THE MANITOBA

Professional Engineer

ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF MANITOBA

October, 1991

Building The Image – The Theme Of Our Annual Meeting

By: W.B. Mackenzie, P. Eng.

The theme of our annual meeting should raise some interesting questions in our minds. Some might be:

- Why are engineers so concerned with their public image?
- Is it important to the public that engineers have a better image and a higher profile?

I think most of us share the opinion that our profession plays a vital role in improving and maintaining the quality of life in our society. And, although many thoughtful people acknowledge the fact that the engineering profession is a primary driver of the technological sector of our economy, far too few engineers occupy managerial and decision-making roles. Why is this? Is there a public mindset against engineers? I think not. The problem is a lack of image in the minds of government and business. And yet there seems to be no concerted effort on the part of our profession to change the status quo. Why?

Countless articles in engineering publications decry the poor or non-existent image of engineers. People running for office in engineering organizations often voice a commitment to "improve our image" if elected. But nothing seems to happen. These people voice a call to battle but present no battle plan. They seldom articulate valid reasons for going into battle. What is our problem? Why can't our profession come to grips with it and do something about it? After all, aren't we self-professed experts in problem-solving?

At our annual meeting a number of speakers will discuss some different initiatives which, if implemented, might start the ball rolling. But we, as individuals, must get involved in the process. If we don't get involved and don't make individual commitments, not much will happen. We owe it to ourselves and to the public to make such a commitment. One way to get the process started is to attend the various functions at our annual meeting. The success of the whole exercise will depend on the number of participants. Whether we are concerned with self-interest or public interest, attendance will be beneficial.

Let's see if we can take this one small step and so contribute to a giant step for the profession. Let's start to Build the Image! □

ASSOCIATION OF PROFESSIONAL ENGINEERS OF MANITOBA

72ND ANNUAL GENERAL MEETING

OCTOBER 25, 1991 - THE WESTIN HOTEL, WINNIPEG

AGENDA

7:30 a.m.	Breakfast Meeting Featuring a Guest Speaker from The Canadian Society of Professional Engineers *(a self-interest engineering organization)*
8:30 a.m.	Registration
9:30 a.m.	Official Opening Notice of Meeting Introduction of Councillors and Guests Minutes of the Annual General Meeting of October 26, 1990 Declaration of Councillors Elected Auditor's Report Appointment of Auditors 1991-92 Budget Nominating Committee Appointments By-law Amendments Reports from Committee Chairmen (published herein) Greetings from CCPE and other Associations
11:30 a.m.	Pre-Luncheon Reception
12:30 p.m.	Awards Luncheon Keynote Speaker: Rheal Teffaine, Q.C. - Manitoba Bar Association "An Advocacy Organization for the Engineering Profession" Presentation of APEM Awards
2:30 p.m.	Panel Discussion on Total Quality Management "Earning our Image - Quality in our Works and Ways" Panelists: Lorne M. Ames, P. Eng., President, Manitoba Division Inco Ltd., Dr. Lia K. Chan, Head, Statistics Department, University of Manitoba, and Mr. Bert Kraemer, President, Reimer Express Lines

(Bring this Agenda to the Meeting)

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Engineers In The News

W. (Bill) H. Mitchell, P. Eng., of Scouten Mitchell Sigurdson Consulting Engineers was elected Chair of the Board of Governors, University of Manitoba, succeeding D. (David) Malaher, P. Eng.

R. (Bob) R. Foster, P. Eng. of Wardrop Ltd. and W. (Bill) G. McKay, P. Eng., Retired, were both appointed Fellows of the Canadian Society for Civil Engineering at its recent Annual Meeting in Vancouver.

J. (Jan) Oleszkiewicz, P. Eng. of The University of Manitoba was appointed Chair - Environmental Engineering Division - CSCE.

S. (Sami) Rizkalla, P. Eng. of The University of Manitoba was appointed Chair - Structural Division - CSCE.

Congratulations to you all!

Editors Note: News items on APEM members welcomed.

Notice of Suspension of Registration

The Association of Professional Engineers of the Province of Manitoba hereby provides notice that as provided for in Section 24 of the Engineering Profession Act, the registration of Peter W. Wagner, P. Eng. was suspended for a period of one week commencing July 22, 1991 after he had waived the right to a hearing and admitted to having been guilty of certifying the proper installation of equipment prior to its installation.

In determining the penalty, consideration was given to the fact that there were mitigating circumstances involved in the member's decision to provide the certification.

Notice of this suspension was also published in the July 20, 1991 issue of the Manitoba Gazette as required by the By-Laws of the Association.

D.A. Ennis, P. Eng.
Registrar

Newsflash



Garland Laliberte, P.Eng., was recently elected to CCPE's Executive Committee.

Iron Ring Fall Ceremony

There will be an iron ring ceremony for Camp #8, on Tuesday, November 12, 1991 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. □

– Notice –

The registration of W.M. McTaggart, P. Eng. has been restored effective July 1, 1991. Restoration was made in consideration of a bank error. □

LICENCES ISSUED IN JULY & AUGUST, 1991

R. Adhikary (Denver)
J.G. Agar (Alta.)
S. Basappa (Alta.)
W.J. Brockbank (Ont.)
B.S. Brown (B.C.)
J.M. Bugajski (Ont.)
J.C. Burford (Alta.)
C.C. Christianson (Alta.)
P. Cody (Ont.)
M. Fabius (Ont.)
H.F. Feldkamp (Sask.)
E.L. Harris (New Jersey)
W.N. Hasegawa (Alta.)
T.L. Heisler (Sask.)
M. Kinash (Alta.)
J.W. King (Missouri)
G.P. Kuijper (Alta.)
P.J. Leduc (Sask.)
D.R. McIntosh (Alta.)
E.C. McRoberts (Alta.)
Z.A. Marsic (Ont.)
B.C. Martin (Ont.)
W.G. Miller (Ont.)
K.P. Ratzlaff (Alta.)
H.D. Reilly (Que.)
G.A. Roberts (Ont.)
J.B. Sawers (Alta.)
T.J. Varkony (Ont.)
R.K. Wallster (Sask.)
A. Wasnea (Alta.)
H.G. Wiber (Alta.)

ENGINEER IN TRAINING MEMBERSHIP JULY & AUGUST, 1991

A.E. Bugeja
D.N. Burmey
R.A. Chatoor
T.M. Kelly
C.A. Lambert
R.P. Martens
D.C. Rothenberger
G. Sauve
D.A. Warren

NEW MEMBERS REGISTERED JULY & AUGUST, 1991

J.E. Allen
M.K. Coyne
D.C. DeLeeuw
W.J. Funk
A.P. Gibson
D.C. Hales
B.K. Horning
J.D.P. Hrabliuk
R.L. Hutchinson
R.J. Jonkman
D. Laroche
A.M.A. Mahmoud
D.W. Marini
V. Miliu
E.J. Paryzek
L. Paulic
I.C. Pavan
G.D. Peters
K. Reznicek
D.H. Robinson
R.R. Rousseau
D.H. Solmundson
P. Sparanese
D.A. Stanbury
E.S. Swatek
A.W. Turner
T.J. Van Dekerkhove
P. Vlahos
J.A. Wells
J.A. Wieler

100% ON THE PROFESSIONAL PRACTICE EXAM

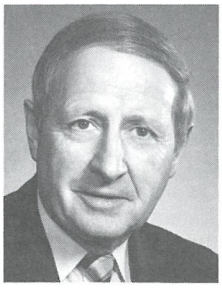
W.M. Arnold
P.J. Leduc

WE HAVE LOST CONTACT. CAN WE HAVE AN ADDRESS?

G.E. Bandola
G. Buttner
E.H. Fung
D.R. Greatrix
R.A. MacPherson
J.W. Meagher

President's Message

Wm. McDonald, P. Eng.



Good News

A year is a short time in the life of an Association, and the happenings and accomplishments of the last year could be typified as one of those "Good News - Good News" stories. The first "good news" is: the affairs of the Association have been well-managed for another year (thanks to the staff and the many member volunteers), and significant progress has been made in a number of areas. The second "good news" is: there remains much unfinished business and there are many other initiatives available for the new Council to get started on in the new year.

Some of the issues that a start has been made on, but that still require more work and study, include:

- development of revised admission standards that take into account changing developments.
- reaction to the Discussion Paper and any possible recommended changes to regulation of professions emanating from the Law Reform Commission Study.
- continuing action to enforce the practice provisions of the Act.
- MANSCETT's proposed Engineering Technology Act and recommendations in the Law Reform Commission's discussion paper.
- finalization of the Position Paper on Sustainable Development.
- development work on the James Avenue Pumping Station Engineering Heritage Museum.
- dealing with the recent proposal to provide for the registration of geoscientist through an amended Engineering Profession Act (and, as an extension, dealing with the issue of participation by geoscientists in the affairs of C.C.P.E.)

Some of the initiatives that are already launched and under way are:

- developing closer relationships with related organizations and Associations, and all three levels of government.
- implementing strategies to increase the enrolment of women in Faculties of Engineering and encouraging welcoming environments in both the Universities and the workplace.
- facilitating programs at the elementary school level to promote engineering as a career.
- providing a much improved and expanded infrastructure for dealing with complaints through the new discipline By-law (if adopted by the membership).

A special thanks to those Councillors leaving council: Appointed Councillor Barbara Cape, Ken Buhr, P. Eng., Milt Goble, P. Eng. and Walter Pawlikewich, P. Eng., for their contribution to the work of the Association. And again thanks to all the members of the various committees of the Association and the outgoing Council for the direction they provided in running the affairs of the Association.

The staff that makes it all happen: Dave Ennis, P. Eng., Shirley Matile, P. Eng., Joan McKinley, Donna Bilodeau, Elaine Ryan, Heather Kitchen and Sylvia Reid are a great group of people to work with, and I enjoyed their constant help and diligence. This year saw the departure of Bill Mackenzie, P. Eng. He will be missed and we wish him all the best in his retirement. □

Brigadier General A.B. Connelly, P. Eng.

By: W.G. McKay, P. Eng.

Brigadier General Alan Connelly, 83, who recently died in Montreal, was a well-known engineer in the Military and Civilian Sectors. While most of his career was in Eastern Canada and overseas, he was responsible for engineering works in Manitoba and Western Canada.

