Canadian Nuclear Society
Société Nucléaire Canadienne
111 Elizabeth St., 11th Floor,
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CNS BULLETIN SNC

Vol. 3, No. 2

April/avril 1982



# HOW THE MEDIA SEES THE NUCLEAR INDUSTRY

# CNS ANNUAL CONFERENCE PREVIEW

# CNS BRANCH PROGRAMMES

La Société Technique de l'Association Nucléaire Canadienne
The Technical Society of the Canadian Nuclear Association

The CNS Bulletin is the membership newsletter of the Canadian Nuclear Society.

*Le Bulletin SNC est l'organe d'information de la Société Nucléaire Canadienne.*

CNS provides Canadians interested in nuclear energy with a forum for technical discussion. For membership information, contact the CNS office, a member of the Council, or local branch executive. Membership fee is $25.00 annually.

*La SNC procure aux Canadiens intéressés à l'énergie nucléair un forum où ils peuvent participer à des discussions de nature technique. Pour tous renseignements concernant les inscriptions, contacter le bureau de la SNC, les membres du Conseil ou les responsables locaux. La cotisation annuelle ext de $25.00.*



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**EDITORIAL**

## The View From Outside

Journalists are people too. And they are professionals. Perhaps that was the most important point made at a recent meeting of the Toronto Branch of the CNS. The subject of the news media arouses a wide spectrum of reactions from the nuclear industry, ranging from terror and disgust to patronizing contempt. But the view that characterizes the "news media" as a bunch of rabid wolverines or amiable dolts is as valid as the view characterizing the nuclear industry as a Dr. Strangelove fan-club.

The job of the journalist is to present "the news" to people in a manner which engages their attention and provides as undistorted a view as possible. In general the profession discharges this responsibility well -- though, as Derek Nelson noted, there are "dingbats" in the news business just as there are in all other areas of human activity.

When dealing with subjects which arouse high emotion and involve high technology, such as nuclear energy, journalists need to rely heavily on specialists in the field for information. And they need that information fast and in readily usable form. The intellectual rigour and painstaking modification and qualification that characterizes traditional scholarly discourse is inappropriate to the needs of the news media. To work effectively within the tight space or time constraints of the various news media broad brush treatment is a sine qua non. A detailed blueprint isn't very informative when it can only be glimpsed at a distance for a short time.

It's not easy to discuss one's area of expertise, or hear it discussed, in simplistic and informal terms, but it's something that's going to have to be done if the nuclear industry wants journalists to do their job properly.

It could be argued that the existance of the CNS gives all of us in the business a unique opportunity to provide journalists with information on all aspects of Canada's work in nuclear energy. What is unarguable is that this opportunity will not be realised until we have learned to transmit that information in a timely fashion and a usable form.

## This Issue

Order is gradually emerging, thanks in very large measure to our newly-joined production editor, David McArthur. David will be no stranger to readers of the CNA's Nuclear Canada, which publication he very ably keeps on track as Assistant Editor. And the Bulletin will be able now to pay more than lip-service to Canada's

other official language with the Royal Military College's Hugues Bonin as Associate Editor. Hugues introduces himself next in this section. This issue of the Bulletin introduces what we hope will become a regular feature -- the publication of lectures given at the various Branch meetings. While it's true that not all branch meetings will produce material appropriate for publication in its entirety we hope all branches will send us as much as they can.

**Message du rédacteur associé/Message from the Associate Editor**

Permettez-moi d'utiliser ces quelques lignes du Bulletin pour me presénter en tant qu'éditeur associé, et offrir mes services aux membres de la Société Canadienne d'Energie Nucléaire (i.e. Société Nucléaire Canadienne). Je suis un diplômé de l'Institute de Génie Nucléaire (4$^{o}$ génération) et présentement à l'emploi du Ministère de la Défense, à titre de professeur en génie nucléaire au Royal Military College de Kingston.

A la demande du Dr. John S. Hewitt, Vice-Président de la Société et Président du Comité des Communications, je collabore au Bulletin depuis l'automne dernier; l'article sur la Deuxième Conférence Mondiale de Génie Chimique étant le premier article d'une série qui devrait en compter un grand nombre, j'y compte bien.

Je vois mon rôle d'éditeur associé du Bulletin comme étant triple: tout d'abord, je compte promouvoir le français pour une bonne partie du Bulletin, ne serait-ce que par la traduction de l'information la plus importante. Un second champ d'action consiste à susciter des articles en français auprès de membres de la société et aussi auprès de personnalités francophones qui ne sont pas nécessairement membres. Enfin, il semble évident que l'éditeur associé du Bulletin serve de liaison entre le Bulletin et les chapitres francophones de la Société. C'est ainsi que de fréquents contacts seront effectués avec le Chapitre Québec de la Société.

