

Comments by J.A.L. Robertson on “Submissions by the United Church of Canada (UCC) to the NWMO”

The UCC submission* illustrates how some people, presumably well intentioned, put faith before facts and propaganda before dialogue.

The UCC submission should be read in the light of the following information:

- Its authors are implacably opposed to nuclear energy. (“*d. That the NWMO report recommend the phase-out of nuclear power as a central component of any viable nuclear waste management approach;*”)
- The NWMO succeeding in its mission to gain public acceptance for responsible management of nuclear wastes would be contrary to the authors’ interests. (“*g. That the NWMO process and outcome not be used to justify expanded or prolonged reliance on nuclear power or exports of nuclear technology;*”)

The UCC is therefore openly opposed to the NWMO’s mission of developing an acceptable approach to the long-term management of used nuclear fuel, despite its claim that it approaches the NWMO process “in a spirit of hopeful cooperation”. Also, as will be shown later, it is hostile to the NWMO’s desire for dialogue as the word is normally understood.

UCC representatives have repeatedly published criticisms of nuclear energy based on allegations that have been challenged, but they have failed to defend their position. In 1996 the UCC made a 98-page submission to the Blair Seaborn (BS) Panel (PHPUB.043). I responded with a 14-page submission (PHPUB.167(a)) to the BS Panel, which is available on the Internet at www.magma.ca/~jalrober/ucc.htm. The UCC provided no rebuttal. One of the present authors, Mary Lou Harley, provided an earlier submission to the NWMO, titled “Response to Comments by J.A.L. Robertson relating to the Submission by the United Church of Canada (UCC) to the Seaborn Panel”. This demonstrates that the present authors were aware of the many criticisms but have chosen to ignore them. I made a submission to the NWMO severely criticizing a Background Paper by Peter Timmerman. He did not claim to represent the UCC but presented himself as a consultant to it. Since it employed and acknowledged him as a consultant his submission is indicative of the material on which the UCC bases its own submissions. There has been no rebuttal of my criticisms by Timmerman or the UCC. Despite the *words* of the UCC submission:

- This submission is offered to NWMO and to the Church in the hope that they may contribute to substantive discussion of the complex ethical issues related to nuclear wastes.

The UCC’s *deeds*, or lack of them, demonstrate that it has no interest in dialogue, only in reiterating its own position.

Before dissecting the submission it is worthwhile examining the issue holistically, as advocated in the UCC submission. The essential difference between us lies not in the principles but in our respective application of them. I can support the twelve principles enunciated in the

* I refer to it thus in accord with the authors’ usage. However, it was prepared by only five “principle writers” (sic) and was “mandated and endorsed” by a single “Unit within the General Council of the” UCC. The *Principles* were more widely approved but this is irrelevant since these are not in dispute.

submission, although I would not have used the same wording, and would have added others. They are essentially the same as those in the UCC's 1996 submission, which I discussed at length in my 1996 response. In it I stated:

- There is an implicit assumption (para.4) that if the principles enunciated in this submission are valid, then so also are the authors' interpretations of them. While I agree with most of the principles I have challenged here much of the interpretations, for reasons given.

I enunciated my own ten principles of practical ethics in a submission to be found under Section 2 of the Background Papers on the NWMO website (also available at www.magma.ca/~jalrober/ethch.htm). The difference in applying the principles may be partly due to differences in values and in the weights accorded to different factors. However, I submit that much of it is due to differences in the information from which we draw our conclusions. Hence my third principle, viz., that facts matter: sound conclusions can only be drawn from sound facts. That is why it is important to dissect the submission to assess any false or questionable assumptions.

The conclusion that I draw is that nuclear energy will continue to save lives while benefiting the environment and the economy. I accept that I am fallible and am ready to defend and debate my position. The UCC Submission, on the other hand, merely restates its position while ignoring any other positions or criticisms of its own position. If my position is the more nearly correct one, the UCC Submission's recommendations would harm people and their world, thereby offending its own principles. Its submission represents hubris masquerading as ethics.