Briefly, born and raised in Calgary, he was a graduate of Royal Military College, he attended Nova Scotia Technical College for electrical engineering and graduated from McGill University in Civil Engineering. After his military career in Canada and overseas he was appointed Chief Engineer of the Northwest Highway System (Alaska Highway), responsible for maintenance of the roads and air fields.

In a civilian capacity he was Vice-President of Overseas operations for Mannix Ltd., working on many foreign projects, including the iron ore mine in Japan. Later, he became Director of Capitol Assistance, CIDA, and also was Director of the Colombo Plan in Sri-Lanka.

He was a long-standing member of many professional and technical associations, and was honoured by many of them; in particular, the Engineering Institute of Canada, which awarded him the John P. Sterling Medal, and the Association of Professional Engineers of Ontario, which awarded him the Engineering Medal.

Several years ago, the author and he had a pleasant visit on the occasion of a meeting in Winnipeg of the EIC Life Member's Organization, of which he had been a former President. At that time, he visited the former site of Fort Osborne Barracks (Tuxedo Blvd.), and during his tour, located his former office in the administration building. Following that visit I received a letter, from which the following excerpt is taken:

"I think some record should be available of the work done by the army through the Unemployment Relief Camps during the depression of the 1930's. I took part as a lieutenant, Royal Canadian Engineers as works officer Military District No. 10, Headquarters Fort Osborne Barracks, Winnipeg, jurisdiction from Lakehead to Saskatchewan border. My tour was 1933-1935. The major projects were: The Trans Canada Air Route, Shilo Camp, and Duck Mountain Forest Reserve.

It was intended that there would be an emergency landing field 1800 ft. x 300 ft. every sixty miles across Canada.

Camp Hughes on the CPR was considered to be too small for an artillery range and DND was taking over land in the Spruce Forest Reserve on the CNR.

Headquarters buildings were to be erected in the Duck Mountain Reserve.

The representative of Civil Government Air Operations would fly the air route and mark on the map likely locations for landing fields. I would take a survey party to find the spots, run a boundary to establish a legal description of the property then get the land turned over to the federal government. I would then do a contour survey and lay out the landing strips. We would then move in a camp of 110 men in sectional huts to clear and grade the field using horses and scrapers. The fields in which I was involved were Vermilion Bay, Kenora, Caddy Lake, Whitemouth.

Continued on Page 5

Mechanical Engineering Graduate Receives Research Award

By: J. Cahoon, P. Eng.

John Peter Shewchuk, P. Eng., a graduate of the Faculty of Engineering, University of Manitoba, (B.Sc. Mechanical Engineering, 1984), has been awarded the 1991 Graduate Research Award by the Institute of Industrial Engineers, USA. The award, which comprises a plaque and $500, is presented for excellence in research and presentation. John Shewchuk won the award for his Master of Engineering thesis, at Purdue University, entitled "Multiple-Resource-Based Part Scheduling and Tool Allocation Heuristics for Automated Manufacturing Systems." John is now working toward his Ph.D. at Purdue University.

John became a registered Professional Engineer with this Association in 1986, when he was employed by Bristol Aerospace Limited.

This continuing record of achievement by graduates of the Faculty of Engineering, University of Manitoba, in premier universities in Canada, the United States and abroad, indicates that the Faculty's standards remain high and that students continue to receive a quality engineering education. □

Revised Code of Ethics Proposed

By: C.R. Bouskill, P. Eng.

Enclosed with this issue of the Manitoba Professional Engineer is a copy of a Proposed Revised PROFESSIONAL ENGINEERS CODE OF ETHICS for the Association of Professional Engineers for the Province of Manitoba. This proposal was prepared at the request of Council by an Ad-Hoc committee with assistance and advice from the Association's legal counsel, some Councillors, some Association staff members and a manuscript writer (or specialist).

This review and revision was undertaken with a view to ensure that:

a) the Code contains standards of conduct for members designed for the protection of the public;

b) the Code does not include any clause(s) which may be in conflict with current human rights or other Provincial or Federal legislation;

c) the Code addresses matters relating to professional ethics, as opposed to personal and/or business ethics; and

d) the language of the Code is clear, concise comprehensible and gender-neutral.

In the process of this review, the current Code was reviewed on a clause-by-clause basis. The Codes in use by each of the other Canadian Professional Engineers Associations/Ordre were also examined, as well as the Codes in use by selected State Boards for Professional Engineers in the USA and other engineering organizations that have published Codes of Ethics.

The revised Code of Ethics encompasses three basic elements, specifically:

a) a statement of Fundamental Principles, which is the statement referred to in the 1968 version of the Code as the "Preamble";

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 define practices that are considered to be evidence of professional misconduct and/or negligence.

The concept of "duty to", on which the 1968 version of the Code was developed, has been replaced by the concept of five basic or fundamental Canons. Some of the Canons of this proposed version of the Code of Ethics incorporate concepts from two or more of the clauses of the 1968 version (Canons 2d, 3g and 3h), while in other instances two Canons have been created from one former clause (Canons 3i, 3j, 3k and 3l) - all in the interests of clarity. One new fundamental Canon has been formulated (Canon 5), relating to professional development and fair treatment of colleagues. Five new Canons of Conduct have also been formulated (Canons 1c, 3m, 4e, 5d, and 5h). One former clause was revised to provide for a Professional Engineer to make a detailed review of, and give approval for, engineering work prepared by a person other than himself or herself or a person under his or her direct personal supervision (Canon 2g). Eight clauses from the 1968 version of the Code were deleted, one to avoid potential conflict with legislation (clause 6.8), one to remove items that were considered to be a matter of business practice as opposed to professional ethics (clause 6.9), and some to reduce redundancy (clauses 6.6, 6.10, 6.11, 7.1, 7.2 and 7.3).

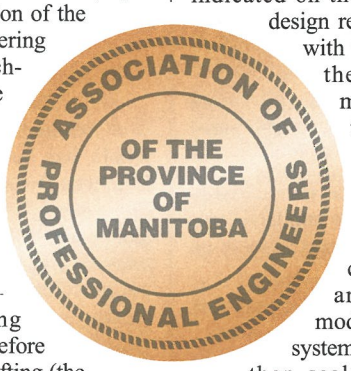
Each member of this Association is encouraged to review the enclosed proposed Code of Ethics and to submit constructive comments in writing to the APEM office on or before October 31, 1991. These comments will be reviewed by the Ad-Hoc Committee, which will then make appropriate amendments to the Code before submitting it to Council for adoption.

Once adopted, this new Code will be the code of conduct for every member of this Association.□

The Professional Seal And CAD Drawings

By: A.E. Ball, P. Eng.

The use of the engineering seal is governed by the Engineering Profession Act, the Association By-Laws, the Code of Ethics and the Guidelines for the Ethical Use of the Engineering Seal. These documents clearly spell out the protocol for the application of the seal on work containing engineering content. In our profession, technological improvements have advanced faster than the traditional rules and regulations.



In general, technology simplifies our work and provides us with greater freedom in our daily tasks – except when producing engineering design drawings. Before the advent of computer aided drafting (the good old days), a drawing original that was produced under the direction of an engineer would be sealed, signed and dated and any blueprints or copies produced would inherently show record of the responsible engineer. When revisions were made to a design, during the course of either construction or manufacture, the original drawing would be modified and the original engineer or another designer would sign the revision block to indicate responsibility for the changes. However, the initial seal, and subsequent responsibility for the original design, would remain with the sealing engineer.

Likewise, with as-built drawings, the drawing changes and as-built conditions may have been made and verified by another engineer (and thus indicated on the drawings), but the original design responsibility would still remain with the sealing engineer. Whether the original sealing engineer maintained his employment with the design firm did not matter; his drawing remained sealed and was either in his control or entrusted to the firm.

New technology has changed all that. Now, drawings are commonly produced, modified and stored on electronic systems. The final drawing is plotted, then sealed and dated. Subsequent changes of the drawing require it to be replotted as a new revision. The plotted drawing requires resealing and resigning as well as completion of the revision block. This is not only time-consuming but it becomes more complicated when the sealing engineer is not available, or worse yet, has left the employ of the firm. In this case, reference to the original design responsibility is lost. The drawing cannot be resealed by another engineer without contravening the Code of Ethics (which requires the seal to be placed only on work done or directed by the sealing engineer).

This leaves few options. The drawing could be sealed with a disclaimer as a revision only, with reference to the original design - but that would produce a division of responsibilities between engineers; or the drawing could be left unsealed, again with a reference to the original issue and a note stating "original drawing sealed and signed by Mr. Designer, P. Eng." (the revision block would bear the name of the engineer responsible for the changes followed by the P. Eng. designation). These solutions are not likely to be particularly comforting to a person employing the services of an engineer, nor do they conform very well to the Guidelines for the Ethical Use of the Engineering Seal.

In addition, safeguarding is lost, since the drawing remains on the computer system and can be transferred, modified and replotted without the permission of the engineer and without the responsibility shown; and in some instances, even the seal is reproduced (although the signature is absent). Inadvertent changes or errors may also find their way into the computer copy, which makes checking of the modified drawings a more difficult task.

Much the same problem exists when drawings are certified As-built. The certifying engineer is only taking responsibility for the changes to the design, but not the design itself. With regenerated computer drawings the original responsibility is lost. The design engineer, if he or she is still available, will usually reseal the drawing in a back-dated fashion so that the certifying engineer

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Professional Development

Structural Concrete Rehabilitation of a Nuclear Reactor

By: J.W. Bogan, P. Eng.

On Tuesday, August 27, 1991, the Professional Development Committee organized a presentation on "Structural Concrete Rehabilitation of a Nuclear Reactor" by David Whitmore, P. Eng. Mr. Whitmore is employed by Vector Construction Ltd., a Manitoba company which specializes in concrete restoration and protection work. They were retained to make repairs to a CANDU nuclear facility under construction near Cernavoda, Romania where five reactors are being built adjacent to the Danube River, near the Black Sea. Atomic Energy of Canada Ltd. retained Vector Construction to use the Structural Concrete Bonding Process for repairing cracks and voids for structural integrity and to help satisfy the structural pressure test necessary for nuclear containment vessels. Mr. Whitmore described the firm's experiences in Romania and gave the reasons and technical background for the repairs and methods used.