Susciter des articles en français peut être une tâche facile ou difficile, selon l'enthousiasme des membres. L'éventail des situations va d'une pluie d'articles spontanés jusqu'à la désignation de "volontaires - auteurs". Evidemment, il est très souhaitable que les articles m'arrivent de façon spontanée. La lecture des Bulletins émis jusqu'ici donne une bonne idée des sujets qui peuvent être traités dans un article. Personnellement, je vois certains domaines du génie et de la science nucléaires qui pourraient même faire l'objet de chroniques régulières. Par exemple, nous pourrions avoir au Bulletin une section "Sur la Colline Parlementaire", où des membres de la Société pourraient nous faire part des "sombres tractations" des politiciens quant

au nucléaire. Je crois que, du côté francophone, le Chapitre Québec pourrait identifier parmi ses membres quelques experts en politique québécoise qui pourraient faire de fréquents rapports sur l'activité parlementaire pertinente au nucléaire. Le Chapitre Ottawa pourrait faire de même sur la scène fédérale, et le Chapitre Toronto pourrait alimenter cette chronique grâce à ses experts en politique ontarienne.

Une autre classe d'articles que je verrais très bien au Bulletin incluerait des textes sur l'enseignement du génie nucléaire au Canada. Personnellement, je me propose d'écrire bientôt un court article sur le génie nucléaire enseigné ici au Royal Military College de Kingston. J'espère qu'il sera suivi par d'autres articles semblables écrits par des professeurs d'autres universités canadiennes, de manière à ce que tous sachent qui fait quoi à tel endroit. D'autres articles de même nature pourraient décrire certaines méthodes d'enseignement originales pour certains domaines du nucléaire, ou encore décrire des programmes d'expériences de laboratoire, etc.

De plus, j'aimerais voir des articles destinés à provoquer la discussion, sinon la controverse. Ces articles pourraient, par exemple, être de nature iconoclaste, où l'auteur tenterait de détruire certains mythes sur l'utilisation de l'énergie nucléaire. Enfin, si vous avez des annonces à faire paraître dans le Bulletin, sur des rencontres, assemblées, conférences, visites, etc, veuillez bien me les faire parvenir pour publication.

Est-ce que les articles écrits en français doivent être traduits en anglais? Sur cette question je laisse totale liberté à l'auteur de l'article. S'il désire une traduction anglaise, il peut la fournir avec son texte, ou encore, je me ferai un plaisir de traduire le texte en anglais si ce désir m'en est exprimé. Une alternative pourrait aussi être d'écrire un résumé du texte en anglais. Voici donc mes vues sur mon rôle d'éditeur associé du Bulletin, et j'attends vos suggestions et commentaires.

I would like to add an extra paragraph for the English-speaking members of the CNS. As Associate Editor of the Bulletin for the French-speaking members, I would like to obtain articles from those members, as well as from the anglophones, in order that the Bulletin truly reflects the bilingual nature of Canada. Since my position is that French language articles published in the Bulletin should be accompanied by an English résumé, if not a full translation, it is my intention to leave to the authors entire freedom as to the choice of the language of their articles. In this spirit, I would like to offer my services to translate in French their English articles if they wish to have them published in French as well as in English in the Bulletin. Also, I could write a French résumé for those who would desire so.

Pour ceux qui se posent des questions sur l'appellation "Société Canadienne d'Energie Nucléaire" pour notre société, ceci est pour respecter les désirs du Dr. Hewitt, vu qu'il semble y avoir un litige présentement avec une société d'ingénierie québécoise dont la raison sociale utilise les initiales "S.N.C.". Comme l'appellation "Société Canadienne Nucléaire" m'apparaît quelque peu boîteuse, j'en profite ici pour suggérer l'appellation "Société Canadienne d'Energie Nucléaire" (SCEN). J'attends vos commentaires. Avant de terminer, permettez-moi d'offrir, au nom de l'équipe du Bulletin, mes plus sincères félicitions à M. Laurent Amyot, pour sa récente nomination au poste de Vice-Président Corporatif, Région Québec, à l'Energie Atomique du Canada, Limitée.

J'attends donc vos articles, annonces, et commentaires. Mon adresse est:

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**Hugues W. Bonin**

**PERSPECTIVE**

Derek Nelson is a Queen's Park-based columnist for Thomson News Services. His column reaches newspapers across the province of Ontario and has earned him a justified reputation as an outspoken, accurate and exceptionally well-informed writer on energy and environmental issues, particularly in the provincial political context. One of Derek's major concerns is the nature of the relationship between science and technology, politics and the news media and the effects of that relationship on decision-making. His talk "The Nuclear Industry and the News Media: A Critical Review" was presented to the Toronto Branch of the Canadian Nuclear Society March 31.

## The Nuclear Industry and the News Media

Three years ago, at Three Mile Island, the nuclear industry committed the corporate equivalent of suicide.

Back then GPU acted, in public relations terms, with all the finesse of a horde of berserk Vikings loose in a monastery. So what has changed in three years?

I give you one impression I received on the eve of the third anniversary of the nuclear industry's painful coming of age. It was American TV, and at least one Canadian network picked up the feed. I use it as an illustration of aspects of the news business.

The information given was relatively factual in itself -- perhaps excepting the use of the phrase indicating TMI was an accident that "nearly resulted in a disastrous meltdown." You might groan about that, as being sloppy and inexact reporting -- but the fact of the matter is that this is the kind of thing one must always face -- even from your friends. You have to describe the incident somehow, and thanks to the "China Syndrome" the word "meltdown" is now part and parcel of the common vocabulary as a "worst possible case accident" for a nuclear plant.