My further comments are organized in accord with the UCC Submission's four "fundamental concerns".

Trust

The UCC Submission states that "The need for trust to be earned by any nuclear management agency has been documented in the Seaborn Panel report" (p.14) but this was an unsubstantiated assertion. It further claims "There is an history which has lead (sic) to justifiable public distrust of the nuclear industry, the regulators and the government in relationship to nuclear power", but this too is unsubstantiated. Since the BS Panel conducted no polls it was unable to assess any distrust among Canadians. It based all its conclusions about "public" opinions on what it heard from less than a thousand submissions, about half of which were presented by participants with preconceived opinions. Many submissions demonstrated no evidence of the authors having even read the proposal under review.

A recent public opinion poll indicated that one-half of Canadians support nuclear power (64% of Ontarians) and 77% believe that nuclear power will be part of Canada's energy mix. 68% support upgrading and refurbishing existing plants while 41% support building new reactors. Another poll had shown that few Canadians recognized "AECL" or "AECB" (the nuclear regulator then) and of those who did many confused the two. The NWMO's experience is that very few Canadians consider the issue of nuclear wastes to be of sufficient concern for them to participate in the NWMO process. All this evidence suggests that any distrust is neither widespread nor serious. It is, however, in the interest of those opposing nuclear energy to create that impression.

Such distrust of the industry and its regulator as exists can be largely attributed to erroneous and misleading information that continues to be disseminated. For instance, some

people attending the Citizens' Dialogue evinced antagonism to, and distrust of, the nuclear industry because of a false perception that it had proceeded with the construction of nuclear generating stations without any provision for management of the wastes. While the UCC may not have repeated this myth there are others equally deplorable in its submissions. The following examples are excerpted from my 1996 submission to the BS Panel:

- "... the health, not only of humans but of the planet itself and everything that subsists in it, is involved." (p.1-1, para.1) is hyperbole approaching scare-mongering.
- For a church publication to claim (para.3) that there was not "any critical assessment of consequences, such as nuclear proliferation for military purposes, health dangers connected with mining and nuclear power generation, the hazardous drive to a plutonium economy, risks of terrorism, and finally, the unsolved and perhaps unsolvable matter of the waste." indicates either a lack of adequate research or a lack of ethics. Either interpretation casts doubt on the rest of the submission.
- "The public needs information on and protection from genetic damage" (para.5) suggests, without saying it, that the information is not available or even is being withheld. Vast amounts are openly available but it shows very little, if any effect on humans at the relevant levels of radiation.
- It is claimed that used fuel is "one of the most hazardous materials yet known" (p.3-12, para.2) yet in four decades nobody in Canada has died from it. Fire, electricity and many chemicals are also hazardous if not managed properly, and they have killed many people. Seeing teenagers in a stolen car being chased along a crowded highway one would say that the car was hazardous, but the same car without ignition key, gas or wheels, jacked up in a locked garage does not present any great risk. Asking questions without indicating what answers are available, or without discussing them, is a rhetorical trick.
- To offer the public hope of "a safe, affordable, environmentally acceptable means of rapidly reducing the radioactivity of the waste and the quantity of waste." (para.3) represents either wishful thinking or an attempt to sway the public against disposal. The UCC apparently distrusts current science but has faith in future science.
- The public and workers do "have input into setting of standards and regulations by AECB." (p.3-18, para.3) through the AECB's consultative documents and other means. The fact is that very few people choose to do so, probably indicating satisfaction with the existing situation.
- "With the present quantity of high-level nuclear fuel waste and other sources of ionizing radiation, there is sufficient radioactive material in storage to threaten the continuation of life." (p.3-19, para.2). This represents scare-mongering. I challenge the UCC to present any plausible scenario whereby radioactive material in storage could eliminate life from the earth. "There has been a history of confusion and secrecy with respect to ionizing radiation and applications of nuclear technology" (para.2). As far as Canada is concerned the often repeated accusation of secrecy is unfounded and unsubstantiated. When it was made at the Royal Commission on Electric Power Planning by G. Edwards it was refuted by the Chairman, Arthur Porter.
- The UCC should be required to state what information it has requested that has been denied, and the reason given for denial: otherwise it should withdraw its allegation and apologize.
- There are again unsubstantiated allegations of "secrecy" (p.3-48, para.3), but no mention of all the open exchanges through the IAEA and NEA, to name only two. The UCC should state what it wants to know, how it has tried to find the information, and why it was refused, if it was.
- On page 3-33 there are references to "the paid AECL members of the committee" (what committee?), "all operations and policies of AECL (should) be transparent and open" and