Mr. Whitmore went on to state that construction of the reactor started in 1981 and the majority of the civil work was completed about 1986. It seems the Ceausescu regime had arranged for the civil work to proceed while not making sufficient provisions at the time for completing the electrical and mechanical facilities. While the structural work was in progress, it is said that the Romanian government had stated within the country that the facility was operational. Present plans call for the completion of Reactor No. 1 and to have it operational prior to proceeding any further with Reactors No.'s 2 to 5.

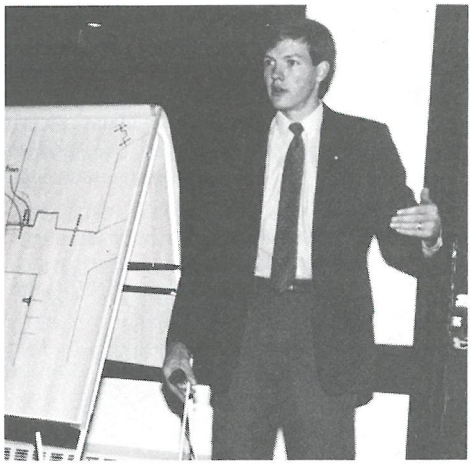
In light of recent developments in the Soviet Union and the deposed Ceausescu regime, the presentation proved very interesting and informative. The slides, depicting current conditions within Romania, were fascinating.

In total, there were approximately six thousand employed in construction on the site. During the repair work, crews varied in size from eight to twenty-two men where we would normally expect three or four. Mr. Whitmore said that the fluctuations depended on if it was pay day (cash only) which proved a laborious process because of the limited availability of large denomination currency or if word spread on the site in the morning that a shipment of cheese was available in the grocery store.

The horse drawn buggy remains a common means of transportation and it is used for hauling hay or water. A car currently represents a fifteen month investment in salary, if it wasn't supplied as an employment perk.

Mr. Whitmore also had a slide showing a one hundred year old railway bridge crossing the Danube River. The bridge was designed by Saligny and it is still in use today.

The presentation was well received and for those not able to attend the breakfast meeting, a video is available at the Association office. □



David Whitmore, P.Eng.

ADR, An Alternative to Litigation

If you have been through a court case to resolve a construction contract claim or other technical dispute, you probably have concluded that there must be a better way than litigation for resolving such disputes. Well, there is and it is known as ADR or Alternative/ Amicable Dispute Resolution.

Most construction or technical disputes that end up in litigation tend to be decided based on procedures and precedents that may have little or nothing to do with the issues at hand and with little reference to the technical merits of either side. In addition, the time and costs involved add to the overall sense of frustration with the legal system in such matters.

ADR has been gaining acceptance by the engineering community in many countries as a response to this frustration. It is regarded as the first step, and in many cases the only step, needed to resolve disputes based on technical issues or matters of engineering interpretation.

ADR includes over 20 different techniques such as negotiation, mediation and conciliation to achieve a successful resolution of a dispute. This process permits the disputants to participate in solving their own problems, in some cases with the aid of a mediator, and avoids the imposed decision of a judge or arbitrator.

FIDIC, the International Federation of Consulting Engineers, has recently formed a Task Force to examine and report on the current state of practice or use of ADR techniques throughout its member countries. The Canadian representative on this Task Force is John L. Seychuk, P. Eng., a Senior Principal with Golder Associates Ltd. in Toronto. Anyone who has had experience with ADR in Canada and wishes to provide comments is asked to write to John Seychuk at Golder Associates Ltd., 2180 Meadowvale Blvd., Mississauga, Ontario, L5N 5S3, Tel: (416) 567-4444 or call Michael M. Maher, P. Eng. at Golder Associates Ltd., 100 Scotia Court, Whitby, Ontario, L1N 8Y6, Tel: (416) 723-2727. □

A.B. Connelly, P.Eng.

Continued from Page 3

I came back as G.O.C. Prairie Command in 1951 and I found that the emergency landing field I had laid out at Kenora had become the municipal airport.

We started Shilo Camp by moving a few buildings from Camp Hughes across Sewell Lake in the winter of 1933/34. We put in a 110-man camp which eventually grew to 1000 men. The first job was to run in a railway spur again using horses, wagons and scrapers, loading and unloading by hand shovels.

A concrete block factory was established to provide building material. I laid out the rifle ranges and designed the reinforced concrete for the markers' shelters and for lintels, etc. in the buildings.

I was the Camp Engineer in the first militia camp held there in 1934. We obtained water from sand points sunk about 6 ft. below the surface. It was a cavalry camp using the farmers' horses. Keeping up the filling of the demand for water was a problem with limited pumping machinery.

The Duck Mountain project was mostly the construction of log buildings by expert axmen under the supervision of the forestry superintendent. Our job, as with other camps, was to provide building materials, tools and accommodation. I recall a visit in winter. I changed trains at Dauphin at 6 a.m. It seemed like -60 F. on the station platform. The branch line took me to Ethelbert where I was met by a sleigh with horses. I have forgotten how long it took to get to Duck Mountain but I think I ran most of the way behind the sleigh to keep warm.

That is a brief account of my engineering adventures in Manitoba. The history of the UER Camps is possibly in the DND archives in Ottawa. Contrary to popular opinion the men accomplished a great deal of useful work."

The writer found Alan Connelly to be a very fine gentleman: very friendly, highly experienced in engineering and very interested in the preservation of engineering history. □

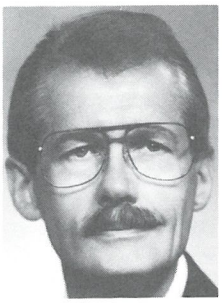
Attention Curlers!

The next Annual APEM Curling Bonspiel will be held on Tuesday, January 14, 1992.

Details to follow.

Mark your calendars now!

Executive Director's Report



D.A. Ennis

The Association office serves the needs of Council and its various Boards and Committees. In addition, we on staff are largely responsible for transacting the business of "APEM INC." Given that the operating budget is in the order of $600,000, that revenue is seldom received in amounts larger than $200, and that a large majority of the cheques written are for amounts under $1000, this in itself represents a considerable level of activity. This, with the other broad areas of responsibility for admissions, professional practice issues, enforcement, communications and general liaison with the public and other organizations, generates a brisk level of activity.

Additionally, in 1991 APEM processed almost $8000 worth of members contributions to the 1989 Canadian Engineering Memorial Foundation. The Foundation was established following the December 1989 tragedy at Ecole Polytechnique in Montreal.

Were it not for the efficiency and dedication of the staff, the service to the public, Council and the membership could not be maintained. I express my sincere appreciation to Shirley Matile, Joan McKinley, Elaine Ryan, Donna Bilodeau, Heather Kitchen and our new staff member, Sylvia Reid. I am sure that they, like I, will miss the contributions of Bill Mackenzie who left us at the end of June.

As Registrar, I can report a small increase in the overall Association membership in the last year. The changes in membership are as follows:

Membership as of July 31, 1990		3,290
Plus - registrations	119	
- transfers-in	27	
- reinstatements	20	
		166
Less - resignations	43	
- transfers-out	7	
- written-off (June 30)	56	
- deceased	9	
		115
Total Membership as of July 31, 1991		3,341

It is comprised of the following categories:

Full Members	2,724
Non-Practising and Non-Resident Members	593
Life Members	24
Total	3,341

Additionally, 168 temporary licenses to practice engineering were issued to non-resident engineers. Most of those licenses were renewals, and 13 were issued to Professional Engineers registered in the U.S.A.

In the area of registration activity, Council has set down policy and procedures to be followed in the hearing of an appeal of a decision taken to refuse the application of any person applying for registration or a licence. I have recently received notice that an applicant has requested a hearing under Section 23 (1) of the Act. It requires that a formal hearing be held.

Under the Engineering Profession Act, Council is charged with the responsibility to exercise in the name and on behalf of the Association any and all power, authority and privileges conferred upon it under the Association. As Secretary to Council, I am happy to report that it continues to carry on that responsibility and with a particular emphasis on protecting the public interest in the field of engineering.

One of the developments that Council will be addressing in the near future will be the review of the Professional and Occupational Associations being conducted by the Manitoba Law Reform Commission. The Commission will be producing a discussion paper on matters that are very fundamental to the concept of a self-governing profession. One of its assignments is to consider and report on "...the extent to which the Provincial Government should delegate governing authority to the Professional and Occupational Associations, including the criteria by which self-governing status should be conferred on professions and occupations". APEM will be giving the paper very careful consideration. Suggestions from the membership will be welcomed.

As Treasurer, I can report that the Association continues to operate on a sound financial basis. The reserves have been increased, again, in keeping with the policy adopted by Council of targeting a reserve level at a ratio of 1.2 of the previous years operating expenses. Interest income earned on the reserve funds contributes significantly to the revenues of the Association. In the last fiscal year, the contribution amounted to almost $24 per member.

In the area of Act Enforcement, I can report that the Association has launched a private prosecution against a non-member, Lillian McMahon, for breaches of both the title and practice provisions of the Engineering Profession Act. A court date has been set for November 15, 1991. □

Director of Admissions' Report



S.M. Matile

In May, 1990, the Association introduced a new staff position: that of Director of Admissions.

Since I became an employee of the Association, the staff has worked very hard at training and educating me in our intricate and extremely complex admissions process. Bill Mackenzie, in particular, spent many hours sharing his abundant knowledge, thoughts and opinions with me before his retirement this past June. Now, after fifteen months of hard work, Bill and the rest of the staff have finally cultivated me to the point of being able to produce a report for the benefit of the membership!

During the training process, the need for a "policies and procedures" manual relating to admissions became apparent. Bill Mackenzie prepared a first draft of the policy manual, which is still undergoing an extensive review by the Ad Hoc Committee on Admission Standards (and probably will be for some time!), and I have commenced with the preparation of the first draft of the procedures manual. Hopefully, both of these documents will be in place some time in 1992.

Two Committees intimately involved in the Admissions process are the Board of Examiners and the Admissions Review Board. The Board of Examiners has a policy manual, which is currently being revised by a sub-committee under the very capable chairmanship of Doug Chapman; and the Admissions Review Board, which has never had a policy manual, is in the process of reviewing the draft policy manual prepared for it by Bill Mackenzie.

