



# CNS BULLETIN SNC

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## Editorial

### Before It Goes Into the Birdcage

Self reference should, as a rule, be avoided in the editorials of any publication. But there are exceptions, and this is one of them.

For the last three years the *Bulletin* has become more or less consistent in layout and content. The only significant change has been the addition of a Technical Supplement in some issues (four out of six is the current target frequency for these supplements). Currently the cost of a single (8 page) issue of the *Bulletin* is about \$1200. Addition of a Technical Supplement brings the cost to just over \$2000. These are considerable sums of money for an organisation with the comparatively modest resources of the CNS and it is important to establish that these sums are being spent in the most effective manner.

The *Bulletin* has attempted to be more than a simple listing of past and future CNS activities, and we have tried to provide a forum for debate within the CNS and a medium for technical information exchange at an informal level. Is this what CNS members want? Should the *Bulletin* be simpler and cheaper? How could the *Bulletin* be improved? What kinds of articles should appear?

Feedback from members is essential if we are to be able to provide a useful communications channel for the CNS. For this reason we do urge you to complete the questionnaire enclosed with this issue. This questionnaire is designed to be as open-ended as possible—we'd like you to treat it as a starting point for comments about the *Bulletin*. We need your comments and sug-

gestions. We really need to know if you do read it before you put it in the bottom of the birdcage.

## Perspective

### The IPPANI Hearings: "Canada's Involvement in Nuclear Arms"

*Alan Wyatt presents his observations on the final report of the Interfaith Program for Public Awareness of Nuclear Issues (IPPANI). This complements his paper presented at the 6th Annual Conference of the CNS, June 1985.*

In the Preface to the Final Week Report on "Canada's Involvement in Nuclear Arms" the panelists are quite critical of the phrasing of many of the questions posed by the IPPANI organizers for this phase of the hearings. Although they try to reduce the sting of their criticisms in a later comment they use phrases such as — "some of the questions are based on false dichotomies;" "some of the questions raised pseudo issues;" and "in hindsight, some of the questions are poorly phrased."

For their own analysis the panelists divided the briefs into three categories:

- moral, ethical and spiritual
- strategic analysis
- pragmatic — political and ethical

The report then gives a brief summary of the key points raised in each brief and a short analysis of these points. These summaries should certainly be useful to any groups that use the report of this panel as a basis for their own discussions.

In summarizing their views on the moral presentations, the panelists made a telling comment that could be applied to many different aspects of the nuclear debate, whether it be on nuclear weapons or nuclear power — "the arguments are at times counter-productive, particularly when those who convey a sense of superior awareness and sensitivity reveal a lack of awareness and an insensitivity to the moral convictions of those who differ." This has been at the heart of the nuclear industry's concern with the hearings structure predetermining an inseparable link between nuclear power and nuclear weapons. Many industry spokesmen have forcefully expressed to the IPPANI organizers how offensive they find this linkage and regard the dogged adherence to this linkage by the organizers, in the face of these repeated pleas for moderation, as crass insensitivity.

The panel returned to this theme in one of their recommendations — "it seemed inappropriate to us that the protagonists of differing strategies should attack one another in moral terms. Further, those who addressed the panel in religious or moral terms, while often sharing positions, were so varied in their justifications, that the effect of moral justification was to weaken rather than to strengthen positions." One recommendation favoured "the development of a much greater degree of independent expertise and in-depth understanding of nuclear issues by Canada's major political parties so that intelligent and informed positions can be taken." There should be no disagreement about that — in a democratic society it should indeed be a 'sine qua non' but, over the past 25 years, there has been little evidence of such a desirable state of affairs existing.

The analyses in the report make absolutely no link between the peaceful uses of nuclear energy and nuclear weapons. Apart from the fact that on any objective basis the only link that can exist is if there is a political will to use, or misuse, nuclear technology for military means there was no evidence presented in any of the briefs of any such link. Very few of the briefs mentioned, and then only in passing, that uranium can be used in nuclear weapons.

