSUED IN AUGUST '89 and SEPTEMBER '89

- | | |
|-------------------------|-------------------------|
| R. Adhikary (Denver) | T. C. McCavour (|
| H. Benjamin (Que.) | G. J. MacDowall (|
| D. B. Burnes (Alta.) | B. C. Martin (Ont.) |
| J. J. Breen (Alta.) | M. J. O'Connor (Alta.) |
| G. L. Colborne (Sask.) | V. S. Platek (Que.) |
| J. A. Connell (B.C.) | J. M. Rae (B.C.) |
| J. V. Egmond (Ont.) | M. J. Rossaker (Alta.) |
| T. A. Eldridge (Ont.) | L. M. Sargent (Iowa) |
| S. N. Ferguson (Sask.) | J. P. Sprentz (Sask.) |
| G. A. D. Ganong (Sask.) | G. M. Still (MI) |
| S. H. Gebler (II) | C. G. Straub (Sask.) |
| C. Gibson (B.C.) | E. A. Tahmazian (Alta.) |
| A. H. Gustafarro (II) | S. K. Tse (Ont.) |
| D. K. Hall (Ont.) | A. Wasnea (Alta.) |
| T. D. Harle (Sask.) | D. Weinreb (Ont.) |
| W. N. Hasegawa (Alta.) | K. D. Whitehead (Ont.) |
| G. Kassis (Que.) | G. C. Wilkinson (Ont.) |
| B. A. Krasnichuk (Ont.) | C. N. Williams (Minn.) |
| E. Lim (Ont.) | |

ENGINEERING GRADUATES AUGUST '89 and SEPTEMBER '89

- | | |
|----------------|------------------|
| S. C. Alford | S. G. Pierce |
| J. M. Barnes | M. A. Robbie |
| D. D. Belsham | G. K. Saevil |
| K. N. Braden | D. Seebaluck |
| G. O. M. Evans | M. A. Stefanchuk |
| B. K. Horning | B. D. Tabac |
| R. J. Jonkman | P. M. Truong |
| T. Marstaller | |

CANNOT LOCATE

- | | |
|---------------|------------------|
| Ashby, W. B. | Quinn, C.M. |
| Brar, G.S. | Storry, J.R. |
| Fu, H.S. | Szeto, M. |
| Kroeker, D.G. | Tilley, M.D. |
| Lion, J.R. | Ventura, T.B. |
| McCann, T.J. | Winstanley, F.J. |
| May, J.A.W. | Zbitnoff, G.W. |

President's Message

G.E. Laliberte, P.Eng.



It is the custom in the final message of the year for the outgoing President to review the work of the various committees. I do not intend to do that in this message for two very good reasons. First, the committee reports appear elsewhere in this issue and there is little point in summarizing them here and second, with twenty-one committees (not counting subcommittees), the idea is not practical.

On the subject of committees, I had made a resolution at the beginning of my term as President to attend at least two meetings of each committee. Your President is a member (non-voting) of every committee except the Practice and Ethics Committee and so I thought that the resolution was reasonable. It was not until I realized that I was attending at least one committee meeting each week that I stopped to count the committees. That's when I realized why I always seemed to be on my way to a committee meeting. Anyway, I think I kept my resolution, at least for those committees which met at least twice during the year.

I will try to highlight, very briefly, some of the significant developments during the past year. Starting with the annual general meeting, members will have an opportunity to get together in a different venue this year. It was decided to reintroduce the banquet and dance format to wrap up the meeting. The dinner will be an awards banquet at which the Association's awards to its members will be presented. Hopefully, this social setting will present greater opportunity for members and their companions to add their own personal congratulations to the honorees during the remainder of the evening. It also gives all members the chance to meet the Association's guests from out of town and from the other professional bodies.

There has been follow-up during the past year arising from the Association's Brief which was submitted to all Members of the Legislative Assembly over a year ago. In March, the Premier responded to the Brief in a letter which considered, one by one, each of the Association's recommendations in the Brief.

At the moment, the Practice and Ethics Committee is holding discussions with the Minister of Urban Affairs with a view to finding a way around a Catch 22 situation which impedes the Committee's ability to carry out investigations, and in the frequently required follow-up action, when it believes there may

A YEAR IN REVIEW

be deficiencies in engineering practice in the submission of building plans for approval by the City of Winnipeg.

Responding to another recommendation, the Premier invited dialogue on the question of limiting the legal liability assumed by professional engineers and to explore opportunities for a cooperative approach in initiating loss control measures. The Executive Committee has accepted the Premier's invitation and has offered to appoint a small working group to interact with persons to be identified by the Premier.

"The Premier invited dialogue on the question of limiting the legal liability assumed by professional engineers and to explore opportunities for a cooperative approach in initiating loss control measures."

During the year, the Manitoba Society of Certified Engineering Technicians and Technologists (MANSCETT) advanced draft legislation to Members of the Legislative Assembly. While MANSCETT considers that passing of this draft legislation would give engineering technologists only right-to-title, it seems clear to the Association that it would give them the right-to-practice in a scope of practice that is not easily separable from the practice of engineering. A small delegation from the Association met in late July with the Premier and the Minister of Labour and in early August with several members of the Liberal Party caucus to communicate the Association's concerns about this draft legislation. A similar meeting is being arranged with members of the New Democratic Party caucus.

The Practice and Ethics Committee requested Council to hold a formal hearing during the past year to consider a complaint which it lodged after investigation of alleged deficiencies in the practice of engineering by one of the Association's members. Council approved the request and held a formal hearing in March. The member was found guilty and disciplinary actions were determined as described elsewhere in this issue.

Engineers in western Manitoba banded together during the year and formed the West-Man Chapter. The Association does not have a formal provision for the establishment of chapters. However, Council gave strong moral support (if not financial) to the engineers in this region on their initiative. It also authorized a study to establish policy to guide it in any future requests for assistance in the formation of regional groups. Members of the Executive and the Act Administration Officer travelled to Brandon on at least two occasions to join with the engineers of the West-Man Chapter at their meetings.

It is my pleasure to recognize here the special honor which two of the Association's members received from the Canadian Council of Professional Engineers during the past year. I am referring to the CCPE Award for Professional Service given to Dr. Glenn Morris, P.Eng., and the CCPE Award for Community Service given to Mr. Walter Saltzberg, P.Eng., in St. John, New Brunswick in May. Two very distinguished members and two very deserving contributions worthy of the honor that the awards represent. Congratulations to both of you!

I wish also to acknowledge the good work of all the committees. The strength of the Association is in its members. In particular, the voluntary effort of committee members is deserving of recognition. I would like to pay tribute to all those who served the Association in some volunteer capacity during the year. Your efforts and support are appreciated.

I wish to single out for recognition only one voluntary effort — that of Mr. Ted Clarke, P.Eng. Ted has served with distinction as this Association's representative on the Board of Directors of the CCPE. His term is now complete after three years. It is not possible to list his many contributions to

"I would like to pay tribute to all those who served the Association in some volunteer capacity during the year."

the CCPE. However, his services on the CCPE Awards Committee comes to mind and his initiatives, during the past year, in reciprocal act enforcement and in developing an infrastructure to encourage professional engineers to maintain and enhance their competence, if not successful in their initial presentation, will likely be recognized in the future as ahead of their time. And, of course, no recognition of Ted's work would be complete without mention of his detailed, accurate and highly articulate reports to the Association on CCPE activities. Thanks, Ted!

I want also to gratefully acknowledge the work of the staff of the Association. They are conscientious and loyal, and, at the same time, they make the office an enjoyable place to be. In particular, I wish to recognize and express my gratitude to Mr. Bill Mackenzie, P.Eng., who will retire as General Manager and Registrar in December. I can't imagine a person more dedicated to the ideals of professional engineering than Bill nor anyone with a fiercer pride in his calling. The Association is fortunate to have had Bill as its chief executive for the past more than five years. Thanks, Bill!

Finally, I want to thank the members of the Association for the opportunity of serving for the past year as your President. It has been enjoyable and I consider it an honor. □

LMMDS — A Manitoba Technology

by E. A. Richardson, P.Eng.

Television has become an accepted, and an often expected, feature in the lives of millions of Canadians. A vast selection of movie, sports, cultural, educational, and news channels are available literally at the push of a button or flick of a switch to subscribers of cable television. However, there are many areas of Canada where it is still impossible to receive a selection of television broadcasts. Often these areas are small or isolated communities where it has not been economically or even feasible to install cable. This may be about to change with the introduction of a low-power multichannel microwave distribution service or "LMMDS" as it has become known.

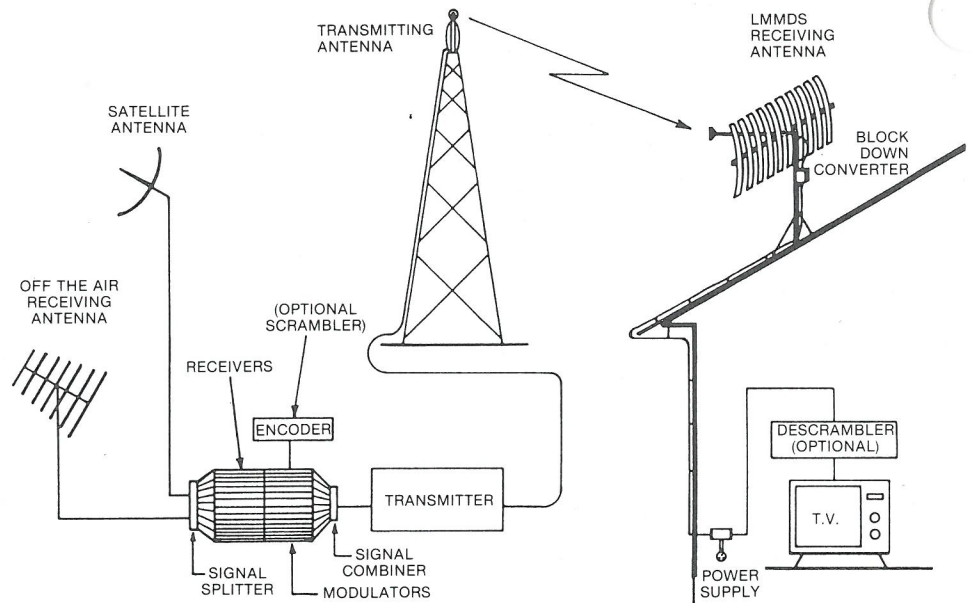
In its original form, LMMDS is a rebroadcast source of satellite or off-air TV signals designed to service small communities over a 10 km. distance. This broadcast range is due to the low-power, typically one watt per channel or less, output of the transmitter. This can be compared to the more conventional high-power MMDS systems where from 10 to 100 watts will provide coverage over a 40 km. path. Operation is in the 2.5 to 2.69 GHz band where Communications Canada has allocated 31 channels on a primary and secondary basis.

