

# Comments by J.A.L. Robertson on Ethics of High Level Nuclear Fuel Waste Disposal in Canada: Background Paper by Peter Timmerman

[All page numbers refer to the Adobe Acrobat Reader version at the NWMO website.]

The seven questions on page 6 of Professor Timmerman's paper constitute a possible framework for an academic discussion of the ethics of nuclear waste management. However, the preamble and the subsequent editorializing under each question are misleading in failing to reveal that much of the substance of this paper was covered in submissions to the Blair Seaborn (BS) Panel by the present author, as a coauthor or consultant: and that detailed responses are available as subsequent submissions to the Panel. Relevant sources are:

- In March of 1996, Professor Peter Timmerman as coauthor submitted the 54 page "A report to the FEARO Panel on the proposed nuclear fuel waste disposal concept". On April 5<sup>th</sup> I submitted a 10 page response ([www.magma.ca/~jalrober/timm.htm](http://www.magma.ca/~jalrober/timm.htm)).
- Also in March, Timmerman as consultant, submitted the 96 page "Nuclear fuel waste management and disposal concept". On April 25<sup>th</sup> I submitted a 14 page response (<http://www.magma.ca/~jalrober/ucc.htm>).
- In the fall of 1996, Timmerman as coauthor, submitted the undated 92 page "Essays: Deeper into the Issues". On October 29<sup>th</sup> I submitted a 13 page response ([www.magma.ca/~jalrober/cceer2a.htm](http://www.magma.ca/~jalrober/cceer2a.htm)).
- Previously, in a letter to the Panel Chairman dated July 12<sup>th</sup> 1991 I wrote: "*I would urge that the ethics of nuclear-wastes management be included in these issues*"; and in another letter, dated December 8<sup>th</sup> 1992 I repeated the suggestion because: "*Meanwhile the accusations that nuclear energy is unethical made in various submissions to the Scoping Sessions go unchallenged*".
- My 34 page submission of January 1996 contained a section on "Ethics" ([www.magma.ca/~jalrober/eisrev.htm](http://www.magma.ca/~jalrober/eisrev.htm)) and other topics regarded by Timmerman as relevant to ethics were addressed in other sections.
- In a section "Ethical Considerations" of another submission, dated February 1996, I responded to this topic in the BS Panel's "Issues Paper".
- My verbal presentation to the BS Panel of May 2nd 1996 included a section on ethics.
- Since 2000 my book, "Decide the nuclear issues for yourself: NUclear need not be UNclear", that contains a chapter "Ethics: a personal view", has been available at [www.magma.ca/~jalrober/Decide.htm](http://www.magma.ca/~jalrober/Decide.htm). A list of my publications on ethics is available at [www.magma.ca/~jalrober/nuceth.htm](http://www.magma.ca/~jalrober/nuceth.htm).

The present author not only failed to answer or discuss any of these responses and publications while the BS Panel existed, he fails in his paper now to acknowledge their existence. In his second submission he wrote: “*the little bow in the direction of value and ethics ... is all the technological imagination knows how to make*”. My criticism may seem to represent pique on my part but an important ethical principle is involved. By ignoring this large volume of material, whether or not the contained arguments are valid, the author misleads readers into believing that nuclear proponents have failed to consider ethics in their considerations.

I prepared my first publication specifically dealing with nuclear ethics, “The Geometry of Nuclear Energy: Getting the Right Angle on the Ethics”, Canadian Nuclear Society Bulletin, 13, 3, 1992, because I had found academic ethics singularly useless in helping to make real-life decisions on nuclear energy, and probably other technologies. My paper, cited in submissions to the BS Panel, addressed several of the issues now identified by Timmerman. Since then no ethicist has responded. It is only now, 26 years since the Hare Report recommending geological disposal, that ethicists wish to discuss the subject, and only when paid to do so by the nuclear industry’s NWMO. This suggests that nuclear ethics is not the burning issue that Timmerman would have us believe.

Professor Timmerman’s paper can therefore not be regarded as a scholarly treatment of the subject such as would be expected of an academic: and his paper is not properly described as a Background Paper since it provides only a partial and biased view of the subject. These conclusions are supported by detailed comments in what follows.

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4 The paper fails to recognize that in setting limits to an inquiry a line must be drawn somewhere: an inquiry covering all topics that anyone considers to be related to nuclear wastes would be unmanageable. The BS Panel on Nuclear Fuel Wastes took eight years to fail to resolve a relatively restricted mandate. Another reason for resistance to limits is that this is a rhetorical technique to avoid resolving the central issue by switching the discussion to another topic, as suggested by the number of submissions to the Panel that addressed topics outside the Panel’s Terms of Reference.