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However, this did not prevent the inclusion of an eight-page 'poem' by one of the panelists, even though it obviously raised doubts in the rest of the panel, who describe it in their prefatory remarks as "operating through visions rather than critical reflection and communicating through stories rather than intellectual analysis..." Here are some of the 'visions':

There are those who say that it is OK to use  
Nuclear energy for whatever purposes we may devise  
Like generating electricity  
And making weapons so devastating and deadly  
To all life on earth that we dare not use them.  
In the matter of generating electricity, for instance,  
No one anywhere yet has found  
A safe way of disposing of the deadly waste that remains  
There seems to be always the assumption and the  
Confidence that somehow with our marvellous  
Technology we will find a way to dispose of the  
Waste safely and forever.  
Surely that must be the arrogance of fools,  
Or of men who consider themselves Gods  
In their own right?  
But what of the massive piles of radioactive  
Waste left on the surface from mining, to leach into  
The air and the water, forever.  
Is that showing a responsible stewardship  
For our time on this earth?  
Is that the legacy that we want to bequeath to those who come after us?  
Do the fish not have a right to live?  
And the animals and the birds and the plants?

The water and the air  
And the sun, moon, and stars.  
They are our life support system  
For us who live on this planet;  
And what of the people who live by those radioactive piles of waste?  
Are we offering them blessing or curse?  
...  
What I have to say about nuclear power  
Is that it was alright in the ground where it was  
The way that God put it,  
It didn't threaten anyone, and now that it has been  
Taken out, it threatens all life,  
Surely that is not (progress and development)  
By God's terms.

If the poem, in this form, remains in the final version of the report it will seriously undermine the claims to fairness and objectivity made by the organizers of these hearings. In their own 'Processes, Rules and Procedures' for the hearings it is clearly stated (Section 7.3) that:

"Panelists are expected to produce a report which is a fair and accurate summary of the information presented about that particular session. It will be an objective record..."

Not one shred of evidence was presented to this panel, pro or con, on high-level nuclear waste management, uranium mine tailings or nuclear power and yet we have these 'visions' and 'stories' making up nearly 20% of the length of this report. A great pity — the rest of the report is a credit to it's authors and well worth study by anyone concerned with the risks of nuclear war.

One final comment on the entire hearings. The only, even partially plausible, justification for the persistence of the IPPANI organizers keeping the three topics ('Canada's Domestic Nuclear Industry,' 'Canada's International Nuclear Trade,' and 'Canada's Involvement in Nuclear Arms') together was to show that there was no automatic connection between the development of nuclear power and the development of nuclear weapons. The hearings, and the reports, clearly show this to be the case. The hearings organizers, in the form of the five sponsoring faith groups, should now redeem themselves by having the grace to make every effort to publicise the absence of this connection. Whether they will follow this route is, I am afraid, probably a purely rhetorical question. I for one would be pleasantly surprised, and quite prepared to withdraw many of the doubts that I've expressed over the past year about the fairness of the preconceived linkages in these hearings, if the public utterances of the organizers and their 'in-house' educational programs hammer home the absence of any automatic connection between nuclear power and nuclear weapons. Let their actions now speak louder than their earlier words.

Alan Wyatt

## CNS Branch Programs

### Toronto Branch: New Executive

The 1985/86 CNS Toronto Branch Executive consists of the following people: Chairperson — Troy Lassau (Ontario Research Foundation, 822-4111), Past Chairperson — Rudi Abel (Atomic Energy of Canada Limited, 823-9040), Vice-Chairperson/Treasurer — John Marczak (Ontario Hydro, 592-7622), Secretary — Eva Hampton (Ontario Hydro, 592-6965).

Anyone who is interested in participating in planning and organizing this year's meetings and events, please contact one of the Executive at the numbers above. No experience necessary! Also, let us know about any ideas or suggestions you may have for this year's meetings.

## FYI

### Ontario Study Sees Uncertain Outlook for Nuclear Power (Staff)

Energy 2000, a two-volume discussion paper by the Ontario Ministry of Energy, sees less energy use in the future, an uncertain future for nuclear power, but appealing export opportunities for Ontario's nuclear-generated electricity.

The paper deals with options involving future energy supply and alternative futures affecting future energy demand and was written "to provide information and to stimulate discussion." It is also expected that policy recommendations on energy supply and demand to the year 2000 will result.