At the transmitter site, the signals to be transmitted must first be obtained. For satellite signals, this may involve installing one or more dishes aimed at the satellites of interest. For off-air rebroadcasts, the erection of VHF and/or UHF antennas will be necessary. Receivers and decoders for the desired frequencies are also required.

In order to generate the microwave signals, the audio and video signals are first transformed into conventional VHF television channels. The next stage is to combine up to eight channels and then feed the one output into a wideband upconverter. The result is one output comprising up to eight discreet TV channels. After filtering, the microwave signal is amplified to yield an output in the one watt-per-channel range.

The transmit-antenna system is not very complex when compared with conventional radio or TV broadcast operations. A length of low-loss cable connects the amplifier to the transmit antenna. Excessive transmit-antenna height is not required. Height sufficient to clear surrounding buildings and trees is all that is required. Tower heights in the vicinity of 30 meters are considered the norm under most conditions.

Features, such as stereo sound or signal encryption, may be added to any of the LMMDS systems. There is a wide variety of encryption systems available on the market today. There are advantages and disadvantages to each method but each LMMDS system will have its own unique requirements. Factors that must be taken into consideration include: susceptibility to noise,



security, tiering, addressability, ease of implementation, and cost.

Each home wishing to receive the service would have to install some basic equipment. A small rooftop antenna and a low-noise block downconverter are the essentials. Most receiving antennas are designed to incorporate some form of parabolic reflector with a simple dipole feed arrangement. The antennas are small in comparison to their larger VHF and UHF counterparts, usually less than 750 mm. in diameter. These small lightweight antennas can be fastened to almost any existing mast or pipe on the home provided a clear view of the transmitting site is possible. At 2.5 GHz, the signal attenuation increases rapidly if the signal must pass through trees or buildings.

The low-noise block downconverter serves to convert the microwave signals back to conventional channels that are viewable on most TV sets. A popular scheme is to output the signals at either midband or superband frequencies. This requires either a cable-ready TV or a set-top converter in order to view these channels. This scheme has the advantage of leaving the VHF and UHF channels free for reception of local off-air broadcasts.

At 2.5 GHz, there is almost a complete lack of sporadic-E propagation unlike with the lower VHF channels. This means signals from distant LMMDS systems will not suddenly appear or interfere with the local microwave channels. Because such relatively short distances are involved, the LMMDS signals will be immune from fluctuations due to varying weather conditions, solar-flux levels, clouds, or time of day. The only change in signal level that may occur would be a sight-improvement during the fall and winter months as trees lose their signal absorbing leaves.

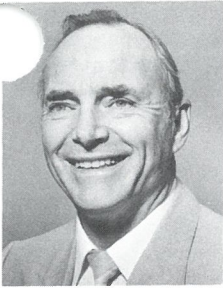
At this point in time, there appear to be two distinct markets for this LMMDS technology. The principle market is the delivery of multichannel television to unserved communities in Canada and the United States. These areas currently are served by two fewer off-air channels and these are often of questionable quality.

A secondary market lies in the expansion of coverage areas by cable companies. Many cable operators hold the licences for areas to which they do not currently provide service. These areas often lie on the outskirts of larger urban centers or in nearby bedroom communities. The cost of installing and maintaining cable in areas of sparse population is too prohibitive in most cases. Running cable up and down long streets where homes are often separated by several hundred feet can be an expensive proposition. This is an ideal situation where an LMMDS system could be used to fill in these bypassed areas. Often a separate head-end will not be required as a connection to an existing cable-trunk would provide the source for the signals.

It should be noted that, in Canada, LMMDS is not perceived to be competitive with either cable networks or conventional VHF/UHF broadcasting. Rather LMMDS is seen to play a supporting role in delivering multichannel television to areas which previously the cable companies could not consider. All cable operators are granted a licence to provide service to prescribed areas, in effect granting them a monopoly in that area. However, in the United States, conventional high-power MMDS systems have been installed in several areas to serve as direct competitors to the cable operations. The views of many are that Canadian regulatory

(continued on page 14)

REGISTRAR'S REPORT



W.B. Mackenzie, Registrar

As Secretary I am happy to report that our Council continues to ensure that the APEM role in protecting the public interest in the field of engineering has been effectively implemented during the past year. All Council decisions are assessed against this basic Association mandate.

As Registrar I can report that a small increase in the Association membership has taken place in the last year. Our Association has experienced a small but steady growth in membership over the past several years. This growth has occurred in spite of the fact that the Manitoba economy has not generated a requirement for a greater volume of engineering work. It has occurred despite the fact that more and more routine engineering work is being done by engineering technologists.

One reason for an increase in enrollment is the act enforcement initiatives being implemented by David Ennis are bringing more engineers into the professional fold.

The following table gives membership statistics for the fiscal year ending July 31st, 1989.

MEMBERSHIP AS OF JULY 31, 1989	
FULL MEMBERS	2,662
NON PRACTICING & NON RESIDENT	525
LIFE MEMBERS	25
TOTAL (as counted in register)	3,212
MEMBERSHIP AS OF JULY 31, 1988	3,133
Plus:	
REGISTRATIONS	153
TRANSFERS-IN	48
REINSTATEMENTS	14 + 215
Less:	
RESIGNATIONS (Dec. 31)	33
RESIGNATIONS (June 30)	13
TRANSFERS-OUT	9
WRITTEN-OFF (June 30)	74
DECEASED	7 - 136
TOTAL MEMBERSHIP AS OF JULY 31, 1989	3,212

As Association Treasurer, I can report that the Association continues to operate on a sound financial basis. Our financial reserves increased during the last year by approximately \$50,000. This increase in financial reserves reflects Association policy that reserves be maintained at a level approxi-

mately equal to the Association's annual expenditures. A small increase in fees was authorized by Council in 1989 and a further increase has been approved by Council for 1990. In terms of real dollars, membership fees have remained very stable over the past five years. However, because of heavy expenses incurred in the investigation of complaints against engineers by the Practice & Ethics Committee, a special levy has been approved by Council for 1990. Revenue for these investigations does not come out of general Association funds but rather from a special Practice & Ethics Committee fund established under the By-Laws. As this fund becomes depleted it is necessary to replenish it by means of special levies.

The Association continues to be active on the national scene through participation on various committees and activities of the Canadian Council of Professional Engineers. Several initiatives put forward by APEM are

being considered by the C.C.P.E. Board of Directors and it is hoped that they will make positive decisions to implement our recommendations. Specific recommendations of the C.C.P.E. Task Force on the Future of Engineering have not yet been implemented by APEM. However, procedures are being considered to implement many of these recommendations in Manitoba.

As Registrar I have numerous duties which are laid down in the Act and By-Laws and as General Manager I have the responsibility for the administration of the business affairs of the Association. I could not adequately fulfill these duties without the assistance of a dedicated and loyal staff. And so I express my sincere thanks and my appreciation to David Ennis, Joan McKinley, Elaine Ryan, Donna Bilodeau, Vera Toth (who left us to accompany her husband to Prince George) and Charlene Thompson; staff members who have made my job immeasurably easier. □

GROUP PRACTICE LICENSING



K.A. Buhr, Chairman

- Members:**
 B.D. McBride
 B.D. Norrie
 W. McGilvery
 T.R. Wingrove
 W.B. Mackenzie
 G.E. Laliberte

In March of 1988 Council passed a motion to establish an Ad Hoc Committee to make recommendations to Council with respect to the implementation of group practice. The committee included members who represented municipal governments, crown corporations, industry and the consulting business.

The issue of whether or not to implement Group Practice Licensing in Manitoba has been around for quite some time. In 1976 a referendum was held on the issue and it was defeated. Subsequently, the issue has been raised periodically by the Practice & Ethics Committee, but nothing further happened until 1984. At that time the APEM Council asked the Consulting Engineers Committee to study the issue. The committee reported back to Council in January of 1987. In October of 1987, an Ad Hoc Committee set up by Council to review the report, recommended that Council proceed with the implementation of Group Practice Licensing.

In general, the committee has attempted to deal with three main issues of implementing Group Practice Licensing:

- 1.) public safety. (Is it in the public's best interest?),
- 2.) disciplinary action. (Will it help with the discipline of members?) and
- 3.) the definition of Group Practice. (Who should be included?).

The committee has attempted to deal with these issues by:

1. establishing a rationale for regulating group practice, and
2. designing a system to regulate group practice.

The committee is currently preparing to discuss the proposal to revise the Engineering Profession Act with the provincial government, and suggesting changes to the Act, By-Laws and Code necessary to support group practice in consultation with the Legislation Committee. The tentative date for implementing Group Practice Licensing is July 1990.

Currently, seven Associations in Canada have implemented Group Practice Licensing and three others are either contemplating or in the process of implementing it.

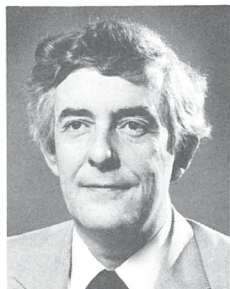
I would like to thank the members of the committee for their work over the past year in dealing with what has been sometimes a difficult and sensitive issue. As well, I would like to thank Mr. Mackenzie, Mr. Ennis and the staff for their contributions and assistance to this committee. □

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

E.W.J. Clarke, *Chairman*

"In early 1987, MANSCETT notified the Association of Professional Engineers of MANSCETT's intent to prepare, and proceed with, The Manitoba Engineering Technology Act. Shortly thereafter, APEM's Ad Hoc Committee on Technologists was formed. The Committee members currently are: W.D. Christie, E.W.J. Clarke, G.E. Laliberte, W.R. Newton, and K.A. Buhr. The Association's General Manager, Wm. B. Mackenzie, and Act Administration Officer, D.A. Ennis, have also contributed actively and productively to the Committee's activities.