Meanwhile, new application forms have been prepared for all of the various types of membership; new information sheets have been prepared for applicants of all types; new reference forms have been drafted; and we will soon be commencing with the preparation of a new Professional Practice Examination.

This year, I attended a meeting of the Canadian Engineering Qualifications Board (CEQB) as an observer, and participated in a Canadian Engineering Accreditation Board (CEAB) accreditation visit to the University of Manitoba's Computer Engineering Department. I also attended a national meeting of Admissions personnel, and learned a great deal about the admissions processes and procedures in the other provinces and territories.

Continued on Page 8

Ad Hoc Committee on Technologists



Members:
K.A. Buhr
W.D. Christie
E.W.J. Clarke
G.E. Laliberte

Wm. M.A. McDonald, *Chairman*

The Ad Hoc Committee on Technologists met three times during the year; one meeting being a joint meeting with the APEM Executive Committee, and others being officials from other Associations. In addition, the President and the Executive Director attended Manscett's 25th Anniversary Dinner as well as its annual meeting, and met informally with its officials on another occasion.

In addition, consultations on the broad issue of relationships with Technologists have been ongoing at a national level.

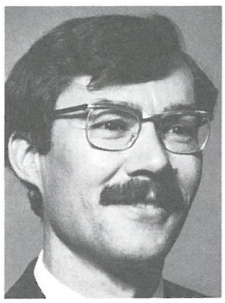
A significant development in the past year, that could have implications relative to our discussions with the Technologists, was the request of the Manitoba Government for the Law Reform Commission to study Professional and Occupational Associations. Specifically, the commission is directed to study and report on the following issues:

- the effectiveness of the present system within Manitoba for the governing of professional and occupational associations, with reference to the policies and practices of the other Canadian provinces;
- the extent to which the Provincial Government should delegate governing authority to the professional and occupational associations, including the criteria by which self governing status should be conferred on professions and occupations;
- the necessity of a structure within government to deal with issues pertaining to the governing of professional and occupational associations and the nature of that structure;
- the advisability of enacting general legislation regarding the governing of all occupational and professional associations and the proposed provisions of any legislation recommended;
- the advisability of permitting incorporation of professionals; and
- any other matter which would assist the government in determining an effective policy for the governing of professional and occupational associations.

APEM expects to present a brief to the commission as soon as it completes its initial discussion paper.

I would like to thank the members of the committee and staff of APEM, especially Mr. Ennis and our committee secretary Heather Kitchen, for their valued assistance during the year. □

Public Relations Committee



Members:
W.H. Brant
M.G. Britton
M. Cornell
K.R. Drysdale
R. Eden
R. Hoemsen
B.G. Lawlor
J.T. Linnen
C.A. Nieuwenburg
T.R. Pearson
S. Parent-Pulak
C.S. Roberts

D.C.H. Prowse, *Chairman*

The Engineering Museum Task Force, co-chaired by George Lawlor and Bill Newton, co-ordinated a study by Stechesen Katz Architects on the conversion of the James Avenue Pumping Station to an "engineerium" or engineering museum. The results were presented to the Core Area Initiative's Program Review Committee. Further progress in creating an interactive museum of science and technology in Winnipeg will depend upon the success of APEM in facilitating the creation of a non-profit corporation to secure funding. George Lawlor worked with engineering students to investigate the feasibility of a water arch across the Red River which could be a feature of the Engineerium and an international tourist attraction for Manitoba.

Shirley Matile attended the Women in Engineering Forum in Regina.

IBM, Mind Computers and Northern Telecom agreed to provide graduation thesis prizes in Computer Engineering after the Public Relations Committee indicated the need for industrial support.

The University of Manitoba coordinator for the Career Mentor Program reported that about 50 engineers had volunteered to be mentors for engineering students.

Progress has been slow in selecting a logo that represents engineering in Manitoba. Discussions with a graphics designer are underway.

APEM acted as a facilitator for provincial funding to support an Engineering Awareness Project in the Fort Garry School Division to familiarize both students and teachers with the profession of engineering. This program was described in a Lance article, and in the MPE.

APEM again awarded registrations to the engineering modules of Mini-University summer camp as prizes for projects at the Manitoba Schools Science Symposium (MSSS). We appreciate the efforts of all the judges who participated, on our behalf, at both school science fairs and in the MSSS.

APEM has expressed interest in purchasing and distributing a booklet being proposed by CCPE to explain engineering to students.

We have obtained approval to use the artwork for an APEO student pamphlet and a subcommittee is working on adapting that pamphlet for use in Manitoba.

The committee co-ordinated "job shadowing" as requested by a high school to allow some talented high school students to each spend a day with an engineer.

Continued on Page 13

Salary Research Committee



Members:
B.G. Bettess
D.G. Chapman
L.R. Ferchoff
C.I. Ireland
B.F. Klaponski
E.G. Parker
R. Prepes
H.M. Soliman

J.M. Symonds, *Chairman*

Once again this year, the Salary Research Committee conducted a membership and an employer's salary survey. It has been decided that both of these surveys will be an annual event in the future since it was difficult to track salary trends having a membership survey every two years.

The results of this year's surveys were published and distributed in the October mailing of the Manitoba Professional Engineer.

This year only minor amendments were made to the membership questionnaire as a result of member's feedback and data processing difficulties. The response from companies employing engineers this year was greater than in past years as a result of a concerted phoning effort by committee members and, I feel, more interest in the survey by the firms involved.

Many thanks to the committee members for their effort this year and to Dave Ennis for his continued support. A special thanks, once again, to Joan McKinley for her assistance in keeping the minutes and for organizing the meetings (and me). □

Consulting Engineers Committee



Members:
H. Haak
R.J. Houston
J.O. Klein
R. Menon
R.S. Morrison
A. Penman
B.J. Rossen
E. Weiszmann

D.B. Whittaker, *Chairman*

The committee held seven meetings in the past year.

The revised Guide for the Engagement of a Consulting Professional Engineer has been available for some months. After a final draft had been approved last year a few further revisions proved to be necessary.

Discussions are continuing on the possible ramifications for engineers in Manitoba of the Station Square shopping centre roof collapse in Burnaby, B.C. in 1988. The B.C. Association reviewed the Closkey Commission report and made recommendations in 1989. However, there was disagreement within the general membership of the B.C. Association with some of those recommendations. A membership vote was taken and a further review called for, the results of which were discussed at branches throughout B.C. A membership vote will be taken on the recommendations. Recently, we received a copy of that second review, and have compared its recommendations to the Closkey Commission report and to the earlier APEGBC review. At our last meeting, six of the recommendations were considered to be relevant for more detailed review by the committee.

The Engineering Safety Branch of the provincial Department of Labour sent to the committee, for comment, a copy of a draft set of documents. These documents comprised mainly letters of assurance, to be completed by owners and engineers prior to the issuance of a building permit and after construction is complete. These letters would provide confirmation of compliance with safety standards. Comments were requested on the concept, the drafts and a proposed trial implementation process. This matter also is under review by the Safety in Engineering Practice Committee and has been discussed between the two committee chairmen. A reply has been sent with a question on the intended procedure for design checks.

Letters were received from a member regarding actual and potential problems in relations with architects. These covered professional, contractual and commercial aspects. Therefore, these cover the mandates of both APEM and ACEM. A review shows that similar problems exist in other provinces, some of whose associations have closer, sometimes informal, working relationships with the architectural associations. This matter remains under discussion.

A question was raised regarding an adverse effect of the GST on engineering fees. The old FST normally was included in contractors' prices and frequently was not deducted when calculating the engineering fee on a percentage-of-cost basis. Some of these same owners no exclude the GST, thus reducing the engineering fee in relation to pre-GST days. In such cases, an approximate reduction of 3% - 20% has been estimated for building projects. There is no suggestion that the GST should result in a higher fee. The question is how to maintain a "level playing field".

It was noted that the Guide recommends that the cost of the work should include "all applicable Federal and Provincial Government surcharges". It was realized that all owners do not follow the Guide.

In February, Bob Taylor left Winnipeg to take up a new position in Ottawa. He was a committed and valuable member of the committee. He has been and will be missed - thank you, Bob. His place has been taken by Dick Menon, well-known as an experienced past-member of Council and several other committees. We welcome him and know that he will make a significant contribution.

As usual, but no less genuine because of that, we thank all staff members. As always, they have provided a great deal of help and it is a pleasure working with them.

Special thanks to those most directly concerned with the committee - Heather Kitchen, Shirley Matile and Dave Ennis. □

Annual General Meeting Committee



Members:
T. Holden
B. St.Amant
E.A. Speers

R.R. McKibbin, *Chairman*

The Annual General Meeting Committee has worked very diligently with the President and Association staff to put together an exciting program. This year's theme is "Building The Image"; that is, the image of the engineering profession in the eyes of the public.

Mark Friday, October 25th, on your calendar and plan to attend one or more of the functions at the Westin Hotel.

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

Mr. Rheal Teffaine, a past President of the Manitoba Bar Association, is the keynote speaker at the Awards Luncheon.

The afternoon Panel Discussion topic - "Earning our Image - Quality in our Works and Ways" will be introduced by three panel members, bringing us three perspectives on the subject: one from industry, one from a client (customer) and one from the point of view of a statistics expert on contemporary quality assurance and the measurement techniques that demonstrate that a person has delivered what he has agreed to deliver.

On behalf of the Committee, I would like to express our sincere thanks to the APEM staff for their very capable and valued assistance. □

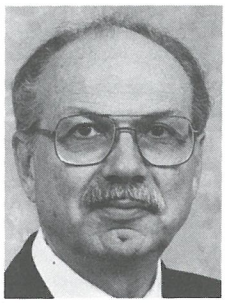
Director of Admissions' Report

Continued from Page 6

From August 1, 1990 to July 31, 1991, we registered 166 members. Of these, 27 were transfers in from other provinces, 20 were reinstatements, and 119 were first-time registrants. We also issued 168 temporary licences to practise engineering in Manitoba, and we gained 47 new engineer-in-training members. In addition, 29 applications for registration were reviewed and referred to the Admissions Review Board, while 46 applications for assessment of academic qualification were referred to the Board of Examiners.