Admittedly, the choice of the word "disastrous" by the reporter, was likely included strictly for emotional purposes, to emphasize the idea that TMI was a major incident that came that close to real disaster. (In popular context, actually, meltdown and disastrous as linked words seem redundant.)

Back to the TV. After a short introductory statement the background scene of the two plumeless cooling towers dissolved to two talking heads, a husband and wife with a delightful child bouncing between them. The focus of the following conversation was of one frightened family whose fear of consequences from the accident were so great they made considerable financial sacrifice to flee Harrisburg for the safety of crime-ridden Atlanta. The

woman even said, without being prompted, that she had been trying to get pregnant again and could not, and wondered if radiation from TMI was to blame.

Now I give you a number of points about this story: First, the woman cannot be taken to task for her fears. Her knowledge of low-level radiation is probably a product of what is acquired in a spotty way through the media. Her fears are legitimate within the context of what she understands.

The report itself, excepting perhaps the word "disastrous", was quite fair. But what was unfair and very biased was the choice of this particular woman as a subject from among hundreds of thousands in the Harrisburg area. Simply by the fact she is moving away, while almost everyone else is not, indicates how non-representative she is.

Fine. But now we come to the question of why her story is chosen as one that will play on TV. There are several possibilities.

One that the nuclear industry might like to believe is that we have some "econut" behind an editor's desk somewhere who said to the reporter "do me the nastiest third anniversary item you can find on TMI." But such deliberate, conscious bias is rare in our business.

Rather, there is a mind set about nuclear -- maybe it should not exist, but it does -- and the simple fact is the industry has to live with it. The mind set, or bias, if you prefer, accepts that TMI was a near-disaster -- whether it was or not.

Within those terms an editor -- who wants human interest response and not some dry technical nonsense -- is going to go for the person upset about what happened at TMI as opposed to the person who says "so what?" Nothing happening may be a story in theory. In practice it ain't.

So they dug up this person and did the interview. I have no troubles with that -- and I say that knowing such an approach would not be one that I would adopt. To me the real story is how needless fear has disrupted thousands of lives both psychologically and financially.

Still, a legitimate angle was chosen, an angle that had a human dimension, spoke of conflict and personal sacrifice, an angle that was punchy and conveyed a message.

Now, at this point I can raise what I would call a justifiable complaint about the report. There was not a single bit of hard news in the item -- in particular there was no indication of how much radiation that woman could possibly have been exposed to,

based on the location of her house, work, and travel patterns. If one is going to air speculation such as her failure to become pregnant being a consequence of radiation -- which we all know in this case just could not be -- then it is incumbent on the reporter to put that into perspective.

It was not done. I personally have no idea why, but I can make some guesses. The most obvious, and again the one the industry would like to hear, is that the reporter deliberately slanted the story. Maybe. It is possible. Our business has its share of dingbats.

But it could be the editor had several assignments lined up for the reporter that day, and said something like -- get out and get that TMI thing. Keep it soft. You have to be over at city hall at 2 p.m. for the ribbon-cutting.

In short, no time. This is a profession of instant thought and instant comment.

Another aspect of no time: perhaps the reporter did have the opportunity to call up GPU and ask what likely dose of radiation the woman received three years ago. The local PR type may have said at that point, "We'll have to check that out" and "I'll get back to you."

Of course, the reporter's deadline is in two hours and the GPU flack is on the phone six hours later. Remember, the reporter has to go out to the woman's house, interview, tape, back to the station, do his voice-over, edit -- probably do other stories -- and have it all together for the six o'clock feed.

There is a rule here about the media: get the information to them quickly. The failure to do so is an industry problem, not a media problem.

Let me go one step further. Assume the relevant information was passed on to the reporter, who then chose not to use it. I can guess why. It would likely be couched in some incomprehensible lingo about "rem dosage per manhour" or equivalent. Nice and technically accurate, based on wind patterns and discharge times, but useless for media purposes because it is meaningless to the man on the street.

Tell me instead that she took the equivalent dosage of flying to where she's moving -- Atlanta -- six times.

Too many people in the nuclear business don't have sloppy minds, and that's fine when it comes to calibrating reactors, or whatever it is you do with them -- but it is useless for our purposes. We are not engineers, and while sloppy minds is a trifle exaggerated,

it is a fact that our profession attracts people who often think in analogies. They try to reduce concepts to the widest possible level so the maximum number of people understand what is being said.

Now that may affront some who prefer the purity of rems to something comprehensible, but again that is a nuclear industry problem, not something the media has to worry about. The complex must be reduced to the simple.

People use English -- not mathematical tables. The heavy use of reasonable analogies is not only wise, but once the principle is grasped it becomes obvious to anyone that there is nothing magic about communicating.

Let me give you a specific example: when NPD released a bunch of tritium (I don't remember the technical term -- which in itself proves something) into the Ottawa River, defenders of the action used phrases like "acceptably low" levels. They were talking about radioactive tritium that was entering water that flows into thousands of households along that river bank. And "acceptably low" or not, that's scary.

David Mosey at Hydro, when asked what that meant, said, "Hell, I would have sat in that water for the period of the release and drunk it."