## Conferences & Meetings

### Symposium on Advanced Nuclear Services

Sponsored by CNA, to be held Jan. 19-21, 1986 in Toronto, Ontario. For information contact: Canadian Nuclear Association, 111 Elizabeth St., 11th Floor, Toronto, Ontario, M5G 1P7.

## CNS BULLETIN SNC

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*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 \$30.00 annually, (\$5.00 to students).

*La SNC procure aux Canadiens intéressés à l'énergie nucléaire un forum où ils peuvent participer à des discussions de nature technique. Pour tous renseignements concernant les inscriptions, veuillez bien entrer en contact avec le bureau de la SNC, les membres du Conseil ou les responsables locaux. La cotisation annuelle est de \$30.00 (\$5.00 pour les étudiants).*

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## **International ANS/ENS Topical Meeting on Thermal Reactor Safety**

Sponsored by ANS, cosponsored by CNS, ENS et al., to be held **Feb. 2-6, 1986** in San Diego, California. For information contact: **J. Webb, AECL CANDU Operations, Mississauga, Ontario, L5K 1B2.**

## **Topical Meeting on Advances in Fuel Management**

Sponsored by CNS, ANS and EPRI, to be held **March 2-5, 1986** in Pinehurst, North Carolina. For information contact: **Dr. G.M. Frescura, Ontario Hydro, Nuclear Studies and Safety Dept., 700 University Ave., Toronto, ON M5G 1X6.**

## **Symposium on Radioactive Waste Management (WM 86)**

Sponsored by ANS, EPRI et al., to be held **March 2-6, 1986** in Tucson, Arizona. For information contact: **Morton Wacks, Department of Nuclear and Energy Engineering, College of Engineering and Mines, University of Arizona, Tucson, AZ 85721.**

## **CNA Symposium on Small Reactor Opportunities**

Sponsored by CNA, to be held **March 4-6, 1986** in Toronto, Ontario. For information contact: **CNA, 111 Elizabeth St., 11th Floor, Toronto, ON M5G 1P7, or call Herb Rosinger at (204) 753-2311.**

## **Topical Meeting on Nuclear Power Plant Maintenance**

Sponsored by ANS, cosponsored by CNS, ENS et al., to be held **March 23-27, 1986** in Salt Lake City, Utah. For information contact: **Ken Talbot, Ontario Hydro — Pickering NGS, P.O. Box 160, Pickering, ON L1V 2R5.**

## **International Topical Meeting on Advances in Human Factors in Nuclear Power Systems**

Sponsored by ANS, ENS et al., to be held **April 21-24, 1986** in Knoxville, Tennessee. For information contact: **Paul Haas, Oak Ridge National Laboratory, Building 6025, P.O. Box X, Oak Ridge, Tennessee 37830.**

## **7th Annual Meeting of CRPA**

Sponsored by the Canadian Radiation Protection Association, to be held **May 5-7, 1986** in Quebec City. For information contact: **CRPA, 151 Slater St., No. 805, Ottawa, Ontario, K1P 5H3.**

## **4th Tritium Safe Handling Course**

Sponsored by Canadian Fusion Fuels Technology Project, to be held **May 5-9, 1986** in Toronto and Chalk River, Ontario.

For information contact: **Robert Stasko, CFFTP, 2700 Lakeshore Rd. W., Mississauga, Ontario, L5J 1K3.**

## **CNA 26th Annual International Conference**

To be held **June 8-11, 1986** in Toronto, Ontario. For information contact: **CNA, 111 Elizabeth St., 11th Floor, Toronto, ON M5G 1P7.**

## **CNS 7th Annual Conference**

To be held **June 8-11, 1986** in Toronto, Ontario. For information contact: **CNS, 111 Elizabeth St., 11th Floor, Toronto, ON M5G 1P7.**

## **4th International Conference on Emerging Nuclear Energy Systems (ICENES 4)**

Sponsored by the Spanish Nuclear Society, CNS, ANS, et al., to be held **June 30 — July 4, 1986** in Madrid, Spain. For information contact: **G. Velarde, Director, Dept. of Nuclear Energy, ETS Ingenieros Industriales, Universidad Politecnica de Madrid, P. de la Castellana No. 80, 28046 Madrid, Spain.**