The coming year promises to be a very busy one for the Admissions department, with the finalization of the Admissions policies and procedures, the revision of the Board of Examiner's policy manual, the introduction of a new CCPE Syllabus of Examinations, the introduction of the Admissions Review Board's policy manual and the revision of the Professional Practice Examination. This Association is fortunate in having a very capable and effectual Admissions Co-ordinator, Donna Bilodeau, who will be assisting with much of this work as well as processing all applications for registration and licensure. Our competent and efficient secretary to the Board of Examiner Joan McKinley, will also be providing input and support to the revisions taking place with our assessment process and with issues involving the Board. □

Practice and Ethics Committee



Members:
C.R. Bouskill
F.M. Fowler
D.R. Grimes
R.C. Isaak
E.I. Lexier
A.M. Lohse
I.H. McKay
R.H. Russell
W. Saltzberg
W.R. McQuade, Vice-Chairman

R.A. Johnson,
Chairman

This report is submitted on behalf of R.A. Johnson, P. Eng., who, at the time of writing, is for health reasons unable to participate in the work of the committee. The committee looks forward to his return and his valuable contribution to its deliberations.

The duties of the committee are set out in the Discipline By-law (By-law 43). As reported by the President in the August issue and as set out in the notice of proposed By-law change, the membership will be asked to vote on a rather important change to the disciplinary system in APEM. If the change is approved, the committee will be disbanded.

Quite apart from the considerable efforts put forward in developing and presenting recommendations to Council on the proposed changes and then drafting the proposed By-law, the committee has carried on with its regular duties.

As a general observation, the committee is disturbed by the number of incidents of dissatisfaction, on the part of the public, with engineers whose area of practice involves pre-purchase or litigation-support inspections and condition reports on single- family residential buildings.

Files considered and findings reported to Council for which the committee's recommendation was that no formal hearing be held were:

- a complaint against a member alleging unprofessional conduct in the preparation of a post-construction report, for the settlement of a legal proceeding, on the condition of a single-family residential building.

The committee concluded that of the various charges laid by the complainant: two did not show a prima facie case; one was judged to be trivial; and in the case of another a satisfactory answer had been received.

- a complaint from a member of the Association against another alleging attempts to supplant engineers in the employ of the complainant after steps had been taken toward their employment and, in addition, damage to the reputation of those engineers.

The committee concluded that no prima facie case had been shown.

- a complaint of unprofessional conduct by a member of the public against a member concerning the inspection of a single- family residential building and the report on the probable cause of distress in its foundation.

The complainant was the owner of the building. The report was to be used as litigation support in a case of alleged damages. The committee was unable to complete its investigation because of the provisions of an out-of-court settlement between the complainant and the engineer. It concluded, on the basis of the investigation conducted prior to the out-of-court settlement, that no prima facie case had been shown.

- a concern brought by the office of the Supervisor of Building Inspections of The City of Winnipeg involving the standard of practice exhibited by a member in assuming professional responsibility for the application of Part 3 (Use and Occupancy) of The Manitoba Building Code, in connection with a particular Building Permit Application.

The committee, after consideration of the circumstances of the evolution of the project, concluded that it had received a satisfactory answer.

In another complaint involving the improper certification of equipment prior to its installation, the registration of a member was suspended for a short period. Notice of that suspension is carried elsewhere in this publication.

Advice was provided to a member regarding the proper professional conduct for ensuring that the extent of his responsibility was fully understood by his clients before he was engaged. The area of practice involved pre-purchase inspections and litigation support reports on single-family residential buildings.

The committee also offered advice to two members arising out of separate items of information directed to it by a building permit granting authority.

Files currently under active consideration include:

- a concern brought to the attention of the committee involving a report prepared by a member on the cause of distress in a single-family residential building. The report was used in support of one of the parties in a warranty dispute.
- a complaint against a member arising out of a post- construction report prepared on a single-family residential building on behalf of a contractor engaged in a civil action.
- a complaint against a member alleging unprofessional conduct regarding his actions in the collection of fees. The fees were for the provision of a condition report on a single-family residential building.
- a concern brought to the committee by the office of the Supervisor of Building Inspections of The City of Winnipeg over very significant structural distress in a multi-unit residential building.
- information brought to the attention of the committee involving the suspension of the right to practice of a Manitoba member licensed in another jurisdiction.

As a result of its deliberations in connection with one of the files, the committee has recommended to Council that article 6.7 of the Code of Ethics (5.g of the proposed revised Code of Ethics), be reviewed and, if warranted, a guideline prepared to assist engineers, employers and clients of consulting engineering firms in deciding upon the preferred course of conduct when a member changes employment and works for an organization in competition with the previous employer.

Another recommendation, that article 6.9 of the Code of Ethics, which reads:

"He shall not accept employment by a client, knowing that a claim for compensation or damages, or both, of a fellow engineer previously employed by the same client and whose employment has been terminated, remains unsatisfied, or until such claim has been referred to arbitration, or issue has been joined at law, or unless the engineer previously employed has neglected to press his claim legally, or the council of the association gives its assent."

be repealed, was accepted by Council. Notice of this action was reported in the April, 1991 issue of The Manitoba Professional Engineer.

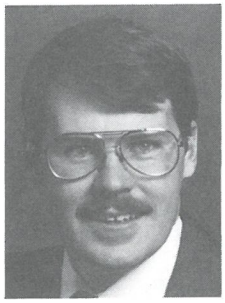
As it did last year, the committee has requested that Council approve a levy of $5 per member for 1991/92 to support the Discipline By-law reserve. This assessment is intended to offset the expenses anticipated in the coming year, while maintaining the reserve at an acceptable level.

The work of the committee continues to place heavy demands on its members. Their committment is greatly appreciated. During the year, they were joined by Andy Lohse who replaced Ken Hallson. □

Professional Development Committee

The report of the Professional Development Committee is not available. However, this committee has been very active, organizing breakfast meetings and professional development seminars. □

Safety in Engineering Practice Committee



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

F.A. Roberts, *Chairman*

The Safety in Engineering Practice Committee has had before it in recent months many issues fundamental to our profession. Among them, tracing accountability when designs and drawings are produced and stored electronically, relationship of the designer to the jurisdictional authority, concerns when designers use equivalency clauses in the National Building Code and alleged health hazards with cold climate sewage lagoons.

The committee has studied these and other problems in an effort to highlight dangers, propose alternative practises where appropriate or recommend legislation changes which will assist in protecting the public.

Computer aided design and drafting has brought with it many benefits and more sophisticated analysis than has ever before been possible. However, with this new technology has come the problem that both designs and drawings or the outputs of designs are stored electronically. As a result, it is not possible under such circumstances for the engineer to place his seal on the design or the drawings in a conventional manner. In addition, such files are subject to revision or tampering which may be beyond the control of the designer. Problems exist in two areas: firstly, where it may be difficult to pin-point the identity of the design engineer who produced the work; and secondly, determining after the fact whether the final design in fact conveys the intent of the original designer. This matter is not yet resolved nor is it going to be easy to manage as more and more of our designs are produced in this manner.

Proposed changes in the administration of the Manitoba Building Code by the Provincial Department of Labour may see the implementation of "conformation of compliance" letters as a requirement which will ensure that design professionals provide certification to the building authority that designs have been prepared in accordance with the Code and the work has been carried out in accordance with their designs.

This concept appears to be a very positive step towards ensuring good structures across this Province if it can be enforced uniformly from municipality to municipality. An area which may not be so positive that goes along with this proposal for verification by the design professional may be a reduced involvement by the building authority in reviewing plans prior to issuing permits.

Although there may be times when engineers would look forward to this prospect, in practical terms review by the authority appears to be a necessary step in the assurance of the quality of design work in the Province. I am certain there will be many opportunities for engineers in this Association to present their views on this subject; and at this time the Safety in Engineering Practice Committee would be particularly interested to have comments from members.

The committee had many informative discussions dealing with a complaint from a member of the public, that cold climate sewage lagoons presented a health hazard because of bacteria growth and other organisms. The committee corresponded with health professionals and leading scientists and found no evidence at this time to support the allegation of such a danger. In any event, through the process of dealing with this issue, it became clear to the committee members that an engineer's responsibilities may go far beyond the technical aspects when dealing with systems which can involve the public health.

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

On behalf of the committee, I wish to extend sincere thanks to Bill Mackenzie and Dave Ennis for their tireless assistance during the year. I wish to personally thank the members of the committee for their dedication and hard work. □

Sports Committee



Members:
E.H. Garfinkel
J.F. Lavergne
K. Miller
H. Wilson

M.D. Vanderpont, *Chairman*

The Sports Committee tried a couple of new things this year while maintaining the two traditional events.

A second attempt was made to organize a ski weekend to Frost Fire. Judging by the less than overwhelming response, it appears that this is an idea whose time has yet to come.

We did manage to break some new ground with the entry of an APEM team in the Manitoba Marathon Relay. The committee is hopeful that many more members will be attracted to this event next year.

The curling bonspiel, again held in mid-January at the Granite, featured a full slate of 24 rinks. This time the glory went to the rink of Tom Price, Walter Schoenfeld, Brent Wall and Doug Petrick. A "closest-to-the-button" competition was held in conjunction with the Bonspiel, with proceeds being donated to Charity. Special thanks to Bill Saunders for his skills as drawmaster.

We returned to Carman and their impressive new clubhouse for the Golf Tournament. Although rain threatened all day, the approximately 120 golfers and a dead tree branch got in the full round. Paul Maycher took top honours for Low Gross, while Don Mulder made off with Low Net.

A special thanks is owed to the many members and their corporate affiliates for the unsolicited prizes they offered for use at the two events.

The sports committee is looking for some new members with ideas for alternative events and suggestions to improve our traditional undertakings. Anyone interested is asked to contact any member of the committee.