The terms of reference of the Committee can be summarized as follows: to consider alternative to MANSCETT's legislative proposal; to hold related discussions with MANSCETT; and to make related recommendations to APEM Council.

"APEM's fundamental position is that such separate legislation is not appropriate, in that engineering activities ought not to be regulated under separate acts of the Legislature."

APEM's fundamental position is that such separate legislation is not appropriate, in that engineering activities ought not to be regulated under separate acts of the Legislature, and in that any separate legislation for technicians and technologists would conflict with the Association of Professional Engineers' existing essential legislated authority to administer and regulate engineering practice and activities in Manitoba in the interests of the Manitoba public.

The APEM Council has by resolution formally adopted the legislative model under which "right to title" for certified engineering technicians and technologists would occur **only** under The Engineering Profession Act. Accordingly, the Ad Hoc Committee was authorized by Council to explore with MANSCETT its interest in being included within The Engineering Profession Act, amended to accommodate reserved title for technologists.

The Ad Hoc Committee reviewed both the New Brunswick legislation on which

TECHNOLOGISTS

MANSCETT's proposal was based and the subsequent draft Manitoba Engineering Technology Act. Committee members met with MANSCETT in 1987 and again in early 1988, and following these meetings, the Committee prepared APEM's "position paper" outlining not only APEM's concerns but also suggestions for their resolution. This position paper was conveyed to MANSCETT in February 1988.

MANSCETT in March 1988 indicated that a written reply to APEM's position paper would be forthcoming, and also that MANSCETT would continue to meet with APEM representatives regarding the Association's concerns. However, as of the date that this report was prepared, there had been no further significant contact and dialogue between the two bodies throughout an 18 month period, despite a number of reminders to MANSCETT of their March 1988 commitment.

APEM submitted a brief in May of 1988 to the Provincial Government, covering a variety of topics (i.e., the brief was by no means focussed solely or even primarily on the topic of separate legislation for technologists).

The brief contained 11 specific recommendations; as Recommendation 10 of that brief, APEM requested that the Government consider APEM's related concerns in advance of any legislative action concerning technicians and technologists in the field of engineering.

Nationally, the activities of technologists' associations seeking legislation to establish right-to-title and right-to-practice for technologists have been of concern to the Canadian Council of Professional Engineers (CCPE) and to its constituent provincial and territorial associations.

The Permanent Staff Officers' Committee (PSOC) of CCPE therefore met in February 1989 to consider preparation of a national coordinated action plan to address the question of such legislation. The PSOC meeting was somewhat inconclusive, due to the diversity of opinions and positions held by the constituent professional engineering associations.

A PSOC task force was therefore formed to prepare: a clearer statement of the issues and problems; terms of reference for an improved national definition of the practice of professional engineering; and recommendations for the implementation of such a definition and related changes.

The task force's most fundamental belief is that the logical way to dissuade provincial and territorial legislators from granting a reserved field of practice to other parties intervening in the field of engineering lies in a renewed definition in the legislation governing the profession of engineering.

Such redefinition should continue to take

into account the protection of vulnerable third party interests (i.e., the public); fairness of self-regulation (i.e., avoidance of perceptions of monopoly, self-interest, or arbitrary barriers); and re-assertion of the fundamental accountability to the public of self-regulatory professional bodies (through further improvements in admission standards, in experience requirements for entry into the profession, and in continuing competence standards).

The Ad Hoc Committee has drafted potential legislative changes pursuant to these national initiatives, and presented these drafts to APEM Council in May of 1989, but the changes are not considered to be ready for final recommendation. Further work in this regard is required of the Ad Hoc Committee and/or the Legislation Committee.

Meanwhile, the Manitoba Engineering Technology Act was submitted by MANSCETT in March of 1989, with the intent that it be processed into law as a private member's bill. MANSCETT gave no notice of this step to APEM.

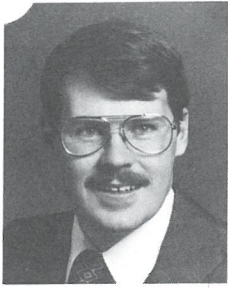
Upon learning of the submission, the Ad Hoc Committee promptly prepared a full formal presentation, outlining APEM's concerns about separate technologist legislation, and stressing the seriousness and importance of these concerns. The presentation emphasized the merit and benefit to the public of the concept of professional self-regulation, the objectives of The Engineering Profession Act; and the responsibilities of the Association and its members, which are simply and solely to ensure qualified and ethical professional conduct throughout the field of engineering for the benefit and protection of the Manitoba public. This is in contrast to what are deemed to be MANSCETT's self-interest objectives evident in its proposed legislation.

The APEM formal presentation was made in July by Past-president Christie, President Laliberte, and the General Manager to Premier Filmon and the Minister of Labour, and to Mrs. Carstairs and senior members of the provincial Liberal Party. Our General Manager is presently pursuing arrangements to make the equivalent presentation to the appropriate representatives of the provincial New Democratic Party.

The Ad Hoc Committee in May of this year also prepared a letter, summarizing APEM's formal position in opposition to separate legislation for Manitoba technologists. The letter, along with a copy of the Association's 1988 position paper, was sent in July to Premier Filmon by President Laliberte.

Although APEM is, and must be, very much an apolitical body, individual professional engineers ought to consider making known their views on this important governmental (not political) issue to the provincial legislators who represent them." □

SAFETY IN ENGINEERING PRACTICE



Members:
 A.O. Dyregrov
 Dr. M.J. Frye
 R.E. Gottfred
 B.W. Gulay
 Dr. D.M. Rogowsky
 L.P. Williams
 J.V. Wieszmann
 W.B. Mackenzie
 G.E. Laliberte

F.A. Roberts, *Chairman*

The Safety in Engineering Practice Committee is grateful to have the willing and active participation of its members.

We are also indebted to the members of the subcommittees who have contributed their special knowledge: G. Bernuy, D.E. Cross, N.C. Hansch, F.L. Nicholson, J.E. Reimer. In addition we wish to thank many other members who have assisted the Committee in its deliberations.

The function of the Committee is to study safety-related problems in engineering practice and to pass on to members information which will help them avoid similar problems. The Committee, in cooperation with Council, makes recommendations on regulations and legislation which affect the safe practice of engineering.

We have looked at a wide range of issues this past year including the Station Square collapse in Burnaby, B.C., ground water heat pumps and their possible effect on foundations, farm buildings, sign support structures, fire protection engineering, precast concrete structures and mandatory periodic inspection of structures.

The Committee continues to monitor the situation with regards to wooden arena structures and we have expressed concern to various owners and authorities on the safety of a number of arch type arenas. The Committee sees these arenas as a problem which may only get worse with deterioration over time.

The subcommittee on Fire Protection engineering submitted its final report which was endorsed by Council. Through the efforts of President Garland Laliberte and the University Liaison Committee representations have been made to the University of Manitoba to provide course options in Fire Protection for all engineering disciplines. The course by Dr. John Frye, P.Eng., A. Tsiserev, P.Eng. and B. Cunningham, C.E.T. for practicing engineers and architects has been very successful and will be offered again in the future through the Continuing Education Department.

The final report of the Precast Concrete subcommittee has been accepted by Council and awaits incorporation into the broader

picture on engineering practice in construction. Presently the preparation of a Guideline for Engineering Practice in the building and construction industry is being considered. There is some discussion as to whether this should be the role of the APEM although other Associations do produce such guidelines. There is general agreement that engineers are operating in somewhat of a vacuum as to what is expected of them in various projects. When engineers refer to their inspections as being "in accordance with accepted guidelines of practice" there is little to define what that "accepted practice" should be.

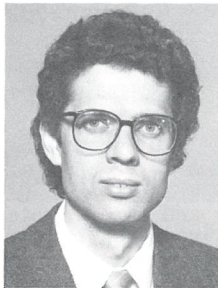
The final report of the Periodic Inspection subcommittee has been accepted by Council and is in the process of being referred to the province for recommendations on changes to appropriate legislation to provide for inspection of existing structures on a regular, periodic basis.

An interesting discovery brought to attention of the Committee in reviewing requirements for design and construction across the province was that individual municipalities appear to have an option for accepting the Manitoba Building Code. Some have not adopted the Code and this lack of uniform enforcement obviously can have detrimental effects on the quality of work. Clearly this is an area of legislation which we hope can be changed.

Members who may become aware of potentially unsafe engineering practice should pass on such information to the Committee or the Registrar. Inquiries or submissions will be dealt with in confidence where requested.

Finally, on behalf of the Committee I wish to thank Bill Mackenzie our Registrar, Dave Ennis, Act Administration Officer and Bill Newton our Liaison Councillor for their generous assistance during the year. □

PROFESSIONAL DEVELOPMENT



Members:
 J.E.A. Belagus
 V.L. Dutton
 E.J. Klien
 A.H. Permut
 S.S. Rihal
 S.L. Ursel
 K.J. Kjartanson
 B.D. MacBride
 W.B. Mackenzie
 G.E. Laliberte

J.G. Hildebrandt, *Chairman*

Professional Development is the continuous process of becoming a better professional. Each and every professional engineer is under increasing pressure to improve while dealing with changes in technology, societal values, resources, markets and competition. The importance of striving to improve has been recognized by contemporary thinkers such as Tom Peters who stress lifelong learning as being vital for constant improvement which in turn is vital for survival.

The purpose of the Professional Development Committee is to assist APEM members in their professional development, and to help in maintaining a high level of engineering competence in Manitoba. We feel that much is happening in the area of Professional Development and much more will happen in the near future.

The committee has had a productive year. The main activities for 1989 have been:

- organizing seminars with topics related to Professional Development;
- surveying APEM members regarding their professional development activities and publishing the results in the Manitoba Professional Engineer (MPE);

- promoting activities that relate to Professional Development,
- monitoring professional development activities of other professional organizations;

The details of these activities are outlined as follows:

1. Professional Development Breakfast Meetings

Eight breakfast meetings were held, each featured topics related to engineering issues. Average attendance was 60 engineers.