I understand some concern has been expressed about that statement, its rather untechnical phrasing -- but in fact that is the name of the game. What Mosey said produced a pithy quote (something we in the media all love) put the release in perspective (which we often try to do) and deflated scare stories about the release simultaneously. And I don't know or care how many rems you were talking about.

You'll note here that what we are dealing with is an impression, an image, in every case. An engineer might groan over the description, but I know what it means. And so will most people.

Moreover, reporters like people who talk in zippy generalities, and frankly, linking your source never hurts the source's case.

But again to return to the TMI piece. What was transmitted on the airwaves was essentially a confirmation that a disaster was narrowly averted, some people suffered anyway, and nuclear power in general, and radiation in particular, remain dangerous.

What the industry appears not to understand is that the name of the game is propaganda -- not facts -- and that perception is reality. Impressions are what lodge in the public mind, not firm data. And until the nuclear industry learns to play the game with

the same skill as the other players -- I was going to say enemies, because there are some in the media, but most reporters are just interested in a good story -- the tide will continue to flow against it. It is a game -- I cannot emphasize that enough -- not in its essence, but in the fact it is played as such and you have to learn the rules.

Here's another rule -- speak in plain English, even at the price of a good deal of precision. Just so long as you don't lie or mislead. That always gets you caught.

The nuclear industry must learn to think like your average non-involved citizen, who never gives a thought to the fact the light switch he or she turns on may work because a nuclear reactor somewhere is functioning. Think like your enemies. Use the media.

I will give you another example of how perception is reality, and it involves Ontario's first nuclear disaster exercise -- or whatever it is called, I forget. The person responsible for media relations arrived at 4 a.m. -- clean-shaven and immaculately dressed in suit and tie -- that ain't the way you impress the media that the exercise was being taken seriously. In fact, you make them positively antagonistic, since some of them probably climbed out of beds, pulled on clothes and raced to the scene without benefit of anything but a cigarette or eight.

TV is tops in terms of perception, but it is important to make the print media understand what is happening in any particular incident. It is not that print is more important in conveying impressions to people -- every poll suggests the opposite, that TV is the most trusted and most used medium -- but too many in the electronic media continue to rely upon print for the starting point of their impressions. And print people have a little more time and space.

Treat the media like what they are: your neighbours doing a job, a little harried by editors, rushed by deadlines, worried about their finances and their relationships -- they're people, not demons. True, we have the usual quota of dolts and glory-seekers, head-hunters and twisters -- so common sense dictates a certain degree of caution in how one frames the words used to transmit information to a reporter in response to a question. Don't joke with the unknown.

Let me repeat -- never lie. But don't be lied to either. Don't be led where you don't want to go.

Let me turn to an example of how someone or several people handled one incident properly, at least from the print end. I didn't see what television did, but they -- as I said -- often take our lead.

The initial stories followed the usual pattern: the Toronto Star, page 1 headline read "more death from radiation, industry fears". Negative. Biased. Whatever. But reasonable in the context of the story. Within the terms of our industry it was legitimate.

But later stories were much better. All pointed out the essential fact -- that the risk to life and limb in the nuclear business, whether from radiation or anything else, is way below the risk level in other industries.

Moreover, someone made available people like Alex Sandula, a non-nonsense, down-to-earth type person who caught 300 rems on his bare hands and shrugs it off.

But another point should be made here too. No-one tried to hide anything. It was all open. And that's another rule. Honesty works in the long run. Being defensive is foolish -- reporters pick up on mood really quickly.

Act upon the circumstances, as was done in this case. Don't react. Raise the point first. Learn what we look for. It really is your job to steer us, rather than ours to take off your blinders. Thank the guy who does a good job. Don't just carp like so many, or attack those reports you dislike and ignore the neutral or favorable.

I repeat, though it may sound like trivializing the important, the key to success in the media game is to realize it is a game, with winners and losers, tie scores and all the rest. There is no reason the nuclear industry has to continue to play like the Maple Leafs.

**Derek Nelson**

**FYI**

**Saving rivers: CANDU can do** (Moira Farrow, Vancouver Sun)

Anyone foolhardy enough to say something positive about nuclear power these days risks the wrath, scorn and ridicule or armies of Jane Fondas. But that's not a risk worth worrying about. Some serious discussion about the use of nuclear power in this province is long overdue before the last of our rivers is dammed to death.

Both the government and BC Hydro assume that every British Columbian prefers hydro power to nuclear power, and so the non-stop assault on our rivers is projected to continue until we run out of suitable rivers. Only then, apparently, will nuclear power be very reluctantly considered. But why?

The answer, of course, is political. Nuclear energy has acquired the popular appeal of the plague. Any government in North America that advocates nuclear plants is courting political suicide. The anti-nuclear movement is always ready to orchestrate massive protest parades if any government so much as whispers the word CANDU. It's all so irrational and ridiculuous. Nuclear technology is not going to go away. All the wishing in the world cannot turn back the clock or stop scientists from thinking.