“Government and industry investigation of private groups or individuals is unfortunately a current practice”. These represent innuendo that cannot be refuted for lack of specific charges.

- Specifically, there is further innuendo throughout the discussion of this principle: “secrecy and manipulation” (p.3-37, para.3), “information is guarded and manipulated” (para.5), “the proponent advocating a proposal is not presenting an OBJECTIVE environmental impact statement” (p.3-38, para.1), “exaggerations and manipulation of information” (para.4), “vested interests are bound to warp the presentation” (para.4), “the influence of propaganda mills and interest lobbies” (p.3-39, para.2), “an air of secrecy” (para.3), “lack of information” (para.3), and “Some of the material coming to the public under the guise of education is better termed propaganda” (p.3-41, para.2). Physician, heal thyself. The UCC should be required to put up or shut up, and ideally apologize to honourable individuals and organizations.
- Masses of information are available on the biological effects of radiation (p.3-41, paras.3 & 4). Readers should accept the obligation to make an effort to understand a subject before presuming to represent themselves as knowledgeable on it. Representatives of religions would expect as much of those who criticized their religion. BEIR V, and hence BEIR IV, is referenced in the EIS.

The UCC’s present submission includes its 1996 submission without any acknowledgement of the comments on it. I can only repeat what I wrote in 1996:

- In talking of a “lack of trust” (para.4) the UCC should accept some of the responsibility for this distrust.

Ethics

“The United Church submits that Canada’s approach to dealing with nuclear waste issues must” satisfy twelve requirements. While I support these in general, several are not the responsibility of nuclear waste management, e.g., “promote change of lifestyle from high material consumption to greater equity and sustainability” and “promote a culture of tolerance, non-violence and peace”. More importantly, when I apply these requirements I conclude, contrary to the UCC, that nuclear energy satisfies them better than the available alternatives. This again illustrates that true ethics involves much more than enunciating principles. Facts matter. Good intentions are not good enough.

In its discussion of ethics the UCC submission refers to submissions by Schader-Frechette and Stirling without any mention of the fact that these have been criticized in my submissions to the NWMO that are published on its website. (Similarly for Timmerman, as mentioned earlier.) Over nearly a decade the UCC has made essentially the same submission while totally ignoring any criticism or contrary arguments. This is not ethics but dogma. The UCC submission’s claim,

- To contribute to the dialogue on ethics and the efforts to apply ethics in the long-term thinking, the United Church is presenting, etc..”

is not dialogue but hypocrisy. They have no reason to complain:

- In the past, ethicists’ input on the nuclear waste issue has not been valued in the way that the voices of technology and science have been.

All this hubris and intolerance in the name of religion serves only to discredit religion.

My colleagues in the nuclear industry may know less about academic ethics but they practice a high standard of ethics.

Lois Wilson, a past Moderator of the UCC, revealed in her book "Nuclear wastes: exploring the ethical dilemmas" aspects of her participation on the BS Panel. I provided a critique of her book, available on the Internet as www.magma.ca/~jalrober/critique.htm. The opening sentence of my critique reads: "This book's title is grossly misleading – and the contents are more so."