My thanks to the sports committee members who all are so generous with their time, energy and enthusiasm. A special note to Bill Mackenzie who makes such an effort to sit in on all our meetings and MC's at the curling and golf days. Your unique contributions are greatly appreciated. Thanks Bill. □

– NOTICE –

Canadian Society for Chemical Engineering

The Canadian Society for Chemical Engineers is soliciting membership in their society. If you are not a member but interested in the society, please contact:

Patricia M. King
Manager - Membership Development
Canadian Society for Chemical Engineering,
Ottawa, Ontario
Phone: (613) 232-6252
Fax: (613) 232-5862

Research and Development Committee



Members:
J.T. Atchison
G.R. Drummond
D.J. Fedirchuk
E.F. Glass
R.J. Hamlin
C. Katopodis
E.J. Klein
M. Paryniuk
E.A. Speers
J.B. Thorsteinsson

D.G. Osman, *Chairman*

The Research and Development Committee has continued with considerable effort to develop, for the Association, guidelines on Sustainable Development. The very exhausting iterative process has culminated in a document which has gone to the Council and the membership at large for constructive criticism. A number of members replied and some requested meetings to discuss the draft. The paper was revised to appropriately reflect the input of those who shared their opinions with the committee. The final position paper was submitted to Council to be adopted at the annual meeting. Much gratitude is to be conferred upon the very hard working members of the committee who have diligently and tenaciously struggled through this initiative.

A brief was prepared (by selected members) concerning the National Science and Technology Action Plan. APEM's comments have been considered in the preparation of a publication (soon to be released) which has analyzed the response of all organizations who were invited to comment on the National Science and Technology Action Plan.

The Resource Recovery Institute requested that APEM provide a representative to their Board. Committee member Ted Speers has been serving in this capacity since being recommended by the Executive Committee.

The Research and Development Committee co-sponsored a luncheon seminar with Science/Technology Awareness Network (STAN) on the subject "Energy and the Economy of Manitoba" on October 16, 1991. Speakers addressed Manitoba Hydro's "Hydro 2000 and the Major Capital Projects Report", The Slo-Poke Reactor Program, Methanol Sourcing and Applications, and Electroluminescence - A New Potential Industry for Manitoba. The keynote speaker was Mr. C.F. Osler of Inter Group Consultants Ltd.

Two members of the Research and Development Committee acting as representatives of APEM participated in the Manitoba Round Table on Environment and Economy on the Codes of Practice Sub-Committee. Their input facilitated the need and understanding of the benefits of technology in the evolution of the solution towards achieving an appropriate balance between the environment and sustainable development and the necessary developments of society. It was realized that technology (science and engineering) must be incorporated into the policy making decisions and must become a real part of the education system.

A luncheon meeting with the Honourable William C. Winegard, Minister for Industry Science and Technology Canada was convened on February 13, 1991 to speak on "International Competitiveness: The Canadian Challenge". This meeting was co-sponsored by the APEM Research and Development Committee, Science/Technology Awareness Network (STAN) and the Engineering and Applied Sciences Industrial Affiliates Program (EASIAP). The event was attended by approximately 100 individuals (members and non-members). The main thrust of Dr. Winegard's presentation was that Canada had to spend money on Research and Development to be in a position where it could sell high value products rather than selling its lower value resources only to buy back their products.

Continued on Page 15

Awards Committee



Members:
K.A. Buhr
R.P. Hoemsen
F.R. Kaita
G.E. Laliberte
W.E. Muir
W.L. Pawlikewich
G.A. Pratt
D.C.H. Prowse

E.E. Lach, *Chairman*

The Awards Committee is responsible for all matters relating to Awards of the Association or requiring participation by the Association, such as the CCPE Awards and the Canada Northlands Development Award.

A nomination form was sent out to the membership with the February issue of the Manitoba Professional Engineer, soliciting candidates for two APEM Awards and four CCPE Awards.

The committee held four meetings in 1991 to assess the qualifications of the new candidates and those recommended by the 1990 Committee from their list, for four APEM Awards and four CCPE Awards.

The committee's recommendations regarding candidates for the 1991 CCPE Awards and 1991 APEM Awards were presented to the May 13, 1991 and June 10, 1991 meetings of Council respectively.

A further recommendation to Council was that the budget include sufficient funds for publicizing the names of the recipients of the APEM Awards.

My sincere thanks to the members of the committee for their interest and enthusiasm in undertaking assignments. The committee wishes to express its gratitude to the Association Staff, with special thanks to Joan McKinley for attending all meetings and serving as Secretary. □

Legislation Committee



Members:
G.S. Cooper
D.W. Gunter
J.S. Hicks
E.E. Lach
B.D. MacBride
D.N. Spangelo

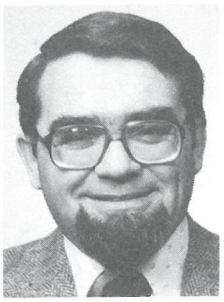
D.J. McIntosh, *Chairman*

The bulk of the work of the legislation committee in the past year was undertaken by a sub-committee comprised of J.S. Hicks, D.J. McIntosh and D.N. Spangelo. It met on a number of occasions to draft Act amendments to provide for licensure of corporations and other entities in which engineers generally practise as a group. Other minor amendments intended to clarify certain aspects of the Act were also included. The sub-committee's work involved some consultation with the Association's legal counsel and a review of the legislation in some other jurisdictions.

The draft was reviewed by the full committee which provided the sub-group with some constructive suggestions. The reworked document is now available for the next review. The participation of the liaison councillor, Walter Harrison, as a corresponding member was very much appreciated.

The committee anticipates that its future activities will include a review of the Discussion Paper on Professional and Occupational Associations being prepared by the Law Reform Commission and the drafting of a By-law to provide for regional chapters of APEM. □

Ad Hoc Committee on Admission Standards



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

K.M. Jardine, *Chairman*

The standards and procedures and policies for handling requests for permission to practice Engineering in Manitoba have been, and will continue to be, the basic raison d'etre of our Association. Many practices and procedures, understandings and interpretations have developed over decades of applying this mandate. The ad hoc committee is trying to identify the basic policies being followed and to describe the complicated procedures used by the Association, while at the same time incorporating any changes that could be beneficial.

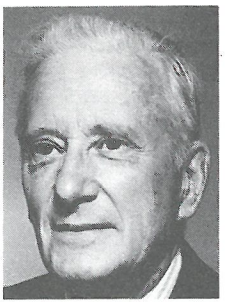
The committee got off to a shaky start but is now reviewing in detail a proposed "Manual of Admissions", compiled by Bill Mackenzie, which outlines the duties of various committees and boards as well as Council in processing admissions applications. In the years to come, this document should prove a valuable tool for the Association in maintaining a steady course in handling applicants for admission to the profession.

The ad hoc committee is dealing with some heady topics - especially in the area of desirable changes. Some examples of areas discussed are:

- Can pertinent experience reduce the academic requirement for admission?
- Should a Registration Board be established for approving applications, with Council acting only as an appeal body?
- Can an appropriate mandatory Engineer-in-training program alert young Engineers to the meaning of Professional Practice?
- Does the Engineering Profession Act require amendment?
- How can we strengthen the Admissions Review Board?
- Should the Association follow CCPE's recommendation to increase the minimum work experience requirement from two years to four?

There is considerable work ahead, but the committee expects to report in 1992. □

Publication Committee



Members:
A. Ball
J. Bogan
B. Danielson
V. Dutton
L. Ganetsky
D. Jayas
J. Lucas
B. Newton
S. Ray
H. Zbigniewicz

W.G. McKay, *Chairman*

The committee gained five new members this year: Allan Ball, Blaine Newton, Brenda Danielson, Sisir Ray, and Halina Zbigniewicz; lost two: Blaine Newton (who was transferred out of the province shortly after his transfer in!) and Jeff Belagus; and regained one Jerry Bogan (a former committee member who has returned to the province).

Six editions of the publication were produced; five containing 12 pages and one, carrying the annual report, containing 16 pages.

The committee continues to maintain its policy of publishing articles covering the activities of the Association and of local engineers. In this respect, there appear to be fewer articles available; therefore, the committee encourages members to submit articles, letters to the editor, editorial comments, etc.

The support of non-committee members in taking on assignments continues to be excellent, with prompt and complete articles. Their services are most appreciated.

The method of production continues to improve through the use of the Association office computer, the computer formatting and the final commercial printing resulting in mailings closer to the first of the month.

Appreciation is expressed to all of the Association staff and in particular to Shirley Matile who acts as a very efficient secretary to the committee meetings. Also a word of thanks to Bill Mackenzie, Dave Ennis and our liason councillor Jack McDougall.

Reports from correspondents Dick Menon, Westman Chapter and Bob Cotterill, Thompson Chapter cover the activities in these areas.

The spirit of cooperation and work ethic continues to be upper-most in spite of the fact that the committee meets on an average of only once a month.

The committee membership is open and new members are always welcome to share the assignments and editing. □

Board of Examiners



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

F.R. Kaita, *Chairman*

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

The Board assessed 46 new applicants, re-assessed 27 and administered 42 examinations. Of the 46 new applicants, 37 were assigned examinations (six qualifying, nineteen confirmatory and twelve programs) and nine were qualified. Of the 27 applicants re-assessed, six were considered qualified, having successfully completed the assigned examinations; three were assessed additional examinations; and two were removed from the program. The remaining sixteen were reviewed for various requests, including changes in the number of assigned examinations and course substitutions. Twenty-four candidates registered for 42 examinations and 23 passes were recorded.

The Board has established a sub-committee under the guidance of Doug Chapman to update our Policy Manual. This has been necessitated by our internal APEM changes and changes taking place at the national level. National level changes include a revised CCPE 1992 Examination Syllabus, a proposed National Guideline on Admission Standards and the negotiation by CCPE of a six-nation mutual recognition agreement.

During the year we welcomed Jack Cahoon and Al Clayton to the Board and lost Ian Goulter to Australia and Subramanian Balakrishnan to sabbatical.

I wish to extend my personal thanks to all members of the Board for their time and effort. We all join in expressing our sincere thanks to the APEM staff and in particular Dave Ennis, Bill Mackenzie, Shirley Matile and Joan McKinley for their valuable and capable assistance. □

Nominating Committee



Members:
N.P. Feschuk
V.D. Gupta
J.G. Hildebrandt
R.A. Johnson
F.R. Kaita
K.J.T. Kjartanson
G.E. Laliberte
W.E. Muir
R.J. Waddell

K.A. Buhr, *Chairman*

The purpose of the nominating committee is to nominate a slate of candidates for election to Council. The committee is comprised of ten members, with the immediate past president of the Association as the chair.