But what we can do is use the positive results of technology and reject the negative. I have no difficulty whatever in condemming nuclear weapons and advocating nuclear energy. I'll take part in any kind of protest march against the nuclear arms race on both sides of the world. But count me out on any demonstration against nuclear energy. I consider a CANDU reactor to be far more desirable than a hydro-electric dam. But that doesn't mean I'm in favour of dropping nuclear bombs on babies -- although that's what the opponents of nuclear power would have one believe.

It's time to consider a CANDU plant in BC -- if any government has the guts to do so -- because BC Hydro has a master plan to dam virtually every river in this province. The Crown corporation announced recently that it would like to apply as early as next year for an energy project certificate for its five-dam project on the Stikine and Iskut Rivers in northwestern BC. Look what has happened already to the rivers of this province. There are dams on the Peace, Columbia, Kootenay, Pend Oreille, Campbell, Bridge, Puntledge, Jordan and Cheakamus. Not only do dams ruin the natural flow of a river and interfere -- or wipe out -- its fish, they also flood valley bottoms to create huge reservoirs. It's just not possible, even with the best will in the world, to love a reservoir as one loves a lake.

Many environmentalists believe conservation, and other sources of energy, including solar and wind power, can provide all the electricity we'll need. How I hope they're right. But even if they are, unless conservation of energy is legislated into our lives -- and maybe it should be -- we will certainly need more electricity than we produce now. Short of building a wall around the province, we can't keep our fellow-Canadians from moving west and turning on more lights. And that, of course, is why we should be considering the best nuclear technology in the world, which happens to be the made-in-Canada CANDU reactor. One of these years we will run out of rivers and have to turn to nuclear energy. Instead let's do it now -- and save our remaining rivers.

Governments are far too easily intimidated by lobbies and the anti-nuclear energy faction is immensely powerful. That's why the nuclear industry is on the ropes in North America. It seems madness that our own CANDU technology is being exported while at home in Canada it's unacceptable outside Ontario.

It's time we did some heavy thinking about the sort of province we want to live in during the next century. If we want it to be as beautiful as it is today, then we have to change our minds about nuclear energy.

**Three of five Plants Shut Down** (UPI-New York Times)

Three of the five active nuclear power plants in New York State are out of action now because of leaks involving radioactivity. A spokesman for the state's Public Service Commission said that the loss of about 6.5 per cent of the state's total generating capacity was not expected to bring on power interruptions.

Like Indian Point 3, Rochester Gas and Electric's Robert E. Ginna plant near Rochester was shut down in January because it vented radioactivity into the air. The third plant -- Niagara Mohawk's Nine Mile Point 1 near Oswego, which was shut down late March while undergoing start-up tests -- could be off line for up to a year, according to a spokesman for the utility.

**Bruce Unit 2 Retube Completed** (Staff)

The unique "repairability" feature of the CANDU reactor design was demonstrated convincingly in early March. Unit 2 at Ontario Hydro's Bruce "A" Nuclear Generating Station was shut down February 9 when D20 was detected in the unit's annulus gas system (ironically enough the shutdown coincided with a provincial emergency exercise based around a notional accident involving the Douglas Point reactor). The leak was located in fuel channel X-14 and identified as a 0.6 in. (15 mm) long crack in the rolled joint area of the pressure tube.

An intensive period of planning and rehearsals (involving over 70 people at the site and in Toronto) culminated in replacement of

the leaking tube by March 11. A sample of the failed tube has been sent to the Chalk River Nuclear Laboratories for examination and it's expected that this will confirm the suspicion that the crack was the result of high residual stresses in the tube wall. Similar cracking required the replacement of a total of 69 pressure tubes at Pickering Units 3 and 4 in the mid-seventies. Exhaustive examination of all tubes in Bruce-2 revealed no other cracks.

**TMI Update** (Staff)

In six months -- three months ahead of schedule -- most of the contaminated water from the TMI-2 containment building has been processed by the submerged demineralizer system. According to GPU spokesman John Fidler, only 5 in. depth (about 30,000 gallons) of contaminated water remain in the building, and this will be taken care of as soon as design of a smaller pump assembly to get closer to the floor is completed. But as seems to be all too usual, the biggest barriers to rehabilitation of the reactor remain financial and political rather than technical. "We believe we've demonstrated we can do the job" Fidler said "and we know we've got, or can get, the equipment and people to complete the job, but we just don't have the dollars." But there may be a gleam of light on the horizon. A bill brought before the US Senate Committee on Energy and Natural Resources to mandate industry participation in a cost sharing program proposed by Pennsylvania Governor Thornburgh, has received support from both Democratic and Republican committee members.

GPU is also wrestling with the problem of tube corrosion in the Unit 1 steam generators. About 150 tubes have been plugged, and plans are in train to re-roll between 8 and 10 thousand other tubes affected by corrosion on the primary side. This should be complete by November this year, so there is no technical reason, Fidler notes, why Unit 1 shouldn't be able to restart by the end of 1982.

**Gentilly 2 and Point Lepreau Get Fuel Loading Authorization** (Staff)

The Atomic Energy Control Board announced March 26 that Hydro-Quebec and the New Brunswick Electric Power Commission have been authorized to load fuel into their 600MW CANDU units. A major step in the Control Board licensing process, this authorization permits commissioning tests with full fuel load while the reactor must be maintained in a guaranteed shut-down state.