The topics and speakers were as follows:

- | | |
|---------------------------------------|--|
| Free Trade | R. Hood, P.Eng.
(Vice President,
Planning and Development,
UMA Group) |
| Future of Engineering | P. Lapp, P.Eng.
(President,
Canadian Council of
Professional Engineers) |
| Engineering Education | G.A. Morris, P.Eng.
(Associate Dean,
Faculty of Engineering,
University of Manitoba) |
| The Truesteel Affair | D.A. Ennis, P.Eng.
(Act Enforcement Officer,
APEM) |
| Art of Leadership | L.R. McGinnis, P.Eng.
(Chairman and CEO
Wardrop Engineering Inc.) |
| Engineering in Management | G.A. Staples, P.Eng.
(Consultant, Staples Consulting) |
| Environmental Responsibilities | R.I. Cooke, P.Eng.
(CEO, Manitoba Hazardous
Waste Management Corp.) |

(continued on page 8)

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

Professional Development

(continued from page 7)

Professionalism and Unionism

I. Craig
(President,
The Professional Institute
of the Public Service of Canada)

On behalf of all attendees, the committee thanks the speakers for sharing their views and experiences.

The success of these meetings demonstrated a desire among engineers to get together, to discuss these challenging topics, and to learn from one another.

2. Plan for a Professional Development Workshop

The committee began plans to hold a workshop for APEM members interested in dealing with issues related to engineering. Topics considered include:

- career development;
- management of professionals;
- ethics and ethical dilemmas;
- the role of the professional association, and;
- legal responsibilities of professional practice.

A goal was set to hold a two-day weekend workshop in the early part of 1990. Keep watching the MPE for future announcements.

Please contact the names listed below if you would like to volunteer to help in this effort or if you can suggest relevant topics and speakers.

3. Professional Development Reporting Form

APEM member's Professional Development activities were surveyed. A Professional Development Reporting Form was sent to all 3,200 APEM members. The completed and returned forms were compiled and a report was published in the Manitoba Professional Engineer (MPE).

4. Promoting Professional Development

The committee developed a brochure to be sent to APEM members encouraging each engineer to take an active role in her/his own Professional Development. At the time of this writing the brochure was being prepared for printing. A copy of the brochure will be sent to each APEM member, and additional copies will be available at the APEM office.

5. Computerized Bulletin Board Service

We developed and maintained a computerized bulletin board for APEM members. APEM members have access to advertise activities of interest and to review what activities are taking place.

A few engineers have used the service and written us to say it is helpful. Unfortunately, initial use of this service has been low. The computerized bulletin board service may be discontinued unless its use increases appreciably in the next few months. We would welcome ideas regarding what would be helpful in this area.

6. Correspondence With Other Professional Associations

We exchanged information regarding professional development programs and activities with all of the Canadian engineering associations. A report was prepared and a summary will be published in the MPE.

The committee would like to draw attention to the special efforts of one of the committee members, Vern Dutton. Over the course of this year, Vern contributed several reviews of books relevant to engineering and articles on activities of other professional associations. We look forward to more articles from Vern and hope that other engineers will follow his lead in using the MPE to communicate with APEM members.

PUBLICATION



W.G. McKay, *Chairman*

Members:

P. Gordon
J. Lucas
J.W. Bogan
G.E. Laliberte
R.A. Kane
C.N. Kohuska
V.L. Dutton
D.A. Ennis
L.Y. Ganestsky
D.S. Jayas
J.R. McDougall
W.B. Mackenzie

For the 88-89 period six issues were printed involving four 16 page and two 12 page issues. Membership on the committee has declined with regrettable loss of D. Spangelo, T. Murray, G. Morris and most recently P. Gordon, the Editor.

The operations of the committee has followed the two-meeting procedure per issue and committee members have responded to the assignments covering meetings, socials etc. Dave Ennis became the production manager after Vera Toth's leaving and has been a strong support in the administration of the committee and the production of the issues. Donna Bilodeau has taken over the duties of preparation for the meetings, correspondence etc.

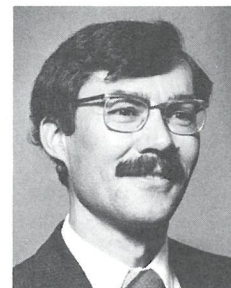
The committee has favored the publication of articles by/and items on local members with less information taken from other publications. It has also considered the use of computer systems for typesetting and production with a view in reducing the time from layout to final printing.

The current need is for new members and in particular for a person to take on the role of editor and layout.

I express my appreciation to all members of the committee for the cooperation and the willingness in undertaking assignments. Our meetings continue to be interesting. We shall miss the editorial comment and repartee generated by Vern Dutton and Bill Mackenzie. □

There is much more that can happen in Professional Development. The key to success of every engineer's career lies in taking an active role in planning and implementing his/her own process of continued improvement. Please contact either J.G. (James) Hildebrandt (956-0980) or W.B. (Bill) Mackenzie (942-6481) with your comments on the committee's activities and with ideas on how the association can contribute to your professional development. □

PUBLIC RELATIONS



D.C. Prowse, *Chairman*

Members:

W.H. Brant
A.F. Eshmade
V.D. Gupta
K.M. Jardine
K.J.T. Kjartanson
C. Kohuska
B.G. Lawlor
S.M. Matile
S. Parent-Pulak
W.B. Mackenzie
G.E. Laliberte

Many Canadians don't appreciate how our quality of life depends upon our ability to deal with technology. To foster an awareness of engineering and to encourage students with an aptitude and interest for engineering we are establishing APEM awards at the Manitoba School Science Symposium. We will be providing subscriptions to an engineering magazine to selected high school libraries to encourage students to consider engineering as a career and we plan to update the APEM student pamphlet "Engineering a Creative Profession". We have initiated scholarships for students entering first year engineering at the University of Manitoba. A selection of videos available at the office should assist engineers speaking to high school students.

We anticipate that the "Professional Engineer" will be distributed to fourth year engineering students to make them better informed about engineering in Manitoba.

The Great Engineering Logo Contest was conceived to develop a graphic image which symbolizes the profession of engineering. We hope the result will be something you want on your business card and on licence plates, bumper stickers, T-shirts ... We are monitoring the possible relocation of the Sons of Martha Cairn at Churchill and future plans for the James Avenue pumping station but are not actively involved.

The most effective public relations is done by individual engineers every day. If you have suggestions for activities or resources that will help students of all ages and the general public better understand our profession, get the Public Relations Committee to work on it. □

COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS

UNIVERSITY LIAISON



- Members:**
 P. Dalkie
 G. Oullette
 S.H. Rizkalla
 M.C. Chaturvedi
 G.E. Laliberte
 W.R. McQuade
 R.J. Waddell
 J.G. Hildebrandt
 W.B. MacKenzie

V.D. Gupta, *Chairman*

The engineering profession in Manitoba has a vital interest in the University of Manitoba; the University Liaison Committee was created by the Council to underscore this recognition.

The Committee members represent both the Faculty of Engineering of the University as well as the profession at large. The Committee serves to provide a bridge between the Association concerns with regards to relevance of engineering training at the University and the Faculty concerns where the Association can provide assistance. It also arranges informal dinner meetings between Council and the Faculty which provide an environment conducive to a frank exchange of views on issues of mutual concern. The major activities this year continue to be centered around the recommendations of the CCPE report on the future of engineering.

Six very productive meetings have been held since October 20, 1988. As well, the three subcommittees struck last year met several times to research potential issues pertaining to university programs realignment, changing role of professional engineer and university funding. For logistic reasons, two of the subcommittees were merged into one, thus reducing the number of subcommittees to two.

First is the funding subcommittee headed by Mr. Dalkie. He was instrumental in augmenting an informal dean's advisory group at the Faculty; the group meets regularly to discuss a number of issues, including funding.

The second subcommittee deals with the Implementation of Task Force Recommendations. This subcommittee, headed by Mr. Hildebrandt, has done an outstanding job of filtering out all pertinent issues pertaining to education of engineers and is in the process of developing proposals for action by the main committee.

The Faculty of Engineering continues to do a remarkable job of maintaining curriculum excellence while offering new programs dealing with the budgetary constraints. Of particular interest to the Association are the following four university/Faculty initiatives:

1. Institute for Technical Development established by the Faculty for technology transfer activities.
2. University Industry Co-operation in Continuing Education — a national level committee to review content and quality of continuing education needs.
3. Engineering Endowment Fund — a five year drive to raise two million dollars. The fund at the end of two and a half year mark stands at 1.6 million dollars.
4. Natural Sciences and Engineering Research Council (NSERC) industrial chairs program at the Faculty continues to lead the nation; the most recent chairs added include the chair in Electromagnetics, the chair in Computer Communication

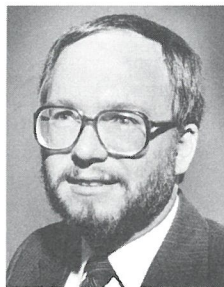
and the Manufacturing Research chair. These three chairs carry combined funding of approximately 4.8 million dollars.

We are planning another informal dinner meeting on November 1, 1989 between the Council and the Faculty; the agenda will include discussion on three items:

1. Women in engineering.
2. An undergraduate course in ethics.
3. Management training for engineers.

These dinner meetings have, in the past, been very lively and interesting. The upcoming meeting will add to this interest as we look forward to seeing Dr. Laliberte shifting gears between the two positions of Dean of the Faculty of Engineering and President of the Association. □

INSPECTION AND SUPERVISION OF ENGINEERED PROJECTS



- Members:**
 R.E. Gottfred
 D.M. Rogowsky
 M.L. Goble
 W.B. Mackenzie
 D.A. Ennis
 G.E. Laliberte

K.J. Kjartanson, *Chairman*

The Ad Hoc Committee on Engineering Related Fatal Accidents and Major Failures was established by Council at the September, 1988 meeting to prepare and recommend guidelines for the consideration of Council in initiating action by the Association in the investigation of major failures and major accidents as they may relate to the mandate of the Association.

The Committee held five meetings culminating in the preparation of APEM guidelines for the investigation of major accidents and failures. The guidelines were approved by Council at its September, 1989 meeting.