The procedures to be followed by the committee in nominating candidates are as laid out in By-law 2 of the Association's By-laws.

This year there were five vacancies to be filled on Council. The committee agreed to first approach Councillors whose terms were expiring this year. Only one such candidate agreed to let his name stand. In addition, the committee identified 16 other potential candidates, giving consideration to having representation of branches of engineering and sectors of employment, as well as representation from outside the City of Winnipeg on Council. Of this list, three additional candidates agreed to let their names stand for nomination. The committee then added six more names to the list of potential candidates. One more candidate agreed to let his name stand.

Nomination forms for the candidates were completed and the names submitted to Council for formal approval.

I would like to acknowledge the work of Ms. Joan McKinley, in following up on potential candidates and processing the necessary paper required to formalize the nominations. In addition, I would like to acknowledge the work of Dave Ennis and the members of the committee in identifying qualified people as potential representatives on Council. □

Admissions Review Board



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

N.P. Feschuk, *Chairman*

Applicants who meet the educational requirements of the Engineering Profession Act but whose adequacy of work experience to meet the standard is in question are referred to the Admissions Review Board by staff or Council.

The Board, after review, may interview the applicant to obtain details of the applicant's work experience; may request additional references; or may request that the applicant resubmit an application after an additional period of adequate engineering work experience.

Again, the issue of new graduates going to work in organizations that have not in the past employed engineers, or not undertaking work of an engineering nature, has created problems for the Board, which has reviewed applications from several applicants who were unable to obtain adequate engineering experience under the supervision of a Professional Engineer.

In the past year the Board met nine times and considered 32 applications, requests and appeals. Of those, 14 were approved, while the remainder were requested to either supply additional references or reapply after additional adequate engineering work experience had been obtained.

I wish to thank the members of the Board; the other members of the Association who assisted the Board by serving on interview sub-committees set up by the Board; Shirley Matile, Director of Admissions; and other staff members who provided assistance to the Board in its deliberations. □

University Liaison Committee



Members:
M.C. Chaturvedi
P.A. Dalkie
J.G. Hildebrandt
W.R. McQuade
G.O. Ouellette
R.J. Waddell

R.J. Partridge, *Chairman*

The purpose of the University Liaison Committee is to provide liaison between the Council of the Association and the Faculty of Engineering of the University of Manitoba. Our scope includes concerns related to engineering at the University of Manitoba, as well as concerns of the Faculty with which the Association might assist. The Committee is expected to develop positions and to provide recommendations to Council with respect to these concerns.

The issues currently being considered include the following:

1. concern over the potential withdrawal of funding for the Engineering Access Program (ENGAP);
2. review of a draft report on "The Future of Engineering Education in Canada" jointly prepared by the Canadian Council of Professional Engineers (CCPE) and the National Committee of Deans of Engineering and Applied Science (NCDEAS);
3. review of the CCPE Guidelines on "Admissions to the Practice of Engineering in Canada" and on "Promoting Continuing Competence of Professional Engineers", as they relate to the scope of this Committee; and
4. investigation of the possibility of representation of student concerns through this Committee.

In addition to the above, we are in the process of arranging an informal dinner meeting between Council and the Faculty where we can share our views on some of the current issues before us.

We would also appreciate hearing from any Association members regarding any concerns they may have which would come within the scope of this Committee. □

Public Relations Committee

Continued from Page 7

APEM office now has a stock of Spiderman mics prepared by the US National Action Council for Minorities in Engineering. Take some along if you are promoting engineering in an elementary school.

APEM has signed a memorandum of understanding with Industry, Science & Technology Canada to develop a speakers' directory and promote engineering, science and technology in the schools.

The Manitoba Department of Industry, Trade and Commerce is funding the "World in Motion" project initiated by APEM. Posters, booklets and a videotape developed by the Society for Automotive Engineers International, which are considered to be excellent teaching material, are being distributed to schools in Fort Garry for Grades 4, 5 and 6 students. The program needs engineers to augment classroom instruction with reality-based experience. If you haven't volunteered yet, contact Shirley Matile at the APEM office today. □

Council Report

July 8, 1991 *By: B. Newton, P. Eng.*

AT WHICH YOUR INTREPID REPORTER DOES SOME SOUL SEARCHING WHILE COUNCIL SEARCHES FOR MONEY TO "DRESS UP NICE".

I have come to the conclusion that I will never be a proper journalist. You need that cold-blooded killer instinct. Your words should make lazy circles above your defenceless target, like vultures in the searing heat, following the fine, self-righteous, opportunistic, sensationalist tradition of Geraldo, or Gordon Sinclair, or that fellow at the Enquirer who claims to have actually seen the aliens enter Madonna's suite.

What brought about this literary self-evaluation was the news at the start of the council meeting that certain matters were of a sensitive nature and that I should exercise discretion when writing about them, if I didn't actually avoid the topics all together.

Discretion. Diplomacy. Tact. Doing the right thing. Let me tell you something: a suburban upbringing and a sense of moral conscience are no way to prepare yourself for being a Council reporter.

I arrived early (please, it's my job) to pick up the agenda, and immediately settled down with a frothing glass of ginger beer for a good read. I was awakened at 1:00 precisely as the meeting started off faster than the captain of the Oceanic going for the life boat.

As usual, items such as minutes of previous meetings, licenses, registrations and the like were dealt with quickly. Of interest was the 50 or 60 members struck off the register for non-payment of fees. Good news came in the form of the financial statement which projects a $10,000 surplus despite a less-than-anticipated membership number. ($23,000 fewer expenses than budgeted helps!)

Council reviewed its policy towards disciplining members when our Association becomes aware of action against members by other Associations. A 1990 policy decision allows that "where an APEM member is disciplined and sanctions imposed in another engineering jurisdiction, the member will automatically be subject to like sanctions (excluding fines and costs) by the Manitoba Association, unless the member can show cause satisfactory to the APEM Council why such like penalties should not be imposed". A specific case is now being reviewed by Council.

MANSCETT (the Manitoba Society of Certified Engineering Technicians and Technologists) forwarded a proposed Engineering Technology Act to the Manitoba Legislature in March of 1990. The advised purpose is to establish for Technologists a "right to title". Since that time, various meetings have been held and correspondence exchanged between APEM and MANSCETT in an attempt to resolve differences of opinion. APEM feels that "right to title" for technologists would best be provided under revisions to the existing Engineering Act. As discussions are ongoing, I won't go into specifics.

Highlights of the new budget for the Association brought your intrepid reporter back to life. Items which sparked the most discussion involved the Roster and development of a logo for the Association. Under the budget provided to Council, $12,000 was allocated to publish a roster of the membership. The last was published two years ago. Although $6,000 was indicated for development of a logo, no allocation was indicated for this budget.

After some discussion, it was agreed that the roster would be deferred for one year (not dropped) with the logo expenditure brought forward to this budget. The primary purpose of this fiscal juggling appeared to be to ensure that the logo concept not get lost. Much was said of the logo being not a cost, but an investment in our image to the public.

It was at this point that my editorial half awoke from its verbiage-induced slumber. A logo does not in itself solve the tarnished image problem of our profession. It is window-dressing, nothing more, and there is a danger of mistaking image for substance. Hand-in-hand with a logo we should be better defining to the public what engineers do, and encouraging the development of high quality engineers. We should be promoting professionalism through example, and through the strenuous and definitive prosecution of those whose conduct detracts from this professionalism. We should consider increasing the period of apprenticeship from two to four years to ensure that there is no doubt that those who achieve the designation "P. Eng." have the proper training. And we should always remember that we cannot expect to be treated by the public as professionals until we treat ourselves as professionals and conduct our business accordingly.

We must ask ourselves whether this logo is meant as a symbol, such as the medical profession's Staff of Aesculapius, or as a bright and gau advertising tool (suitable for lapel pins and lunch buckets and the kind of plastic patio glasses distributed by your better service stations). If the former, then $6,000 is a small price indeed. If the latter, and the re-building of our professional image dies there, then it is a hollow gesture with a solid cost.

Again I have strayed well beyond the limits of reporting into editorializing (rather like colouring outside the lines — a sloppy and childish habit, but immense fun). I encourage all members to take an interest in Council and in their Association — attend the AGM, read the bulletin (and contribute to it through articles, editorials or letters of rebuttal) and become involved. □

1990-91 Engineering Endowment Fund Awards

With each passing year, the Faculty of Engineering's Endowment Fund continues to grow and to make an increasingly important contribution to activities and facilities. It currently stands at almost $200,000. Interest from the capital account was used this year to fund 11 of 16 proposals submitted to the Engineering Endowment Fund Advisory Committee, comprising four academic staff, three alumni, one graduate student, two support staff and three undergraduate students. The Chairperson is R.H. Russell, P. Eng. (alumnus).

For the 1990-91 Competition, the following proposals were given complete or partial support (approximately $1 was available for every $2 requested).

Title of Project	Amount	Applicant
Instruction Aids - Pavement Design	$ 500	D.H. Shields, P. Eng. A. Clayton, P. Eng. G. Ganapathy, P. Eng.
SYSES Computer Based Support for Teaching Civil Eng. Systems	$2,000	S. Simonovic, P. Eng.
Audio/Visual Sources for Groundwater Program	$1,100	A. Woodbury, P. Eng.
Meeting Point Program	$ 350	B. Stimpson, P. Eng.
Portable PC for Data Collection	$1,000	G.W. Swift, P. Eng. P.G. McLaren, P. Eng.
Effects of Plasma Treatment of Insulators on Their Surface Flashover Behaviour	$3,500	K.C. Kao, P. Eng.
Hydrostatic Bench Apparatus: Fundamentals of Fluid Mechanics	$8,000	B. Lence D. Burn, P. Eng. D. Moore
Great Northern Concrete Toboggan Race	$2,000	J. Anderson R. Brownlee
University of Manitoba Super Mileage Vehicle Group	$3,700	A. Thornton-Trump, P.Eng J. Paulmark A. Ludlam
SPE Technical Paper Microfiche Collection	$1,615	D. Ruth, P. Eng. B. Pinkney, P. Eng. B. Stimpson, P. Eng. N. Godavari
1991 CSME National Student	$ 800	R. Han, P. Eng.