The UCC submission enunciates a praiseworthy ethical principle:

- the rights of the poorest in society and of nature need to be given great consideration

but fails to examine its implications. Canada's poor benefit from our social programs and health-care services. However, these depend on a healthy economy. Nowhere does the submission consider the costs of its recommendations or their effect on the economy. Where nuclear energy can be provided at lower cost than available alternatives, all costs having been internalized, this constitutes an ethical reason for its adoption. It is not ethical to do harm out of ignorance or from failure to examine the consequences of one's actions.

In objecting to "embedding" the ethics the UCC submission is trying to turn back the clock. Ethics is an integral aspect of any engineering enterprise, along with cost and safety. Professional Engineers of Ontario have a Code of Ethics, while medical doctors, who contribute to the setting of regulatory standards, have taken the Hippocratic Oath.

Bounding

This is an example of a principle that sounds good when enunciated but has problems in its application. Once the scope is expanded there is no good reason for stopping at any point. The UCC submission wants to include all aspects of nuclear energy: I would agree if this were done in the context of all energy sources, each of which has some disadvantages. The UCC wants to include the prospects for energy-efficiency and conservation: I would agree if all the benefits of the wise use of energy and the harm from energy shortages are recognized. Any discussion of energy needs would introduce the divisive issue of population control. The UCC submission wants Canada to depend on renewable resources: I would want the findings of competent authorities such as the World Energy Conference to be included. And so on. Experience shows that it takes years to do justice to any one of these issues, hence the practical need to truncate the scope.

The UCC submission complains:

- The ethical considerations concerning the radioactive waste that Canadian reactors generate in other countries do not appear to have received much attention.

If this is to be included we should discuss the pollution caused by automobiles built in Canada and exported; and the effects of Canadian grain exports on obesity and hence diabetes – the *reductio ad absurdum* argument. We would be offended if the U.S. dictated how we deal with imports from there. The UCC should respect the right and ability of independent countries to determine their own policies. Concerning the UCC's objections to nuclear exports, I stated in my 1996 submission:

- A Canadian church should not be trying to dictate economic policy to a foreign government, even if it is poor (para.4).

The UCC submission asserts:

- AECL apparently believes that an available longer-term management plan for the nuclear waste problem improves public acceptance of nuclear power,

which appears to be a reasonable belief. It is only because it opposes nuclear energy that it objects to this possibility. The same prejudice results in its accusing AECL:

- In support of the company's objective to realize profits on the sale of CANDU reactors, AECL claims "growing public acceptance of nuclear energy".

If one starts from the position that CANDU reactors are beneficial, profits are essential to maintain AECL viable: profits are a means to an end. The UCC submission provides no justification for claiming:

- ... the misrepresentation of the management approach in the USA as "a safe and practical solution"

and it does not even provide a source for the quotation.

Under the heading "The Future of Nuclear Power in Canada" the UCC submission repeats its call for all aspects of nuclear energy to be included, as already discussed. It argues that because the Assessment Team (AT) Report considered only existing used fuel and that to be discharged from existing reactors, any NWMO findings would not apply to further used fuel in the future. I have already drawn attention to this deficiency of the AT Report in a submission to the NWMO. However, the assessment in that report was only illustrative and the NWMO's Final Report will presumably consider the implications of all reasonable futures for nuclear energy

The UCC submission asserts

- that no single management option or stepwise management plan under consideration is a long-term solution to the hazards of nuclear fuel waste

and demands

- a solution that is good absolutely.

The UCC should recognize that the NWMO's mission is to recommend a management approach that is "socially acceptable", not necessarily acceptable to a few members of the UCC with their own interpretation of ethics; and that we cannot guarantee that any thing we do in the real world will be "good absolutely".

Social acceptability

The UCC submission complains that

- the (NWMO's) time frame is very short

but the UCC has had over a year to prepare a submission that is virtually the same as one to the BS Panel nine years ago. This lack of urgency appears to be inconsistent with the UCC's claim to believe that

- the health, not only of humans but of the planet itself and everything that subsists in it, is involved.

It repeats its reference to

- the level of distrust in the government, the nuclear industry and the present process

that has already been discussed. In my 1996 submission I noted:

- This account omits (para.3) the opportunity the UCC had to participate in Ontario's Royal Commission on Electric Power Planning, which included consideration of waste disposal.