## **Second International Conference on Radioactive Waste Management**

Sponsored by CNS, cosponsored by ANS, to be held **September 7-11, 1986** in Winnipeg, Manitoba. (Revised deadline for summaries of papers is **Jan. 31, 1986**, to be submitted to **E.C. Card, W.L. Wardrop & Associates, 77 Main St., Winnipeg, Manitoba, R3C 3H1**). For information contact: **T.S. Drolet, Conference Registration Chairman, CFFTP, 2700 Lakeshore Rd. W., Mississauga, Ontario, L5J 1K3.**

## **ANS International Topical Meeting on Waste Management and Decontamination and Decommissioning**

Sponsored by ANS, cosponsored by CNS, US DOE, et al., to be held **September 14-18, 1986** in Niagara Falls, NY. For information contact: **Eva Rosinger, Whiteshell Nuclear Research Establishment, Pinawa, Manitoba, R0E 1L0.**

## **International Topical Meeting on the Operability of Nuclear Power Systems in Normal and Adverse Environments — Call For Papers**

Sponsored by the American Nuclear Society, cosponsored by the Atomic Energy Society of Japan, the Canadian Nuclear Society, the European Nuclear Society, the Societe Francaise d'Energie Nucleaire, the Electric Power Research Institute, and the Nuclear Regulatory Commission, to be held **September 29 — October 3, 1986** in Albuquerque, N.M. The theme of this meeting will be the experiences of utilities, manufacturers, researchers, and consultants

concerning the operability and survivability of essential plant systems and equipment during normal and adverse environments. Information will be shared through panel, presentation, and poster sessions. Papers are invited on the following topics: plant experiences; system/equipment reliability studies; aging effects on equipment performance; severe and beyond-design bases accidents; other environmental issues; life assessment and extension; identification of important equipment; analytical approaches to demonstrate operability; electrical and mechanical test experiences; surveillance and maintenance experiences; equipment degradation monitoring techniques; and human factors considerations. Deadline for submission of four copies of summaries (of up to 1200 words) in English: **March 15, 1986**. Author notification: **May 1, 1986**. Full-paper deadline: **September 15, 1986**. Summary papers and inquiries should be directed to **Lloyd L. Bonzon, Division 6446, Sandia National Laboratories, P.O. Box 5800, Albuquerque, N.M. 87185**; phone 505/844-4313 (FTS 844-4313). Exhibitor and general information is also available.

## **International Conference on CANDU Fuel — Call For Papers**

Sponsored by CNS, co-sponsored by the American Nuclear Society, to be held **October 6-8, 1986** at Chalk River, Ontario. The conference will focus on CANDU fuel technology from production, manufacture and testing, through analysis, operating experience and fuel management, to PIE techniques and storage. Submissions of generic interest from other water-reactor systems are also invited. The conference is aimed at fuel developers, producers, operators, analysts and modellers, and is intended to provide a forum on the various factors important to utilities and countries operating CANDU reactors, or with CANDU programs. In addition to specifically-invited papers on National fuel programs, papers for both verbal and poster presentation are solicited in the following topic areas: Irradiation Behaviour and Operating Experience; Behavioural Modelling, including normal operating conditions, accidents, plus experience with various codes; Fuel Development and Production, including design, development, testing, powder production and fabrication; Fuel Management and handling at stations, including procedures, experience and analysis; Pool and PIE Techniques, including handling, storage, pool examination techniques, and hot cell examination techniques; and Fuel Cycles, including development programs, irradiation experience and studies on slightly enriched uranium, uranium-plutonium and thorium cycles. Those wishing to submit a paper for either verbal or poster presentation are requested to forward a 500 word summary indicating the planned content. This will be used for paper selection and session allocation. Titles and





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authors of accepted papers will be published in the conference program brochure. Summaries must be received by **March 15, 1986**, with response to all authors by **April 30, 1986**. Summaries of all papers will be published prior to the conference. Proceedings will be produced following the conference, containing full papers and discussion. Authors will be required to provide a camera-ready copy of accepted papers by the time of the conference, for inclusion in the conference pro-

ceedings, using a format provided with paper acceptance. Contact: **Dr. I.J. Hastings, Fuel Materials Branch, Atomic Energy of Canada Limited, Research Company, Chalk River Nuclear Laboratories, Chalk River, Ontario, Canada K0J 1J0.**