News From Other Associations

: L.Y. Ganetsky, P. Eng.

British Columbia

After almost 41 years, the Civil '50 class picture will take its place on the walls of the Civil Engineering Building at the University of British Columbia. Civil '50, numbering 86 grads, included a great many World War II veterans and was one of the largest Civil graduating classes in the history of the University. The reason for the missing picture has been lost in the sands of time, but after its absence was recognized and the years rolled by into the nostalgia phase, it has become increasingly important to remedy the situation. The only source of grad photos was the 1950 Totem Yearbook which contained 78 members of the graduating class. A fund-raising program was under taken and the project was completed early this year. Civil '50 can now claim a continuing presence in the halls of the Civil Engineering Building and members can show their grandchildren what Grandpa used to look like (sorry, no Grandmas in those days!).

Ontario

The APEO published its membership salary survey recently and concluded that the current recession has had a less pronounced effect on the employment status of APEO members than the 1982-83 recession. Unemployment remained ·nder 1% and salary increases were reported in most areas. Comparing the salaries for recent graduates, female graduates from the past 5 graduating years reported salaries almost equal to their male colleagues. The trend to pay employees additional compensation over base salaries continues. One in three members was compensated for overtime and members who work outside Ontario receive higher than average salaries.

Newfoundland

The 7th Annual Bridge Design & Construction Competition was held March 8, 1991 at Concordia University in Montreal. Twenty-one teams from Engineering schools across Canada and the U.S. participated. The challenge is to construct the strongest and most original bridge using only popsicle-sticks, dental floss, white glue and toothpicks, while respecting the rules governing dimension and weight. This was the first year MUN (Memorial University of Newfoundland) has entered the competition. MUN was successful by winning the overall competition with a bridge weighing only 2.2 lbs. and carrying a load of 550 lbs. before failure. This victory was especially appreciated by all the participants at the event, since it was the first time in the history of the competition that the host team from Concordia University did not win. □

Student Visit To Engineering Office

By: J.W. Bogan, P. Eng.

On June 20, 1991, DS-Lea Consultants hosted eighteen Grade 6 students from Immaculate Heart of Mary School. The students were given a brief exposure to the functions within an engineering office on their "field trip".

During their visit, the students were divided into smaller groups and given engineering demonstrations which included traffic analysis, highway and bridge design, AUTOCAD, surveying, transportation planning, as well as land use and community planning. Wherever possible, the students were allowed to have hands-on experience, especially with personal computers or equipment set up for the display.

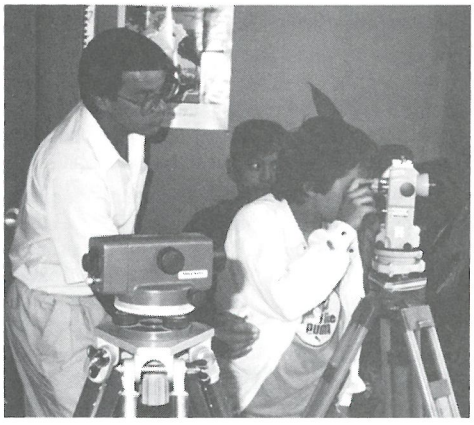




The groups enjoyed the presentations and asked several interesting questions. They all felt they learned something and were surprised that "Engineering was not that boring after all". In preparing the presentations, individuals at DS-Lea were able to remind themselves of their original reasons for selecting engineering as a career, while helping others realize the same interests.

The exercise was worthwhile since it allowed the students to briefly see what engineering really entails. Their initial expectations indicate that there is a need for greater effort by engineers to reach young groups.

Hopefully, this exposure will help them to decide if an engineering career is in their future. □



R & D Committee

Continued from Page 11

The APEM Research and Development Committee has collaborated with the Canadian Construction Research Board (Manitoba Chapter) of the National Research Council of Canada to be a co-sponsor with others to stage a series of seminars on "The Indoor Environment and the Quality of Indoor Life". The series of five half-day seminars for the Manitoba building industry covered the topics of "Space" held on March 22, 1991, "Air Quality" held April 26, 1991, "Light and Colour" held September 27, 1991, "Acoustics" to be held October 18, 1991, and "Controls" to be held November 22, 1991. The seminars, to this date, have been well attended and it is felt that this has been an effective venture to get the technology out to those who need it.

The Manitoba Round Table on Environment and Economy convened a one- day workshop on Sustainable Development on June 26, 1991 at the Winnipeg Convention Centre. The APEM Research and Development Committee presented a brief (through Mr. Ted Glass) which apprised them of our efforts and direction in this important area. Members of the Round Table expressed their appreciation for the excellent presentation and our earnest effort to be leaders in this current and pressing topic.

At the time of writing this report, the committee made good progress in organizing a seminar on "Demand Side Management" (DSM) scheduled for October 2, 1991. This is being organized in concert with Manitoba Hydro, and The Electric Service League of Manitoba.

I would like to express my considerable gratitude to all members of this committee for their energetic, enthusiastic and valued time and experience as well as to Bill Mackenzie, Dave Ennis and Heather Kitchen for all their support and input during the year. Meetings were convened monthly, and in certain instances weekly, to become a most effective committee. □

Coming Events

Seminar -
"STATISTICAL QUALITY ASSURANCE"
Sponsored by: Technical University of Nova Scotia (TUNS)
October 10-11, 1991 Vancouver, B.C.
For further information contact:
Professor H. Ahuja, TUNS,
Halifax, Nova Scotia
Telephone: (902) 420-7510 Fax: (902) 423-9859

One Day Seminar -
"SLABS ON GRADE"
American Concrete Institute (ACI) Manitoba Chapter
Keynote speaker - Armand Gustafero
October 16, 1991
For further information contact:
Michael Hatch, P. Eng.
DS-Lea Consultants Ltd.
Telephone: 943-3178 Fax: 943-4948

Seminar -
"ESTABLISHING EFFECTIVE MAINTENANCE MANAGEMENT IN SERVICE AND INDUSTRY"
October 21 - 24, 1991
University of Alberta - Calgary
Sponsored by Faculty of Extension
Telephone: (403) 492-5532

"BUILDING SCIENCE INSIGHT 91"
Sponsored by Institute for Research in Construction, National Research Council
October 18, 1991 - Winnipeg, Manitoba
For further information contact:
BSI '91 - Technology Access Group,
Institute for Research in Construction,
National Research Council Canada,
Ottawa, Ontario
K1A 0R6
Fax: (613) 954-5984

Seminar Series -
"THE INDOOR ENVIRONMENT"
Seminar #4 - "Acoustics" - October 25, 1991
Seminar #5 - "Controls" - November 22, 1991
Sponsored by the Manitoba Chapter of Canadian Construction Research Board.
Location: Canadian Institute of Industry Technology, 435 Ellice Avenue, Winnipeg
For further information contact:
E. Lach, P. Eng., Secretary
Manitoba Chapter, CCRB
Telephone: 945-6131
Fax: 983-8835

CANADIAN WASTE MANAGEMENT/WASTE TECH '91 CONFERENCE
In Conjunction with National Solid Wastes Management Association, Washington, D.C.
Theme "It's Time For Action"
October 30 - November 1, 1991
Toronto, Ontario
For further information contact:
Susan Clarke,
Technology Development Branch,
River Road Environmental Technology Centre,
3439 River Road South,
Ottawa, Ontario K1A 0H3
Telephone: (613) 991-1956
Fax: (613) 991-1634

Canadian Engineering Human Resources Board of Canadian Council of Professional Engineers sponsoring one day conference
"BRIDGING THE GAP: DEALING WITH ENGINEERING HUMAN RESOURCES REQUIREMENTS IN THE NINETIES"
November 5, 1991, Congress Center, Ottawa
Directed to employers of Engineers. For agenda of meeting and other information contact
APEM 942-6481, or CCPE - G. Lozano - Ottawa 613-232-2474

Canadian Institute of Steel Construction Seminars:
"CONNECTIONS FOR STEEL STRUCTURES" - One Day
"LOW RISE STEEL FRAMED BUILDINGS" - Two Day
November 4-5-6, 1991 - Winnipeg, Manitoba
For further information contact:
B. Williamson, CISC,
Willowdale, Ontario
Telephone: (416) 491-4552
Fax: (416) 491-6461

Call for Papers

FIFTH NATIONAL CONFERENCE ON DRINKING WATER.
September, 1992, Winnipeg
Topic - "Disinfection Dilemma: Microbiological Control Versus Byproducts"
Call closes February 7, 1992
For further information contact:
K. Kjartanson - City of Winnipeg
Telephone: 986-4807
Fax: 339-2147

New Publications

Canadian Standards Association Concrete Technology

"CAN/CSA-A23.1-M90, Concrete Materials and Methods of Concrete Construction"

"CAN/CSA-A23.2-M90, Methods of Test for Concrete"

For further information contact;

Prairie Region C.S.A. Office
50 Paramount Road
Winnipeg, Manitoba
Phone: 632-6633
Fax: 632-1796

The Professional Seal and CAD

Continued from Page 4

can sign the revision. This is not only time-consuming, but it raises the question as to what dating a signature really means. If the design engineer is not available, then the problem remains as to who should seal the drawing.

So what is the solution? The simple one is to treat the original drawing the same way we used to; that is, make manual changes to the original sealed document. But that's clearly counterproductive, since one of the most desirable features of the CAD system is its ability to easily change and regenerate drawings. Should an electronic signature be pursued? Even then, the document will never be secure, regardless of the signature security. Perhaps it is time for the seal use guidelines and code of ethics to address these aspects in a more direct sense.

Whether you've been in this position or not, I urge you to fax or phone your ideas, suggestions, or comments to the Association office. It's time this problem was solved. □

ROSTER UPDATE/CHANGE OF ADDRESS NOTIFICATION

Full Name _____

New Address _____

City _____ Province _____

Postal Code _____ Country _____

Employer _____

Position/Title _____

Bus. Tel. _____ Date Effective _____

Mail to: A.P.E.M., 530-330 St. Mary Ave. Winnipeg, Manitoba R3C 3Z5 or FAX (204) 942-3718