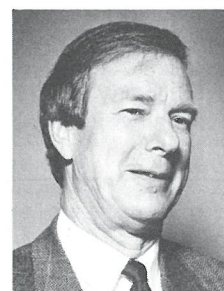
The guidelines include five policy statements as follow:

1. That the Association be pro-active rather than re-active in investigating major accidents/failures that are, or are perceived to be, engineering related.
2. That, where appropriate, an immediate media release be issued stating that the Association is addressing the matter. Follow-up releases shall also be provided, as necessary, at any stage of the consideration of the matter.
3. That a prompt and initial assessment of the matter be the responsibility of the staff. On the basis of this assessment, the staff will make recommendations to

the Executive Committee regarding further investigation.

4. That the Executive Committee will determine whether further action is necessary and if so, will refer the matter to the appropriate standing committee or staff for further investigation or refer it directly to Council for action.
5. That the Association pursue a standing arrangement with Government agencies to provide for official representation and/or observer status on any Federal, Provincial or Municipal Commission or Board of Inquiry which relates to the practice of engineering."

Thanks to the Committee members for their hard work and Bill Mackenzie for his able assistance. □



AWARDS

- Members:**
 E.W.J. Clarke
 K.M. Jardine
 K.A. Buhr
 R. Menon
 R.E. Scouten
 F.A. Jost
 E.E. Lach
 F.R. Kaita
 W.B. Mackenzie
 G.E. Laliberte

G.A. Pratt, *Chairman*

A nomination form was sent out to the membership with the March Bulletin for candidates for two APEM awards and four CCPE awards. The committee met four times to assess the qualifications of all nominations for eight awards. The Committee operates under the auspices of Council and reports recommendations to Council.

The Committee wishes to express its gratitude to and thanks to the Associations W.B. Mackenzie, D.A. Ennis and J.C. McKinley for their hard work and assistance in meeting the deadlines. □

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

**Members:**

C.R. Bouskill
F.M. Fowler
K. Hallson
R.A. Johnson
F.A. Jost
E.F. Mackenzie
W.R. McQuade
B.D. Norrie
R.H. Russell
W. Saltzberg

D.R. Grimes, *Chairman*

This committee again had a very busy year as the number and complexity of issues brought to the committee continue to increase. In addition to dealing with complaints concerning our members and licensees, the committee responds to questions of ethics from the members and questions of procedure from the Council.

Perhaps the most pressing issue facing the committee is the procedure used in dealing with complaints. A recent hearing required the expenditure of in excess of \$40,000. In addition, there were countless hours of volunteer support provided by members of the Association. The committee recognizes that a simpler and less costly system which still serves the public interest is required. To this end, the sub-committee on the Discipline By-Law 45 Review is continuing its work and it is hoped that revisions to our procedure can be prepared in 1990.

The committee requested that Council replenish the funds required under the Discipline By-Law. A levy of \$10 per member was proposed and approved by Council.

The committee dealt with a total of 17 files on members during the year, six of these were new. Four requests for advice were made by members and a number of requests for information and support were received from Council. One hearing was concluded and there are no complaints presently before Council. The work of the committee included the following:

PRACTICE & ETHICS

The committee provided representation to a hearing held by Council, regarding a member who pleaded not guilty. The member was subsequently found guilty on a number of charges and disciplinary action was taken as reported elsewhere in this publication.

There were a number of concerns raised by plans approval agencies which reflected on three of our members. These concerns were resolved without requiring formal proceedings.

A concern was raised by another Manitoba professional association with respect to one of our members. The issue has been dropped.

Three of our members found themselves embroiled in a public dispute reflecting on professional ethics. With some difficulty, the issue is now resolved.

A serious allegation was raised by an anonymous person, purporting to be a member. It was pointed out that the person, if a member, has a professional responsibility to bring the fact to our attention. This was not done and no further action could be taken. The committee's recommendation to Council on this matter has resulted in the Ad Hoc Committee preparing a policy on Accidents & Failures.

A number of commercial disputes between members were reviewed. Where there were professional responsibilities at issue, the committee investigated. To date, none of the issues have resulted in a recommendation for a formal hearing.

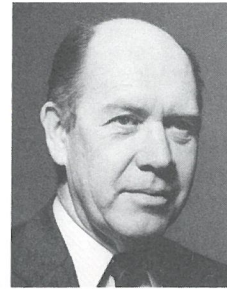
Four written concerns have been brought before the committee by members of the public. Three of these have been dealt with and one is outstanding.

A disciplinary hearing was held by a professional engineering association in another province which involved a member of our Association. In another instance a member of our Association was also found guilty in a civil court of a violation of the Engineering Profession Act in another province. These

proceedings and the associated penalties were reviewed by the committee. One additional complaint has been laid against a temporary licensee in Manitoba. The matter is being investigated by the home province. We are keeping a watch on the proceedings.

The work of the committee makes heavy demands on its members. The committee is ably supported by the Act Administration Officer, Mr. Dave Ennis. □

CODE OF ETHICS

**Members:**

E.W.J. Clarke
D.A.J. Ennis
F.M. Fowler
J.S. Hicks
F.A. Jost
W.B. Mackenzie
W.R. McQuade
R.E. Scouten
G.E. Laliberte

C.R. Bouskill, P.Eng., *Chairman*

The Code of Ethics Ad Hoc Committee 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 was last reviewed twenty years ago and the Code now in use was adopted on February 18, 1968. In undertaking this review the Committee had endeavoured to ensure that:

- the Code contains standards of conduct for members designed for the protection of the public,
- the Code does not include any clause(s) which may be in conflict with current human rights legislation, and
- the Code addresses matters relating to professional ethics, as opposed to personal and/or business ethics.

The Committee has reviewed the current Code on a clause by clause basis, and has also examined the Codes in use by each of the other Canadian Professional Engineers Associations/Order, as well as the Codes in use by selected State Boards for Professional Engineers in the U.S.A. and other engineering organizations that have published Codes of Ethics. In addition to meeting on a couple of occasions during the past year, the Committee members have each devoted time outside of the meetings to reviewing drafts of the proposed revised version of the Code of Ethics as well as to review information available from other organizations. Comments and input have been invited from general membership of the Association without response. The proposed code was submitted to, and reviewed by, the Association.

(continued on page 11)

SALARY RESEARCH

**Members:**

C.E. Anderson
B.G. Bettess
D.G. Chapman
L.R. Ferchhoff
C.I. Ireland
B.F. Klaponski
E.G. Parker
H.M. Soliman
W.B. Mackenzie
G.E. Laliberte

J.M. Symonds, *Chairman*

The Salary Research Committee conducted a membership salary survey as well as an engineering employers salary survey. The results

were published and distributed with the August mailing of the Manitoba Professional Engineer.

The membership questionnaire this year was changed substantially to reflect inputs that have been received from members and also to reflect the increasing importance of fringe benefits and bonuses in the compensation packages in industry.

Many thanks to the committee members for their effort and also to Bill Mackenzie, Dave Ennis and W. McGilvery for their help and support. A special thanks to Joan McKinley for her assistance in the keeping of minutes and organizing of meetings. □

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

Code of Ethics*(continued from page 10)*

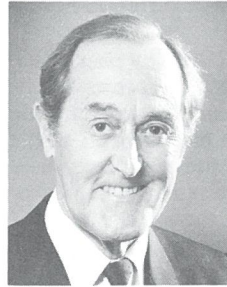
's legal counsel to ensure that it is not in conflict with any current legislation.

The proposed revised Code of Ethics was submitted to the APEM Council in mid August 1989. The revised Code of Ethics encompasses three basic elements, specifically:

- a) a statement of Fundamental Principles, essentially the preamble to the current Code of Ethics,
- b) a statement of five Fundamental Canons, and
- c) a series of Canons of Conduct, or rules of conduct which outline practices that are to be encouraged and/or define practices that are considered to be evidence of professional misconduct and/or negligence.

I welcome this opportunity to extend my personal thanks to each member 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 Joan McKinley for her cheerful and capable contribution as secretary of this Committee

Although the Committee considers its activity to be essentially complete, the Committee members are prepared to assist in a review of the proposed Code at a general membership meeting, should one be convened, and to review any issues relating to this Code which may be forwarded by the APEM members before the Code is adopted. □

CONSULTING ENGINEERS

D.B. Whittaker,
Chairman

Members:

H. Haak
R.C. Isaak
J.O. Klein
R.S. Morrison
A. Penman
B.J. Rossen
R.F. Taylor
E. Weiszmann
W. McGilvery
T.L. Stratton
Observer (ACEM)
W.B. Mackenzie
G.E. Laliberte

The Committee held 11 meetings between September 1, 1988 and August 31, 1989.

The booklet, Guide for the Engagement of Consulting Professional Engineering Services, is again under review. Initially the section on the calculation of Scale A (Time Basis) fees was revised and presented to Council who accepted the revision in principle. The Guide was read in detail by a member of Council and comments were sent to the Committee for review. A subcommittee was established (R.C. Isaak, R.F. Taylor, and D.B. Whittaker) to study the comments. It will require approximately three more meetings to complete the work. The Committee will also review the information in the guide regarding fees for Resident Services.

Another matter receiving considerable discussion concerns the design work submitted to the City of Winnipeg for review under the Building Permit approval process. There have been difficulties with the quality of some submissions related to an apparently unsatisfactory level of knowledge and application of Part 3 of the Code, Use and Occupancy.

There has been correspondence from and a meeting with the Manitoba Association of Architects on the matter. Engineering staff from the City's Office of the Supervisor of Building Inspections also attended a meeting, at the invitation of the Committee, to outline their perspective of the problem. Discussions have included a special programme developed by the City of Vancouver in coordination with the B.C. architects' and engineers' associations which includes an educational course and certification in Part 3 of the Code. This matter is ongoing. Other matters receiving attention were:

- Development of a standard report form for use in inspection of residential buildings. Held in abeyance until a decision in principle is made by Council.
- Listings used in the "Engineers" section of the Yellow Pages Directory telephone book. This is ongoing and arises from Council's desire to establish a more informative Yellow Pages advertising format similar to that currently in use by the legal and medical professions.
- The report on the enquiry into the collapse at the Station Square development in Burnaby, B.C. Discussions will continue on some of the recommendations.
- The new "Spec" system for retaining architectural and engineering consultants recently introduced by Public Works Canada.

The Association of Consulting Engineers (ACEM) requested representation on the Committee by a member of its Board of Directors. Council did not approve that request but did invite ACEM to have one of its' Board attend as an observer for the balance of 1989, with provision that the matter be considered on an annual basis. Mr. T.L. Stratton, P.Eng. attended for the first time as the observer at the meeting held on July 20, 1989.