The author demonstrates bias in the wording “*that got us into this situation in the first place*” and “*the extraordinary lengths of time ... that nuclear waste must be managed or segregated*”. The first implies that the present situation is unsatisfactory: the second fails to inform readers that proponents argue that the wastes are no more hazardous than the original uranium deposit after a few hundred years. The “Nuclear Age” is nonsense from the media that coins a new “Age” every few years, e.g., the “Information Age”.

5 Readers should be warned that Senator Lois Wilson’s book is unreliable as a source for public concerns. My critique of it ([www.magma.ca/~jalrober/critique.htm](http://www.magma.ca/~jalrober/critique.htm)) provides evidence that she quotes exclusively those submissions critical of the proposal. The book demonstrates her own bias that should have disqualified her as a panellist: and shows that she was responsible for the illogical conclusions of the BS Panel based on her distortion of the English language (<http://www.magma.ca/~jalrober/Blunder.htm>).

Of those submissions that dealt with ethics in detail, those by Timmerman and myself were the most substantial and so are worth citing in his paper. Mine and my comments on his are cited above.

Careful reading of the BS Report and Wilson's book shows that the newly coined expression of "*safety from a social perspective*" was a minority view of the Panel and had been introduced by Wilson.

There may not have been "*a great deal of work*" done on nuclear ethics in Canada but the author ignores what has been done and ignored the opportunity accorded by the BS Panel of a dialogue on his submissions on the subject. A Google search returned no publications by him on the subject.

- 7 There is again bias in a failure to recognize successes in environmental protection and improvement, partly to the credit of nuclear energy that has reduced atmospheric and air-borne pollution: and to acknowledge that many, probably most, independent scientists question that global warming, *if it is occurring*, is due to human activities. Also, it should be acknowledged that some religions believed until recently, and perhaps still do, that man has dominion over nature.
- 8 These "*ethical intuitions*" correspond to the Principles or axioms in my companion paper, "Nuclear energy - an ethical choice", in the same Section 2 of this website.
- 9 The present paper is correct in stating that the BS Report required the concept to "*have broad public support*", but this was contrary to the Panel's Terms of Reference that required it only to determine the "*acceptability*" of the concept. Since it is doubtful that any concept for waste management will "*have broad public support*" the NWMO should be wary of agreeing to this condition. The Terms of Reference also required the BS Panel to determine if the concept was "*safe*", presumably using the normal meaning of the word as found in dictionaries. The BS Report, by coining a new term, required that the concept be "*safe from a social perspective*". This, if it means anything, has more to do with acceptability than safety. Since the Panel raised the bar for "*acceptance*" it is similarly unlikely that any concept will be "*safe from a social perspective*". The present author states that "*For ethicists, the devil is often in the details*" but these are not details, they are absolutely fundamental to the whole process. They were pointed out in my review of the BS Report, published in the Canadian Nuclear Society Bulletin in 1998 and available at [www.magma.ca/~jalrober/blunder.htm](http://www.magma.ca/~jalrober/blunder.htm), and in my critique of Lois Wilson's book, available at [www.magma.ca/~jalrober/critique.htm](http://www.magma.ca/~jalrober/critique.htm) since 2001.
- 11 The author talks of "*three, perhaps four, main ethical positions, or clusters of positions, that have been in the forefront of public debate*" but there has been no debate, largely due to "ethicists" such as the author ignoring any response to their pronouncements.

The question of rights, utilitarianism, etc. was raised by the author in submissions to the BS Panel, and was addressed in my responses ([www.magma.ca/~jalrober/timm.htm](http://www.magma.ca/~jalrober/timm.htm) and [www.magma.ca/~jalrober/cceer2a.htm](http://www.magma.ca/~jalrober/cceer2a.htm)). The author repeats the question without any recognition of the response. Similarly for people's perceptions of personal risks and benefits: since my responses I have further developed my position in my book, "Decide the nuclear issues for yourself: NUClear need not be UNclear" in Chapter 13 at [www.magma.ca/~jalrober/Chapter13.htm](http://www.magma.ca/~jalrober/Chapter13.htm).

- 12 The "communitarian" position was also addressed in my responses. The mention of "community language" should include reference to the oxymoron "sustainable development" and why the "precautionary principle" would ossify civilization. His fourth position, regarding "*extended perspectives of time and space*", is a reasonable topic for

discussion but this reinforces in the reader's mind the implicit and unjustified assumption that the wastes, if put in geological disposal, would represent a hazard beyond a few hundred years and internationally.

- 13 The author argues that social and ethical factors have to be considered as well as "*the vast array of scientific and technical facts*". This has been the nuclear proponents' position throughout the BS Panel's life – see, for instance, AECL's EIS. The mirror image, however, is also true, but not recognized by many critics in submissions to the BS Panel. This results in one of the principles in my companion paper on this website – "Nuclear energy – an ethical choice, Principle 3, 'Facts matter'".