**"I have a dream..."** (Staff)

"Three Mile Island could have been prevented" says Larry Arnold, director of Harrisburg, Pennsylvania's Para-Science International, quoted in the latest edition of Omni magazine. Months before the accident as many as 30 people experienced the same prophetic

nightmare, in which they saw the cooling towers of TMI glowing deep red, with lightning crackling all around". The article continued: "to help future nuclear disasters, PSI has set up a hotline (717-236-0800). Should Larry Arnold notice an inordinate number of psychic warnings... he'll alert the relevent nuclear plant manager and request a shutdown".

Bulletin staff, excited by this novel (and, it would seem, economical) approach to reactor safety, contacted Ernie Siddall of Atomic Energy of Canada Ltd. "This is a breakthrough of the utmost importance" Mr. Siddall said, adding "it certainly deserves immediate consideration and detailed investigation by the Atomic Energy Control Board. And while they're doing that they might be able to suspend their interference with the efficient operation of the nuclear industry".

Hugh Spence of the Atomic Energy Control Board was equally enthusiastic. "Of course we have to pay attention to any new development of this magnitude" he said. "We'll be giving it a great deal of thought and will probably be giving out a large research contract. In fact this contract will have the same magnitude, and be given the same priority, as the one investigating the implications of radon releases from freshly ploughed fields". Bulletin staffers also called the manager of the Pickering Nuclear Generating Station to tell him of their nightmares and request a plant shutdown. They were unable to record his response.

**Did the Greeks have a word for it** (Staff)

The scene was the meeting of the Toronto Branch of the CNS. The speaker, columnist Derek Nelson, was fielding questions, mainly concerning how one could provide the news media with information that was at once simple and essentially correct. Then a rather earnest looking young man suggested "isn't this really a matter of issue management?" The existential purity of this question temporarily stunned the Bulletin reporter (and, it seemed, most of the audience) but after jaws had been replaced and eyes unglazed, Bulletin staff decided to approach the question of "issue management" more systematically. Is the term just another deplorable neologism? the product of a disordered mind? the latest lexical assault by some undercover linguistic terrorist squad? The Bulletin has formed an ad-hoc Committee for the Review of Arcane Phraseology to study the question. Any reader who can throw some light of "issue management" is urged to contact the Bulletin editor. All contributions will be published (subject only to editing to ensure conformity with existing laws on libel and obscenity).

**CNS NEWS**

**Annual Conference**

Our third annual conference will be on Wednesday, June 9 following the CNA Conference, June 6-8, at the Royal York Hotel, Toronto.

The afternoon plenary session, "The Role and Qualification of Nuclear Plant Operators - A Reassessment", will be prepared for open discussion by introductions from a panel of speakers representing Canadian and US utilities and Canada's Atomic Energy Control Board. These key people will outline their views on the challenge to nuclear power plant operations posed by the management and development of highly trained operator workforces.

Lured by coffee and a danish, CNS members will be able to take part in the early morning business meeting. The agenda will include the election of officers and presentation of the years financial statement. This is the members opportunity to present their concerns to the executive and members at large.

Professor Umberto Columbo, guest speaker at the luncheon session, will discuss "The Future of Electricity in the Economy and Society". Currently, Prof. Columbo is president of CNEN, the Italian Atomic Energy Commission. He is the author of over 120 papers on geochemistry, materials science and industrial chemistry. His writing extends to books on energy policy and co-authorship of the Club of Rome's report, Beyond the Age of Waste (1978). With this background, it is clear we can look forward to an informative and exciting commentary on the energy future.

Technical sessions will be held morning and afternoon. Forty high quality papers will be presented in four parallel sessions. All the technical divisions of the society are well represented by papers covering a wide variety of topics.

Dr. Dan Meneley, Ontario Hydro's Group Manager, Nuclear - Design and Development, is the conference chairman, and will close the conference at the end of the plenary session about 5:15 p.m.

**P. J. Armstrong**
**Conference Organizing Committee**

## CNS BRANCH PROGRAMMES

### Manitoba Branch

The Manitoba Branch continues to hold technical meetings at Winnipeg and Pinawa, while at the same time attempting to increase our membership. The April 13 meeting in Winnipeg will feature a presentation by Mr. Gary Simmons on "AECL'S Underground Research Laboratory." Our previous meeting, in Pinawa, which included an interesting presentation by Dr. Nash Soonawala on "Uranium Exploration in the Canadian Shield" was well attended.

In our continuing effort to present talks on a wide variety of topics, we are considering such topics as remote repair technologies, nuclear medicine, nuclear safeguards and non-proliferation. Some members of the branch are also assisting with the organization and planning of the International Waste Management Conference coming up in Winnipeg this September.

**Ernie Card**

### Toronto Branch

At the March 31 meeting of the Toronto Branch, Derek Nelson of Thompson News Services gave us an insight into the relationship between the "media" and the "nuclear industry" (two pretty generalistic terms). In his assessment of the industry's ability to communicate effectively with reporters he made the following points:

- -the nuclear industry has not been "singled out" by a news media conspiracy;
- -the industry's successes don't get much coverage because these events aren't "news" - just the industry doing the job it's paid to do;
- -we must recognise the needs of a reporter for instant information - they have deadlines which cannot be adjusted to allow for "corporate policy statement formulation";
- -reporters need our help in putting the "complicated" nuclear stories into the "simple" language used by the news media.