It refers to Wilson's book and the BS Report without informing readers that both have been the subject of highly critical reviews (available on the Internet at www.magma.ca/~jalrober/critique.htm and www.magma.ca/~jalrober/Blunder.htm respectively); and without responding to any of the criticism. Its accusation of secrecy was refuted in my 1996 response as already noted under "Trust". It endorses

• the importance of social acceptability as set out in the Seaborn Panel report without any recognition of the fact that this has been denounced as distortion of the meaning of words in the critique.

It lists six “concerns” about the future of nuclear energy but fails to acknowledge the vast literature on them that is available, and the number of public inquiries and environmental assessments on them conducted by authorities far more competent than the present authors. There is an ethical obligation to perform one’s own research before demanding to be spoon-fed information at public expense. If this has been done, the specific issues requiring further attention should be identified.

Containment and hazard reduction

The UCC submission asserts:

- There is at the moment *no* safe “solution” to the “problem” of highly radioactive waste. This is true only to the extent that there is no safe solution to any of our problems if absolute safety and guarantees for the future are demanded. The NWMO is required to recommend a solution that is reasonably safe compared with other risks we face and that provides for future generations to be protected to the same extent. The UCC submission fails to inform readers about the volume of material supporting the three technical methods under examination. It raises the scare that

- the low-probability event could threaten the continuation of life in the area without suggesting any scenario that could cause this, let alone quantifying the risk.

The UCC submission quotes Schader-Frechette to argue that

- a containment plan ... is an ultimate dilute and disperse option

but neglect to mention that this was answered in my comments on the Schader-Frechette submission, viz.,

- The Canadian concept is *not* “built on a philosophy of dilute and disperse”. It is expected that the great bulk of the wastes will remain *in situ* where the radioactivity will disappear by natural decay: the small amount released from the immediate vicinity of the repository would be subject to repeated adsorption and release from the surfaces of cracked rock, providing further time for natural decay of the radioactivity. Any minute amount of the wastes that eventually reaches the surface would therefore have greatly diminished radioactivity, comparable to that in some natural groundwater. This qualitative description is quantified in the EIS.

The UCC submission states that “the UCC has concerns” about the management options, and it recommends that the “waste remain retrievable” but it does not indicate whether it has examined available assessments and, if so, which aspects it challenges. It recommends research on means to reduce the radioactivity of the wastes. This was answered in my 1996 submission:

- It is irresponsible for a group with no relevant experience or expertise to advocate that Canada commit a large fraction of its research budget to what would be a mega-project on transmutation.

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The final sentence of the UCC’s submission criticizes “the continuation of an energy-greedy society”, without discussing who defines greed. Nowhere in the submission is there recognition of the potential benefits to people, particularly the poor of the world, from plentiful energy for water supply, sewage treatment, food refrigeration, health care and, even at the simplest level, one lamp per dwelling and one pump per village. Nuclear energy is one of the sources that can contribute to this need: none can do it alone.

Detailed comments

Individually these comments may be trivial but in total they suggest a lack of familiarity with the subject.