The Committee is also represented on the Ad Hoc Committee in Inspection and Supervision by D.B. Whittaker.

Many thanks to Bill Mackenzie and the APEM staff for their support. Particular thanks to Dave Ennis, who attends and records our meetings and who keeps us informed on a range of subjects of interest to the Committee. □

ADMISSIONS REVIEW BOARD**Members:**

C.R. Bouskill
D.I. Waldman
W.M.A. McDonald
W.D. Christie
S.H. Rizkalla
G.E. Laliberte
W.B. Mackenzie

K.A. Buhr, *Chairman*

The Admissions Review Board considers all applications for admission to the Association referred to it by the Registrar and/or Council, where the applicants have met the educational requirements under The Engineering Profession Act, but where there is some question regarding the adequacy of the applicant's engineering work experience to meet the required standards. The Board may approve an application, may require an applicant to obtain additional experience, or interview an applicant and/or an applicant's referees to satisfy the Board that the applicant does have sufficient experience to qualify for registration.

During the past year, the Board considered

thirty applications. Twenty were approved. Ten applicants were advised of the need to obtain additional experience. A number of applicants were asked to provide additional information, or their referees were contacted for additional information. One applicant was interviewed to determine the adequacy of his experience.

A number of issues have been raised over the past year which are of concern to the Board. One of these is that a number of graduates are employed in jobs which do not give them an opportunity to practice engineering, let alone practice engineering under the supervision of a Professional Engineer. Another concern is that some graduates are working in relatively new engineering fields where there are currently few registered engineers practising. This limits the number of referees the applicant can rely on to provide references.

I would like to thank the members of the committee, and other members of this Association who have agreed to serve on subcommittees to interview applicants, for their assistance. In addition, I would like to thank Mr. Mackenzie, Mr. Ennis, Mrs. McKinley and other staff members for their assistance during the year. □

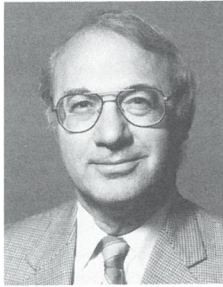
COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

COMMITTEE REPORTS

INSPECTION AND SUPERVISION OF ENGINEERED PROJECTS

R. Steele, *Chairman*

Inspection & Supervision of Engineered Projects was established as an Ad Hoc Committee of Council on February 8, 1989 to determine if a need exists for policies and guidelines on the application of the Engineering Profession Act during the construction phase of engineered projects. This was done in response to a request by a municipal building authority for clarification of professional responsibility with respect to inspection of construction. Standards vary widely among engineers as to what constitutes adequate inspection. The origin of the request was specifically the structural aspect of building construction and the committee is focusing on that area. However, the result of the committee's conclusions will be presented with sufficient generality to apply to other engineering specialties and sectors of the con-

Members:

F.M. Fowler
R.H. Russell
F. Nicholson
F.A. Roberts
D. Whittaker
D. Beacham
M.N. Sinha
W.M. McDonald
W.B. Mackenzie
G.E. Laliberte

struction industry.

Four meetings of the committee have been held. Terms of reference have been established and approved by Council. These include the determination of the requirements of the Act, a survey of the practise of other associations, a review of current municipal and provincial requirements and the establishment, if necessary, of standards or guidelines for the professional responsibilities of engineers on the construction site.

Other topics which are related to the above are the education and training of field engineers, parallels with the architectural profession, legal aspects and the possible need for changes to the Act.

The committee will be meeting through to the end of 1989 and will present a draft report to Council early in 1990. Some presentations from outside the engineering community will be sought, in particular the legal and architectural professions. Submissions from members at large who wish to present their views, particularly on the definitions of "inspection" and "supervision", would be welcomed.

My appreciation is extended to all committee members who are generously contributing their time and expertise. The ongoing support and assistance of D.A. Ennis is also gratefully acknowledged. □

BOARD OF EXAMINERS

F.R. Kaita, *Chairman***Members:**

C.D. Anderson
D.T. Anderson
S. Balakrishnan
A. Baracos
E. Bridges
D.G. Chapman
A.D. Gerrard
I.C. Goulter
R. Menon
R.W. Menzies
A.B. Sparling
M. Yunik
W.B. Mackenzie

The Board of Examiners reviews the academic qualifications of applicants who are graduates from programs not accredited by the Canadian Engineering Accreditation Board (CEAB) or its equivalent to determine the eligibility of applicants for registration. The Board may require an applicant to take and pass additional examinations, or may require an applicant to take additional specific academic training.

The equivalent Engineering Programs are those that have been subjected to an accreditation process equivalent to that of the CEAB and accepted by the CEAB.

During the past year the Board assessed twenty-six new applicants, re-assessed twenty candidates and administered twenty examinations.

Of the twenty-six new applicants thirteen were assigned confirmatory examinations, one qualifying examination, five examinations programs, and four were academically qualified. Three assessments were deferred for various reasons. Twenty applicants were re-assessed for reasons including the results of their examinations, appeals and requests for changes. Of the twenty, ten were re-assessed based upon examination results and eight were considered academically qualified and two were assigned further examinations. Thirteen candidates registered for twenty examinations, and twelve passes were recorded. Oral examinations were taken by 1984 to 1986 graduates with degrees in Computer and Industrial Engineering from the University of Manitoba. All eight graduates who were given the oral examinations were found to be academically qualified.

During the year we welcomed Doug Chapman and Dick Menon to the Board and bid farewell to Jack Cahoon, and Jane Dobrovlny.

I wish to extend my personal thanks to each member of the Board for their dedicated efforts. We all join in expressing our sincere thanks to the APEM staff and in particular Bill Mackenzie, Dave Ennis and Joan McKinley for their valuable and capable assistance. □

SPORTS

C.N. Kohuska, *Chairperson*

The Committee held six meetings during the past year.

The annual curling bonspiel took place on January 10, 1989 at the Granite Curling Club with 24 rinks participating. For the 3rd consecutive year, the President's Cup, presented by Garland Laliberte, was presented to the winning team of Murray Vanderpont, Lance Sigfusson, Harvey Kaita and Jim Suzuki.

The spring Golf Tournament was held on June 28, 1989 at the Pine Ridge Golf Club, 116 golfers teed off. The Low Gross winner, Rod Brody, was presented with the Landon Cup by APEM president Garland Laliberte. Mr. Laliberte had his hands full presenting

the Sullivan Cup, Low Net winner, to three people this year. The three way tie winners were Gord Smith, Larry Beilus, and Ian McKinnon.

Prizes for both events were won due to the sponsorship of 16 companies. Special thanks to the sponsors.

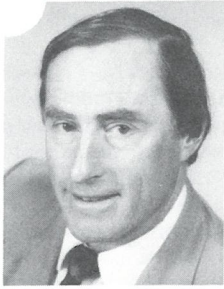
Plans are underway for a new event in the winter of 89/90. The sports committee is planning on organizing a ski weekend to Frostfire or La Riviere — so all the avid skiers should get their skis waxed and wait for the snow.

Many thanks to the committee members along with Bill Mackenzie, Donna Bilodeau, and Charlene Thompson for their valuable contribution. □



COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS COMMITTEE REPORTS

RESEARCH AND DEVELOPMENT



R.J. Hamlin, *Chairman*

- Members:**
 M. Kauldher
 D.J. Fedirchuk
 T.R. Hsu
 R. Hoemsen
 D. Osman
 E.J. Klein
 E.A. Spears
 M. Paryniuk
 B.G. Lawlor
 M.L. Goble
 W.B. Mackenzie
 G.E. Laliberte

The Research & Development Committee was responsible for four luncheon informational meetings over the past year. These meetings were in the form of speaker-panel-discussions and were held at the Canadian Institute of Industrial Technology building during and following the lunch hour.

Topics discussed during these sessions were:

- R&D Opportunities Under Free Trade
- Non-Hazardous Waste Disposal and Recycling
- Hazardous Waste Management
- Sustainable Development — Technical Opportunities

The participating speakers presented their views and opinions on the various subjects as seen from their respective roles in government and industry.

Their panel presentations stimulated good response from those in attendance which included not only professional engineers but also other technical and non-technical people and often media personnel. Attendance averaged about 60 people per session. All indications suggested to the R & D Committee that this is an effective method of meeting its objective of providing information about R & D to the APEM membership. The committee thanks all those who helped make these sessions a success and extends a special

thanks to Jim Ferguson of the Biomass Energy Institute.

In addition to these informational meetings the committee has met on a regular basis throughout the year to discuss courses of action that can be taken to fulfill its mandate of promoting R & D information to the membership and the public. Several ways of achieving this goal are presently under active consideration and next year promises to be even more interesting and challenging.

As chairman, I wish to express my appreciation for the efforts extended by the committee members and the assistance and guidance provided by Bill Mackenzie and Dave Ennis. □

COMMITTEE REPORTS

ANNUAL GENERAL MEETING



R.R. McKibbin, *Chairman*

- Members:**
 Ian E. Hogg
 Terry Holden
 B.R. St. Amant
 E.A. Spears
 J.A. Oleszkiewicz
 W.B. Mackenzie
 D.A. Ennis
 G.E. Laliberte

Your Annual General Meeting Committee has been very busy this year putting together a format that should appeal to all association members.

Mark Friday, October 27th, on your calendar and plan to attend one, or all, of the functions at the Holiday Inn Downtown.

Once again, the day's agenda is to be kicked off with a breakfast meeting organized by the Professional Development Committee, followed by Registration and the Business Session.

The luncheon guest speaker this year is The Honourable Gary Filmon, P.Eng. A new, exciting change to our format is the evening Cocktail Reception, Awards Banquet and Dance.

On behalf of the Committee, I would like thank W.B. Mackenzie, Dave Ennis and Joan McKinley for their very capable assistance. □

NOMINATING



W.D. Christie, *Chairman*

- Members:**
 E.A. Spears
 A.W. Knight
 J.M. Nostedt
 E. Van den Bosch
 W. McGilvery
 K.J.T. Kjartanson
 D.R. Grimes
 J.G. Hildebrandt
 F.R. Kaita

The Nominating Committee met twice in the early part of this year. The first meeting was to consider a list of members of the present Council whose terms expire at the next Annual General Meeting, a list of the members of Council who have one more year to serve and to identify a long list of potential nominees. Committee members assumed responsibility for contacting each person on the long list.