Future Toronto Branch events include a talk by Chalk River's Archie Robertson on preventing weapons proliferation (20 April) and a discussion of overseas reactor sales by John Boulton on May 20.
We are currently preparing the fall programme, and the Branch executive would welcome suggestions from members. Please contact Dave Jefford (592-2853) with your ideas.

**Arthur Guthrie**

## CONFERENCES & MEETINGS

### Course on Reliability Assessments of Nuclear Facilities

Sponsored by the CNA, to be held in Toronto, May 17-21. Further information from the Canadian Nuclear Association, 111 Elizabeth Street, 11th Floor, Toronto, Ontario, M5G 1P7.

### 22nd Annual International Conference of the CNA

Sponsored by the CNA, to be held in Toronto, Ontario, June 6-8. Further information from the Canadian Nuclear Association, 111 Elizabeth Street, 11th Floor, Toronto, Ontario, M5G 1P7.

### 3rd Annual Conference of the Canadian Nuclear Society

Sponsored by the CNS, to be held at the Royal York Hotel, Toronto, June 9. Further information from Dr. D.A. Meneley, Ontario Hydro, 700 University Avenue, H16A3, Toronto, Ontario, M5G 1X6. Also, see **CNS NEWS** section of this Bulletin.

### Human Factors in Control Room Design and Operation

The Human Factors Assocation of Canada in conjuction with the Canadian Nuclear Association will be holding a one-day conference at Toronto's Constellation Hotel, June 23, 1982. This conference is aimed at improving the communication between those involved in nuclear design and operations and human factors practioners. It is hoped that people in the nuclear business will gain a better understanding of what human factors can offer them, while those in the human factors area will learn something of the problems specific to nuclear design and operations.

Nuclear plants are increasing in size, and reactor safety systems are increasing in complexity to meet expanding regulatory requirements. An important element in maintaining the nuclear industry's enviable record of safety and reliability lies in continuing to develop the application of human factors considerations to design and operations. While oriented towards the nuclear industry, the conference should be of interest to operations people in a variety of industries, as well as designers coping with questions involving the man-machine interface. To find out more about this opportunity to take part in a stimulating exchange of ideas and experiences call:

**The Canadian Nuclear Association, (416) 977-6152, or**
**The Human Factors Association of Canada, (416) 675-2235.**

**International Meeting on Thermal Nuclear Reactor Safety:**

Sponsored by CNS, ANS, ENS and JAES, the meeting will be held at Chicago, Illinois, August 29 to September 2, 1982. Further information available from Jan B. van Erp, Co-Chairman, Technical Program Committee, Argonne National Laboratory, Bldg. 208, Argonne, Il 60439.

**Uranium '82**

In conjunction with the Canadian Nuclear Association the Hydrometallurgy Section of the CIM Metallurgical Society is holding its 12th Annual Hydrometallurgical Meeting at the Royal York Hotel, Toronto, from August 29 to September 2, 1982. The theme of this year's meeting will be "uranium". Papers drawn from industry are devoted to practical aspects of the nuclear fuel cycle. International speakers from many of the world's uranium-oriented companies will present practical operating papers on the preconcentration and milling of uranium ores, yellowcake refining, reactors and waste management. Also, plenary sessions reviewing world milling practice, world refining practice and the demand for uranium and metallurgists have been organized. As has been the tradition at past meetings, emphasis will be placed on informal discussions, allowing metallurgists an opportunity to meet with others in the profession. Post-conference tours to visit Ontario Hydro's Pickering Generating Station, Eldorado Nuclear Ltd's Port Hope uranium refining and conversion facilities, and the mines and mills of Elliot Lake have been organized. For information contact:

**Dr. I. J. Itzkovitch**
**Eldorado Nuclear Ltd.**
**400-255 Albert Street**
**Ottawa, Ontario, K1P 6A9**
**Phone: (613) 238-5222**

**International Conference on Radioactive Waste Management**

An International Conference on Radioactive Waste Management, sponsored by the Canadian Nuclear Society, will be held in conjunction with the Annual Information Meeting of the Canadian Nuclear Fuel Waste Management Program on September 12 to 16, 1982 at the Winnipeg Convention Centre, Winnipeg, Manitoba. The object of this conference is to present all aspects of the Canadian Waste Management Program in an international context. For additional information please contact the **Canadian Nuclear Society, 111 Elizabeth Street, Toronto, Ontario, M5G 1P7 or phone (416) 977-6152.**

## Decontamination of Nuclear Facilities

Sponsored by the CNS, the CNA and the ANS the conference will be held at Niagara Falls, Ontario, September 19-22, 1982. Further information from Eric LeSurf, London Nuclear Services Inc., 2 Buffalo Avenue, Niagara Falls, N.Y. 14303.