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- 4 The UCC recommends, without justification, that “Canadian energy policies be transformed to emphasize ... and renewable energy sources”. The resources to be devoted to investigating alternatives is a matter for judgement, based on a scientific assessment of the likelihood of success. Without proper assessment this is wishful thinking and a possible waste of resources.
- 8 The submission refers to questions in a UCC resolution. Instead of simply asking questions it would be more ethical to state what answers are available and why they are not satisfactory. The resolution called for a national public inquiry into all aspects of the nuclear fuel system but failed to mention the number of relevant inquiries that have been held.
- 11 The demand for a “perfectly safe solution” is unrealistic for anything in this world. It can only be regarded as a rhetorical trick to make the NWMO’s mission appear impossible.
- 11 Originally, “people” adopted and welcomed nuclear energy because they needed and wanted the energy. I reject the revisionist theory that it was done out of any misguided sense of atonement for the use of nuclear weapons. Since their use actually saved about a million lives, of Japanese as well as Allied veterans such as I, there was no reason for atonement.
- 11 “There was little or no public debate of matters such as the health and environmental dangers connected with mining and reactor operations, the threat of catastrophic accident or attack at a nuclear facility, the potential for CANDU technology to be used in nuclear weapons programs, the troubling legacy of radioactive waste, and the social and fiscal costs of managing these problems.” To the extent that this is true it is more a reflection of the nature of the times when such technical matters were not debated publicly than of any lack of discussion. Anyone interested can consult “Canada’s nuclear story” by Wilfrid Eggleston (1965), “Nucleus” by Robert Bothwell (1988) and “Canada enters the nuclear age” by several of us who were involved from the early days (1997). To discover how the issues were presented from a predominantly anti-nuclear angle, the Bulletin of Atomic Scientists can be consulted. Personally, I was greatly impressed by the ethical approach of pioneers such as W.B. Lewis and George Laurence.
- 12 The UCC submission states “the public that pays the price in energy rates, taxes, health and environmental damage” from nuclear energy, while nuclear proponents claim that the public gains benefits in these areas. Only facts can resolve this difference.
- 12 There is no justification for the claim that “Aboriginal peoples ... pay the heaviest price in their contact with the nuclear industry”. There should be recognition that they share the benefits of a healthy economy and a clean environment, even those who are not connected to the grid or who do not require radiopharmaceuticals.
- 12 Nuclear energy avoids the pollution of most other energy sources, contrary to the statement “our present dependence on nuclear power and other polluting energy sources”.
- 12 The UCC submission mentions only the need for considering a 10,000 year timeframe, ignoring the caveat in AECB Report R-104 that I quoted in my 1996 submission:
 - *"Where predicted risks do not peak before 10,000 years, there must be reasoned arguments that beyond 10,000 years the rate of radionuclide release to the environment will not suddenly and dramatically increase, and acute radiological risks will not be encountered by individuals."*
- 12 Contrary to the assertion: “some of the radioisotopes in this waste will need to be contained virtually forever”, there will be no need to contain them once they constitute a hazard no greater than naturally occurring ore bodies.
- 13 When one considers the minute fraction of Canadians that has chosen to participate in the NWMO process, it can hardly be regarded as a model for “democratic decision-making”.

- 14 To the UCC's "Fundamental concern", "Let us not be guided by corporate agenda, by political motives, by military urging", could be added "or misguided pressure groups claiming to represent churches".
- 14 The UCC submission, by stating "the 'polluter pay' principle has been applied in a way that gives the polluter control in the long-term management of the wastes", is libelling the nuclear industry that avoids polluting by sequestering its wastes.
- 14 "In Canadian nuclear waste management policy, there tends to be a priority of business values over values of justice" is another unsubstantiated assertion.
- 15 The UCC submission's claim that the NWMO needs more than three years "to assess at least three nuclear waste management approaches" ignores the amount of work, including environmental assessments, already done for all three.
- 17 "complimentary" (sic)
- 17 In reference to the "Aboriginal perspective", the UCC submission fails to note that the NWMO found Aboriginal values to be virtually the same as those of other Canadians.
- 21 The UCC submission erroneously refers to "the use of weapons-grade plutonium in MOX fuel". To produce weapons-grade plutonium low burnup fuel is required: this is incompatible with electricity production.
- 26 The demand that no further damage be done to Aboriginal land would deny Aboriginals the right to improve their lot through development should they so choose.
- 26 To promote the dream of a world free from nuclear weapons is dangerously naïve. Now that the knowledge exists any rogue state could make one, however primitive. In a world otherwise free of nuclear weapons we would all be at the mercy of that rogue state.
- 31 Under the heading "3. Life styles of high material consumption must yield to the provision of greater sufficiency for all" the UCC avoids suggesting any means to achieve this unpopular objective.

Submitted 2005 January 5