## 2nd CNS International Conference on Simulation Methods in Nuclear Engineering

Sponsored by CNS, to be held **October 14-16, 1986** in Montreal. For information contact: **D. Rozon, Directeur, Groupe d'Analyse Nucleaire, Ecole Polytechnique, 6600 Cote-des-Neiges, Suite 215, Montreal, Quebec, H3S 2A9, (514) 340-4201.**

## Water Chemistry & Materials Performance Conference

Sponsored by CNS, to be held **Oct. 20-21, 1986** in Toronto, Ontario. For information contact: **N.A. Graham, Westinghouse Canada Inc., Dorset St. E., Port Hope, ON L1A 3V4, (416) 885-4537, ext 297.**

# The Unfashionable Side

## Emergency Planning

Aphasia University faces further delays before its new research reactor can be placed in service. The regulatory authority has demanded that the offsite contingency plan (previously approved) be revised and successfully tested before a licence to operate will be granted. A test of the original plan (known as NUCWRECK '85), under the direct command of the Province's Chief of Emergency Planning, ex Lance Corporal Figleaf of the 43rd Horse (ret'd) was, "inadequate to properly assess the co-ordination of assessments of the assessment of possible offsite effects of a possible major accident to the Aphasia University reactor which might possibly release possibly harmful amounts of possibly radioactive material" an authority spokesperson said. L/Cpl Figleaf endorsed this assessment, noting "it was a right shambles."

A special investigative Committee of University and Provincial Officials has been formed to evaluate the exercise and recommend changes to the contingency plan. While the committee's report is unlikely to be available for a month or so, a number of serious problem areas have been clearly identified. The original plan called for a major accident at the Aphasia Test Reactor for Organic Components Irradiation and Operation Under Stress (ATROCIOUS) which would release sufficient radioactive material to render necessary the temporary evacuation of the surrounding population.

This in fact posed the first problem, since ATROCIOUS is located in the middle of the University's second-best football field at a distance of eight miles from the nearest inhabited structure, the prestigious Hydrise Regency Hotel, which happened to have been selected as the Operational Headquarters for the exercise.

Early on in the course of the exercise it became clear that reactor physics were to be another problem area. ATROCIOUS has a maximum thermal power of 6 milliwatts and despite strenuous efforts by Senior Reactor Physicist Maximilian Kay with the simulation program, no combination of accident sequences could be made to disgorge any measurable radiation release. Luckily Dr. Kay was able to obtain a short lease on a used source term from Ontario Hydro, but it was some four hours into the exercise before these arrangements could be satisfactorily finalised and the notional radioactive plume started upon its way.

The exercise scenario called for police detachments to control the population fleeing from the affected areas. But since the population in the immediate (8 mile radius) vicinity of the reactor is zero it was necessary to request the aid of members of the Aphasia University Dramatic Society to play the roles of panic-stricken citizens. Unfortunately, if understandably, the Dramatic Society members spent the four hours' delay in the exercise at the Stuffed Parrot (a popular off-campus establishment among the undergraduates) and emerged in a somewhat tired and emotional state of mind. No doubt this resulted in their getting their directions confused, and, en masse, they proceeded to drive or run towards the reactor site. RCMP Constable Maurice Onions, who was charged with direction of evacuee traffic, misinterpreted this movement as a terrorist attack on the nuclear facility and possibly increased the confusion by discharging his service revolver into the air and calling for re-inforcements on his two way radio which, coincidentally, happened to be turned to a local radio station.

Meanwhile at the Operations Centre, problems were being experienced with communications, since the only telephone outside the Star and Garter Spring bar is a pay phone and the supply of quarters had run out within the first two hours. Luckily the head of the Technical Assessment Group, MREM Professor of Implausible Theory, Dennis Molestrangler, was able to arrange with Bartender Sid Crunch the transfer of the Operations Centre to the Star and Garter Spring Bar, from where the remainder of the exercise was conducted. While the full text of the Emergency Operations Centre log has not been made public, doubtless for very cogent security reasons, such portions as have been released bear eloquent testimony to the skill and dedication of the Emergency Operations Centre staff.

**Ernest Worthing**