The second meeting dealt with reviewing the list of names of those who had agreed to be nominated for election. These names were reviewed and approved by the Committee. As the required list of seven members had been identified, no further candidates were considered. The names were turned over to Mrs. Joan McKinley for processing of the nomination papers, candidates' platforms and the ballot papers to be sent to the membership.

The Committee sincerely appreciates the services provided by Mrs. McKinley. Her efforts significantly reduced the time requirements of the Committee members. □

Dean of Engineering Recognized

Dr. Garland Liberte, President of APEM and Dean of Engineering at the University of Manitoba has been named 1989 AGRICULTURAL ENGINEER OF THE YEAR by the North Central Region of the American Society of Agricultural Engineers. The award is sponsored by Versatile Farm Equipment Operations Ford New Holland Canada Ltd. and will be presented at the Region's Annual Meeting in Minneapolis, September 29-30, 1989.

Garland was cited for his leadership within the engineering community. In particular, his involvement as current President of APEM, current Board member of the Canadian Council of Professional Engineers, past Chairman of the Canadian Engineering Accreditation Board and new Dean of Engineering at U of M were acknowledged as representative of his current contributions to the engineering community at large. His past involvement with both the Canadian Society of Agricultural Engineering and the American Society of Agricultural Engineers was recognized as a "training ground" for his current, much more broadly based activities. The Agricultural Engineers within the North Central Region of ASAE, which includes Minnesota, North Dakota, South Dakota, Saskatchewan and Manitoba, agreed that Garland is unique within their group and deserving of recognition as the 1989 AGRICULTURAL ENGINEER OF THE YEAR. □

Council Reports

AUGUST 17, 1989 by J. Lucas, P.Eng.

At which council receives a delegation from C.C.P.E. on the Canadian Engineering Manpower Board.

The meeting was called to order at 3:30 with Mr. Ken Buhr presiding.

The agenda and minutes of previous meeting were accepted with short discussion.

The June and July financial statements were reviewed and approved as presented.

Engineering licencees, graduates, transfers, registrations and reinstatements were discussed and accepted as presented.

Council agreed that the Minutes of August 14/89 Executive Committee meeting be received as information.

Mr. Newton reported to Council on behalf of the Selection Committee regarding the appointment of a new Executive Director of the APEM. The results of Council's actions are to be published separately from this report.

The Ad Hoc Committee on the revised Code of Ethics was represented by Mr. Bouskill who presented the background and recommendations of the Committee to the Council. It was agreed that this meeting would include only a general discussion and Council invited Mr. Bouskill to attend the September meeting for further detailed discussion of the committee's recommendations.

Council reviewed the matter of licences for out-of-province engineers acting as expert witnesses as put forward by the Practice and Ethics Committee. It was decided that Council would seek legal opinion on this item.

Members of Council discussed the details of a disciplinary hearing and the recommendations of the Executive Committee. Available results will be published separately.

At this point in the meeting, Council had the opportunity of being visited by Mrs. Claudette MacKay-Lassonde, Chariman of the Canadian Engineering Manpower Board and Mr. George Lozano, CCPE Director of Public Affairs. Mrs. MacKay-Lassonde attended this meeting to provide Council with detailed information on the Canadian Engineering Manpower Inventory. The activities and future plans of the Manpower Board were reviewed in detail by Mrs. MacKay-Lassonde with many questions from Council being entertained.

In conclusion, Council deferred further consideration of APEM's involvement until the September meeting.

Members of Council reviewed and approved the document "Act Enforcement Authority and Duties of the Act Administration Officer" as submitted.

The final meeting item was a discussion of a CCPE Executive Committee request for information regarding national treatment of Mutual Recognition Agreement. Council requested that Mr. MacKenzie draft a letter of response to the Director of Educational and Professional Affairs of CCPE. □

SEPTEMBER 11, 1989 by V.L. Dutton, P.Eng.

At which Council considers a revised Code of Ethics and appoints an Executive Director.

Our Council considered much important material at this meeting. If

you wish details concerning the routine items — licences, admissions etc. — please telephone the Association and one of the staff will get them to you.

Your Practice & Ethics Committee submitted reports on six cases for consideration by Council. Two of these concerned members who had been found guilty of breaches of the Professional Engineering Acts of two other provinces. Members should be aware that, should this happen to them, this information may be "...formally placed in your Association file unless you can provide reasons satisfactory to the Committee as to why this action should not be taken." One wonders if, like the responsibility you assume when you place your seal on a design, this material would remain in your file "forever".

On this subject of responsibility, and the ever-present possibility of a civil suit arising from a real or supposed failure of the design, your President has accepted the invitation of Premier Filmon, P.Eng., to second several members of the Association to work on a joint committee to address:

"1) the desirability of legislation to limit the period of liability of professional engineers following the completion of the work.

2) the desirability of legislation limiting the maximum of liability exposure so that it reflects the level of responsibility which an individual professional engineer is required to assume.

3) the desirability of implementing a loss control program to reduce the exposure risk assumed by professional engineers."

Mr. Charles Bouskill, P.Eng., chairman of the Ad Hoc Committee to Revise the Code of Ethics, appeared before Council to present the latest proposals developed by the committee. A copy of this report may be seen at the Association should you be interested. Our Councillors agonized over the final clause in the following section: "g) He shall sign and seal only those plans and other engineering documents for which he is professionally responsible and which have been prepared by him, or under his supervisory control, or reviewed in detail and approved by him." What would be your decision on this one?

Councillor Kjartanson submitted the report of the Ad Hoc Committee on Engineering-Related Fatal Accidents and Major Failures. This report deals with the Association's response to accidents and failures that are of such a nature as to warrant the attention of the Association. Some concern was expressed as to the setting of policy by this document. Council finally accepted the report subject to certain editorial changes. David Rogowsky, P.Eng., whom many readers know, was a valued member of this Ad Hoc Committee. He was also a member of the Board of Examiners and of the Committee on Safety in Engineering Practice. President Laliberte announced that Dr. Rogowsky has moved to Switzerland where he will be working with VSL International as head of their Special Developments section. David scouted with this reporter in the 135th Winnipeg Troop and was a valued Scouter. I am sure that you will want to join Council, and me, in wishing David a successful sojourn in Switzerland and in anticipating that we will see him back in Winnipeg after his two years in Berne.

While we have lost one David, we have gained another. Your President announced that, as of January 1, 1990, your new Executive Director will be David Ennis, P.Eng. Your Council makes some good moves! □

LMMDS — Technology

(continued from page 4)

bodies, backed by the cable industry, will not follow suit in allowing cable to become competitive in this country.

This LMMDS technology is not limited to North America alone. Many cities in Europe cannot consider cable because of the difficulties in obtaining right-of-way agreements. Over-the-air broadcasting is proving to be the only method for the delivery of

multichannel television. In Australia and New Zealand, many communities are situated in remote locations and would be ideal candidates for an LMMDS system.

All indications are that the CRTC still favours cable as the preferred means of signal delivery but will consider LMMDS as a viable alternative when cable is shown to be non-cost-effective. Adoption of LMMDS or MMDS, as the alternative standard to cable, will serve to reduce the number of privately owned illegal rebroadcasters operating

throughout Canada.

GEC Plessey Telecommunications (Canada) Ltd. of Winnipeg is leading the world in the field of LMMDS. Development has been assisted by grants from both the ERDA and NRC organizations. With the production of a low-power transmitter and transmitting antenna designed by EM-WAVE, also of Winnipeg, a cost-effective solution to the delivery of multichannel television to small and remote communities may become a reality in the very near future.

NOTICE

STATEMENT OF FINDINGS AND DISPOSITION OF A HEARING HELD UNDER SECTION 24 OF "THE ENGINEERING PROFESSION ACT" OF THE PROVINCE OF MANITOBA ON A COMPLAINT AGAINST DAVID ROY HOLSTEIN, PROFESSIONAL ENGINEER

PREAMBLE

The Council of the Association of Professional Engineers of the Province of Manitoba, sitting as a Tribunal, heard and received evidence at a hearing into a complaint against David Roy Holstein, P.Eng., of Markham, Ontario at Winnipeg, Manitoba on March 20, 21, and 22, May 15 and June 19, 1989 under the provisions of Section 24 of "The Engineering Profession Act" of the Province of Manitoba.

Mr. Holstein (the Defendant) and the Practice & Ethics Committee of the Association (the Complainant) were each represented by legal counsel. Evidence was given under oath by five witnesses and taken down in writing by a court reporter. Thirty-five items of written evidence and two physical models were submitted as exhibits. Oral summary submissions were made by the respective legal counsel on behalf of the Complainant and the Defendant. The Tribunal adjourned on March 22 to allow time for the production and study of the transcript of the testimony.

After considering the transcripts, and after studying the exhibits, the Tribunal reconvened on May 15, 1989. All members of the Tribunal were present at that meeting. The purpose of the meeting was to consider the charges in the complaint and to find the member either guilty or not guilty. The Tribunal arrived at the following decision.

DECISION

After consideration of the evidence presented and the representations made at the hearing, the Tribunal resolved that David Roy Holstein, Professional Engineer and, at the time, a licensee of the Saskatchewan Association, is guilty of unprofessional conduct, guilty of conduct in the practice of engineering which is detrimental to the public interest and guilty of negligence in the practice of engineering.

BASIS OF DECISION

In arriving at this decision, the Tribunal was satisfied that, as alleged in the complaint, the Defendant had caused to be prepared under his personal direction, structural drawings for a concrete grain elevator silo complex at Hamlin, Saskatchewan, which were deficient in that the provisions for horizontal restraint within the silo complex were inadequate and resulted in a structure that was unsafe and unsuitable for the purpose intended.

Furthermore, the Tribunal was satisfied that, as also alleged in the complaint, the Defendant caused to be prepared under his personal

direction, structural drawings for a concrete grain elevator silo complex at Hamlin, Saskatchewan, and in particular that he did not seal these structural drawings, and, in the performance of this work, he failed to employ every resource of skill and knowledge at his command. The Tribunal was further satisfied that, again as alleged in the complaint, the Defendant failed to satisfy the engineering needs of this client in a truly worthy and professional manner in that he did not stress to his client the need for engineering review and qualified on-site inspection during the construction period and, in his dealings with his client, he failed to ensure, before accepting his commission, that the extent of his responsibility with respect to engineering review and on-site inspection of the construction work was properly understood by that client.