The question of people's perceptions of risk and benefit, and what constitutes "acceptable risk", is discussed in my book at [www.magma.ca/~jalrober/BOXSAFE.htm](http://www.magma.ca/~jalrober/BOXSAFE.htm).

- 14 I do not accept the author's characterization of two sorts of people. In my opinion, those advocating geological disposal consider it an available and adequately safe solution that would not be vulnerable to social chaos, *should this occur*; and believe that while better solutions may be developed in the future we have an ethical obligation to solve our own problems. The argument that "*something better may turn up*" would ossify civilization in the same way as the precautionary principle. The logical flaw in the postponement principle is that it will apply at every time in the future, so that a decision will never be taken.

- 15 The author again assumes implicitly that the wastes will represent a significant hazard for more than a few hundred years, without revealing that this is controversial. I suspect that while he criticizes projections as "*virtually worthless*", he would be the first to criticize their absence. His discussion should, but rarely does, consider some of the positive possibilities. For instance, if a cure for cancer is discovered any estimated risk from the wastes would be virtually insignificant, as I argued in my response ([www.magma.ca/~jalrober/ucc.htm](http://www.magma.ca/~jalrober/ucc.htm)) to one of the author's Panel submissions. Also, there should be recognition that future generations inherit benefits as well as risks from our activities, just as we now are still benefiting from the Industrial Revolution.

I disagree that proponents of geological disposal believe that future generations will be unable to manage the wastes. Rather, we believe that we should not burden them with the responsibility and costs of our wastes; and that we should bequeath them a means for the disposal of their own nuclear wastes should they wish to exploit nuclear energy.

The wastes would not be irretrievable, as so many critics have misrepresented. The requirement is that they *need not* be retrievable. In this way future generations are bequeathed a safe manner for long-term management while leaving them the opportunity to exploit the vast energy resource in the "wastes".

- 17 While ethicists debate these ten questions the radioactivity in the wastes will have decayed significantly. Some, e.g., "*What is the legitimacy of our current ways of responding to complex environmental issues?*" are so broad that the NWMO should not be expected to answer them for this specific application: some, e.g., "*What is the full range of alternatives, e.g. transmutation, deep sea burial, etc.?*" is a technical, not an ethical, question that has already been answered, e.g., in the Hare Report and AECL's EIS. There was an opportunity to debate these questions during the BS Panel's life but the opportunity was wasted, largely because of the inactions of the present author. There

is little chance of them being answered in the remaining life of the NWMO's current mandate. This is the sort of reason that I have proposed ten Principles of Practical Ethics in my companion paper, "Nuclear energy – an ethical choice".

- 18 Any discussion of process illustrates the fundamental difference in approach between the present author and me. He goes from theory to practice and I the reverse. I reviewed more than 30 nuclear inquiries, national and international, and drew conclusions about their compositions and processes in Report AECL-10768, 1993. Later, I published a detailed analysis of the BS Report in "Malice in Blunderland?", Canadian Nuclear Society Bulletin, 19, 2 & 3, 1998, ([www.magma.ca/~jalrober/Blunder.htm](http://www.magma.ca/~jalrober/Blunder.htm)) showing how it arrived at flawed conclusions from a flawed process. In Chapter 17 of my book, "Decide the Nuclear Issues for Yourself: NUclear need not be UNclear" at [www.magma.ca/~jalrober/Chapter17.htm](http://www.magma.ca/~jalrober/Chapter17.htm) I recommend an improved process. The ethics of the process are not mentioned explicitly: in my approach it is just one of the requirements that must be satisfied, not a separate subject. In 2001 I made available at [www.magma.ca/~jalrober/critique.htm](http://www.magma.ca/~jalrober/critique.htm) "A critique by J.A.L. Robertson of 'Nuclear waste: exploring the dilemmas' by Lois M. Wilson" questioning her interpretation of the Panel's history. Readers of the present paper are not made aware of any of this.

I addressed the questions of trust and public participation in my response, [www.magma.ca/~jalrober/cceer2a.htm](http://www.magma.ca/~jalrober/cceer2a.htm), to one of the author's submissions to the Panel. AECL's EIS and my submissions tell how the nuclear industry and its regulator have made serious but unsuccessful attempts to secure public participation. My own attempts at this objective are listed at [www.magma.ca/~jalrober/media.htm](http://www.magma.ca/~jalrober/media.htm). The NWMO can encourage participation but it cannot force it. A requirement in the process for public participation, let alone support, would guarantee failure.

Finally, any discussion of nuclear ethics should include those issues raised by nuclear proponents. These include, but are not confined to:

- How wise energy consumption can be good, not evil.
- The ethics of making any technology too safe.
- The ethics of some nuclear critics, notably church leaders.
- The principles enunciated in my companion paper on this website.

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