## "Materials in Nuclear Energy" Conference

Sponsored by the CNS and the Canadian Council of the American Society For Metals (CCASM). The conference will be held at Huntsville, Ontario, September 29-October 2, 1982. Further information from Derek O. Northwood, Dept. of Engineering Materials, University of Windsor, Windsor, Ontario, N9B 3P4.

## POSITIONS AVAILABLE

**Faculty Positon in Nuclear Engineering**
**Department of Engineering Physics**
**McMaster University**

Applications are invited for a tenure stream appointment at the Associate Professor level with a starting salary normally in the range of $27,000 to $40,000. Candidates should have a Ph.D. in Nuclear Engineering, or a related Engineering or Science field, with several years experience in the area of Nuclear Engineering and be committed to teaching and experimental research in areas central to this discipline. Industrial experience would be desirable. Major experimental facilities at McMaster University consist of a 5MW Reactor, high energy particle accelerators together with general facilities of large nuclear and materials research centres. Some university funding will be made available to the successful candidate to help establish a research programme. Send a detailed description of current research interests, curriculum vitae, and the names and addresses of three referees to Dr. D. A. Thompson, Chairman, Department of Engineering Physics, McMaster University, Hamilton, Ontario, Canada L8S 4M1.

Canadian Nuclear Society
Société Nucléaire Canadienne

111 Elizabeth St., 11th Floor,
Toronto, Ont., Canada M5G 1P7

☐ Request For Further Information
(Complete Only Name and Address)

☐ MEMBERSHIP APPLICATION

A. PERSONAL DATA:

Surname: _____ Given Names _____
(underline name used)

Indicate desired mailing address in one of the check boxes:

☐ Home Address: _____ (Street) _____ (City) _____ (Province)

_____ (Postal Code) _____ (Phone Number)

☐ Business Address: _____ (Street) _____ (City) _____ (Province)

_____ (Postal Code) _____ (Phone Number)

B. MEMBERSHIP DATA:

Employer _____

Business Title (if applicable) _____

Please list any Technical or Scientific Societies, Institutes and Professional Associations of which you are a member.

_____ _____

EDUCATION

| University, College Institute, etc. | Discipline | Degree/Diploma | Date of Degree or Diploma |
|---|---|---|---|
| | | | |
| | | | |

Your Association with Nuclear technology

_____

Please indicate the one or two CNS Technical Divisions most accurately reflecting your interests.

A. Nuclear Science . . . . . ☐
B. Design and Materials . . . . . ☐
C. Mining, Manufacturing and Operation . . . . . ☐
D. Environment, Health and Public Affairs . . . . . ☐

Are you interested in attending local Branch events? ☐ Yes ☐ No

Are you willing to serve as an executive on Canadian Nuclear Society Committees?

| | | |
|---|---|---|
| Administration | ☐ Yes | ☐ No |
| Technical Division | ☐ Yes | ☐ No |
| Branch | ☐ Yes | ☐ No |

Previous experience on Committees:

_____

_____ _____
Date (Signature of Applicant)

Language for correspondence _____

C. FEES:

**MEMBER: $25.00 for Calendar Year - January 1 to December 31.**
**STUDENT: $ 5.00 for Calendar Year - January 1 to December 31.**
**Cheque payable to: CANADIAN NUCLEAR SOCIETY**

Canadian Nuclear Society
Société Nucléaire Canadienne

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☐ Demande pour de plus amples renseignements (Noms et adresse complets)

☐ Demande d'adhesion

A. RENSEIGNEMENTS PERSONNELS:

Nom de famille: _____ Prénoms: _____
(soulignez le prénom usuel)

Cochez la case appropriée pour l'adresse où vous désirez recevoir votre courrier:

Adresse au domicile: _____ (rue) _____ (ville) _____ (province)

_____ (code postal) _____ (numéro de téléphone)

Adresse au bureau _____ (rue) _____ (ville) _____ (province)

_____ (code postal) _____ (numéro de téléphone)

B. RENSEIGNEMENTS PROFESSIONNELS:

Employeur: _____

Fonction (s'il y a lieu): _____

Veuillez indiquer les sociétés ou associations de caractère technique ou scientifiques vous êtes membre.

_____ _____

EDUCATION:

| Université, collège, institut, etc. | Discipline | Diplôme | Année décerné |
|---|---|---|---|
| | | | |
| | | | |

Domaine d'activité ou d'intérêt relié à la technologie nucléaire

_____

Veuillez indiquer **un ou deux** groupes techniques de la SNC qui représentent le mieux vos intérêts.

A. la science nucléaire .....
B. la conception et les matériaux .....
C. l'exploitation minière, la fabrication, l'exploitation des centrales .....
D. l'environnement, la santé et les affaires publiques .....

Vous intéressez-vous à assister aux événements des sections locales? oui non

Désirez-vous participer aux comités de la Société nucléaire canadienne?

Conseil d'administration oui non
groupes techniques oui non
sections régionales oui non

Expérience antérieure comme membres de comité:

_____

_____ _____
Date (Signature du candidat)

Langue de correspondance _____

C. **MONTANT DE LA COTISATION:**

**MEMBRE: $25 par année civile - 1er janvier au 31 décembre**

**ETUDIANT: $5 par année civile - 1er janvier au 31 décembre**
**(Payable à la Société Nucléaire Canadienne)**