The Tribunal was not satisfied, however, that the Defendant failed to give credit for engineering work to a fellow engineer who had prepared the original plans for another complex of a very similar nature, as was also alleged in the complaint.

The Tribunal set the date of June 19, 1989 to receive submissions with respect to penalty and adjourned. Mr. Holstein and the Complainant received written notification of both the decision and the opportunity to make representation with respect to penalty on that date.

When the Tribunal reconvened on June 19, 1989, Mr. Holstein was represented by legal counsel and the Practice and Ethics Committee was represented by its Chairman.

Following representations as to disposition of its findings in connection with the complaint, the Tribunal resolved as follows:

- a) That David Roy Holstein, P.Eng. be censured, such censure to be communicated in written form.
- b) That David Roy Holstein, P.Eng. be fined \$5,000.
- c) That David Roy Holstein, P.Eng. be suspended from practice in Manitoba for six months.
- d) That notice of the suspension in c) be inserted in an issue of the *Manitoba Gazette*.
- e) That this statement of findings and the disposition of the complaint, including names, be published in an issue of the *Manitoba Professional Engineer*.

Mr. Holstein was advised through his legal counsel of his right to appeal Council's decision under Section 25 of The Engineering Profession Act by originating notice of motion into the Court of Queens Bench. The appeal period has expired and a notice of motion has not been filed. □

Coming Events

Seminar: Creep Behavior of Frozen Soil and Ice — October 26-27, University of Manitoba, contact Professor L. Domaschuck, Civil Engineering, 474-9254.

★ ★ ★

Canadian Institute of Mining & Metallurgy — "Mining & Energy Challenges", Calgary October 25-27th, contact I.R. Murhead, Calgary 403-298-4655, Fax 403-298-4125 or C.E. Anderson, UMA Engineering (204) 284-0580.

★ ★ ★

Seminar: Electromagnetic Compatibility and Conference — October 23-26, Edmonton. Contact: Ms L. Hilts, Electronic Test Centre (403) 450-5369.

★ ★ ★

42nd Canadian Geotechnical Conference Theme "Materials: From Theory to Practice" Westin Hotel Winnipeg — October

23-25. Local contact: Ken Boyd, P.Eng., (204) 945-0561.

★ ★ ★

Call for Papers for 1990 Canadian Public Works Conference, to be held in Winnipeg, May 22-25th, 1990. Theme, "Public Works for the 21st Century The Future is Now". Deadline for abstracts November 1, 1989, contact: B. MacBride, P.Eng., 986-4434 or Fax 224-0032 Winnipeg.

★ ★ ★

Technical Conference — Canadian Technical Asphalt Association — November 19-22, 1989, Halifax, Nova Scotia. Contact: (902) 861-1911.

★ ★ ★

One Day Courses — Canadian Institute of Steel Construction — "Single Storey Buildings", November 13, Fort Garry Hotel, Winnipeg. **"Connections for Steel Structures"**, November 14, Fort Garry Hotel,

Winnipeg. Contact: CISC Toronto 1-416-491-4552 or 1-800-268-3104

★ ★ ★

TUNS Workshops — "Intelligent Buildings" Vancouver, November 1-4; Toronto, November 15-18. **"Intelligent Closets"** Vancouver, November 6-7; Toronto, November 20-21. For further information contact Technical University of Nova Scotia, Karen Conrad — 1-800-568-1179.

★ ★ ★

A Call for Papers — Deadline for abstracts — November 15, 1989 — **Canadian Conference on Engineering Education** — June 27-28, 1990 — Toronto. Contact: C.R. Phillips, U of T, Toronto — (416) 978-6182 or Fax (416) 978-8605.

★ ★ ★

NOTE: Additional information on most of these events is on file at APEM office until the date of the event. □

News from other Associations

by D.A. Ennis, P.Eng.

In **BRITISH COLUMBIA**, the Association has published the results of the Court of Inquiry dealing with the members involved in the Station Square failure in Burnaby, British Columbia. The Inquiry ordered four engineers were suspended and fined. One of the engineers has appealed the decision of the disciplinary panel. The results of the appeal are not available. Partly because of the expenses incurred by the Association from the Station Square incident, members will be asked at the Annual Meeting to approve By-Law changes which will provide for a one-time special levy of twenty dollars per member and also allow for increases in membership fees of up to 25 dollars per year with a fee ceiling of 300 dollars (without requiring membership approval).

In **ALBERTA**, members attending their Annual Meeting learned, from an interim report on the Future Role of **APEGGA** Task Force, that one recommendation would be that the Association will designate spokes-

men to speak to the public on current issues that involve the profession and on other issues that are facing the public where members have special knowledge.

In **ONTARIO**, **APEO's** Task Force on external communications has also recommended that the Association develop a policy for scanning and responding to technical issues of public importance with a more integrated approach to information flow targeting issues rather than audiences. On another front, in a joint effort with twelve undergraduate engineering societies, **APEO** has organized the Association of Professional Engineers of Ontario Undergraduate Student Conference to bring together delegates from each of the engineering societies to discuss important professional issues that are not normally part of the undergraduate curriculum.

In **QUEBEC**, the new president of **OIQ**, Yvan Asselin, Ing., in noting the social contract imposed upon engineers by the lawmakers, has undertaken during his

presidency to see that the pride in being an engineer and fulfilling that contract become the basis for enhancing the self-esteem of the profession whose strength lies in the multiplicity of fields of competence.

In **CALIFORNIA COUNCIL OF CIVIL ENGINEERS AND LAND SURVEYORS** reports that the insurance company which provides "errors and omissions" insurance for a large number of the member firms is now offering to reimburse them for the cost, up to a maximum of \$6,000, for participating in the American Consulting Engineers Council peer review program.

In **SASKATCHEWAN**, **APES** as part of its discussions with the province on the drafting of a new Act, has indicated that the revised legislation must require that all corporate and government entities which undertake engineering work be registered under the Act. The Association has also extended an invitation to geoscientists to join the engineers under a revised and renamed Act. □

Environment Needs Our Obligation

by J.A.E. Belagus, P.Eng.

At the Professional Development Breakfast Meeting of July 19th, Dr. R. Cooke, P.Eng., emphasized the need for our profession to assess its obligations towards environmental issues.

Dr. Cooke began by stating that environmental quality is perhaps the foremost social issue in the country today. At least in an abstract sense, it seems to equal or exceed economic values, employment security, and the standard of living as a prime social concern. Everybody agrees there is a problem out there, but as individuals we do not yet see ourselves as being part of the solution. Dr. Cooke commented that this is perhaps the biggest barrier in addressing the majority of environmental issues. For example, we are all concerned about CFC's, but how many of us drove to that meeting in air-conditioned cars? Since car air-conditioning systems represent one of the largest contributors of CFCs in the atmosphere, perhaps a moral decision people should make is whether to buy air-conditioned cars!

Concern for the environment appears to be fairly well-founded. Dr. Cooke indicated there exists today ample scientific and technical evidence to substantiate that we do have problems which, if not resolved, will significantly affect the quality of our future. These problems are not isolated, but rather global in nature. As individuals, there is no place for us to hide anymore!

Dr. Cooke declared that these problems and concerns are being discussed by a broad range of society including business, labor, the professions, consumers and politicians. In many cases, there is a trend amongst "blue-chip" corporations to diversify towards environmentally oriented investments.

Dr. Cooke stated that, as a profession, we have expertise and responsibilities to offer in addressing environmental issues. He believes there is an increasingly apparent relationship between the public good and protection of the environment. Unfortunately, Dr. Cooke feels we also have some inherent liabilities in fulfilling this obligation.

There is a public perception that environmental issues are attributable to either the excessive application or the failure of technology. Society distrusts technology today! Dr. Cooke expressed concern that global warming, ozone depletion, the general reduction of air, land and water quality, and highly visible failures of technology such as Challenger, Valdez, Chernobyl and Bhopal, are in the public's mind as examples of failures of technology which contribute to the overall problem.

However, technology will not go away. Dr. Cooke declared that our ability to live in a society that can combine technology and its application with environmental values will require innovative technological solutions, and that will undoubtedly require engineers. Dr. Cooke believes that, as a profession, we are therefore caught in a dilemma. On one hand, we have a credibility problem since we are viewed by society as being part of the problem and not being credible participants in the solution. On the other hand, it's likely that our collective expertise will be required to deal effectively with environmental problems.

Since there will be a need for us to develop more credibility in being able to sell new and innovative approaches, Dr. Cooke commented on the application of "Sustainable Development" to the engineering decision-making process. Sustainable development is a

concept that advocates the inclusion of many longer-term considerations, some of which are ecological and related to environmental impact, as part of economic decision-making. He noted engineers tend to view environmental standards as being externally imposed "hoops-to-jump-through". We do not tend to view them as being part of our obligation in critically assessing the quality and integrity of our work.

Dr. Cooke concluded his presentation by suggesting the Association commence a formal assessment of our obligations towards the environment, and that we take a more active stance in the debate concerning sustainable development. Otherwise, we may be left behind in the evolution of social values.

Another successful Professional Development Breakfast Meeting drew to a close with E. Klein, P.Eng., thanking Dr. Cooke for a very enlightening presentation. □

THE PROFESSIONAL ENGINEERS' WIVES ASSOCIATION OF MANITOBA PROGRAM 1989-1990

October 24/89: Luncheon — Windsor Park Inn, 1034 Elizabeth Road, Pauline Fia — President of A.C.T.A. will talk on travel.

November 28/89. Luncheon — Ramada Inn, 1824 Pembina Hwy., Fashion Show by REISS FURS.

January 23/90: Dinner — Winnipeg Winter Club, 200 River Avenue. Speakers: Ruth Vince, Manitoba Interfaith Immigration Council; Marjorie Soloman, International Centre; Pat Taylor, Host Program; Elsie Chippendale, Host of Host Program. *Spouses Welcome.* Cocktails 6:00 — Dinner 7:00.

February 27/90: Luncheon — Manitoba Research Foundation, 409 Tache Street. Caters Lunch — Guided Tour.