

## **Meeting of Ethical Expert Roundtable – January 17, 2004**

### **NWMO Overview of Recent Activities and Roundtable Questions**

- Elizabeth Dowdeswell provided an overview of NWMO activities since last meeting and planned activities for the first half of this year. Among the activities discussed were:
  - Additional Background Papers recently received and posted on the website and papers still to come;
  - Plans for the further development of the assessment framework and description of the management approaches leading up to NWMO's second discussion document, which is planned for release mid-year. Mention of convening of a working group for this purpose;
  - The multi-prong engagement process which is being conducted in parallel, the results of which will be continually streamed in to the framework development process. Engagement process includes:
    - Submissions function on the website;
    - Citizens' Dialogues across Canada in conjunction with Canadian Policy Research Network (CPRN). This is to reach out to Canadians directly and engage them in an informed discussion about trade-offs, and Canadian values with respect to this particular issue;
    - Consultation with national aboriginal organizations;
    - Dialogue with reactor site communities through a process in which each community will design how they want to engage in the study;
    - Targeted dialogue with specialized interests through individual meetings, and group meetings in the form of a series of national and regional dialogues.
- Roundtable members asked how the assessment framework development process will be linked to the first discussion document. NWMO answered that the assessment process will take as its starting point the 10 questions outlined in chapter 3 of the discussion document, and proceed to attempt to operationalize these questions, better define them, give them weight, and measures in order to develop an elaborated assessment framework. This elaboration process will be informed by input from the dialogue and engagement process.

- Roundtable members asked how the discussion document was distributed and comments received to date. NWMO answered that the discussion document was published on the NWMO website, an email advisory about the availability of the document was sent to 800 individuals who had expressed a prior interest and mailed to more than 1,000 individuals across Canada. NWMO continues to receive requests for the document through its toll-free number (1-866-249-6966) and through requests to the website. A relatively small number of comments have been received to date to the website and/or through mail – many of those received to date from a single individual.
- Roundtable members asked how many copies of the discussion document were sent out to each individual. NWMO answered that one copy was sent, noting more copies are available upon request and the availability of the document on the website.
- Roundtable members asked how NWMO will hear from the ‘silent majority’? NWMO answered it is attempting to involve Canadians who might not otherwise become involved through the Citizens’ Dialogue initiative. This initiative randomly recruits citizens to the day long session, and uses a work book process, as well as several large and small group dialogue sessions throughout the day, as means to engage a cross-section of Canadians in an informed discussion.
- Roundtable members asked whether citizens in this dialogue are asked to make actual decisions, and whether the Citizens’ Dialogue process is similar to a citizen jury process. NWMO answered that the Citizens’ Dialogue process is focused on identifying the values which people bring to bear in decision-making on this issue, rather than asking citizen’s to assess the technical methods and management approaches. The iterative process which NWMO is using attempts to involve and receive direction from Canadians at multiple points in the process. NWMO is not yet at the point of assessing management approaches, rather NWMO is at the point of ensuring that we have characterized the problem the study is to address appropriately, and we have identified the broad range of questions which ought to be asked and answered in the study and should be used to assess the management approaches in the next phase of work.
- Some Roundtable members suggested that a citizens jury type process be considered after this phase of work has been completed and once NWMO has moved to the point of engaging citizens in the actual assessment of the technical methods and management approaches.
- Roundtable members questioned whether the NWMO process is focused on recognizing the right of the public to be heard, or the right of the public to participate in decision making. NWMO answered the intent is the latter, through integrating citizen dialogue throughout the study. The suggestion was made by a Roundtable member that, in order to highlight the innovative nature of the NWMO process, NWMO may want to compare the NWMO process with the Seaborn Panel process in its next discussion document.

- Some Roundtable members suggested the NWMO will need to provide additional forums for citizens to express their view 'off the street'. NWMO mentioned that such forums are being considered for later phases of work.

## **Roundtable Comment on NWMO's First Discussion Document "Asking the Right Questions? The Future Management of Canada's Used Nuclear Fuel"**

### Overall reaction:

- Overall, the Roundtable expressed a positive reaction to the document, and to the process which NWMO is engaged in:
  - The range of values identified in the discussion document are appropriate
  - The success of this document will hinge on how the key concepts and questions are operationalized and given weight. The document does not discuss the difficult trade-offs inherent in decision making, and difficult trade-offs will be required. However, it is important and appropriate to get the issues on the table through this document as a foundation for discussion, understanding that people will likely disagree on how the issues ought to be addressed. This is consistent with a good process.

### Additional clarity required:

- Roundtable members suggested additional clarity in the discussion document is necessary, or would be helpful, in the following areas:
  - The length of time we are planning for, that is the length of time for which the waste is hazardous, is unclear. For instance, the reader might think we are talking about 100 or 200 years (7 generations) rather than 1 million years (40,000 generations). The document glosses over the length of time the waste needs to be dealt with. (NWMO noted there does not appear to be a full consensus among experts on length of time for which the waste is hazardous. Some say the material is hazardous for 800 years – the time required for the waste to decay to radiation levels equivalent to that of natural uranium; others say the duration of the hazard is 10,000 years based on the half lives of certain elements contained in the used fuel.)
  - The chart on page 27 shows dramatic drop-off of radioactivity. This graph suggests the danger period is shorter than it actually is. This chart requires a very sophisticated reading in order to understand the timeframes are actually much longer than presented.
  - The chemical toxicity problem associated with the waste, and the fact that the chemical toxicity never decreases is unclear from this presentation.
  - Precautionary Principle description does not capture its entire essence. The NWMO needs to specifically state that the burden of proof is on the proponent – those who want to engage in the activity.

- The term “management approach” tends to connote that nuclear waste is an engineering problem (despite NWMO’s definition to the contrary), and so has a manipulative aspect. It begs an ethical question: we should not be managing something we should not be doing at all. NWMO needs to be more specific that it does not mean this.
- In terms of setting context, it would be useful to add: 1) we (society) are releasing a whole range of chemicals to the environment all the time; 2) there is background radiation in the environment and organisms have the capacity to deal with background radiation.
- Page 53: ‘Q.5 Synthesis and continuous learning’ - Do not understand how in handling waste there can be an improvement in human and ecosystem well-being in the future. The concept of ‘protection’ is understandable, but not the concept of ‘improvement’. The potential for improvement should be considered, but this should not be made a requirement.
- NWMO needs to be clearer on what it is expecting people to do with the discussion document, and how it wants people to become engaged in the study.

Political process:

- NWMO should consider creating a companion document concerning the political process which will be used to move people along; this may raise some important ethical issues. Exercise of power needs to be dealt with and made clearer.

Firewall to failures:

- Need to build a firewall for a few failures. NWMO’s approach needs to be seen as pluralistic and credible at its core. This is particularly important because the kind of broad involvement process which NWMO is engaging in comes with some risk

The nuclear energy question:

- The issue of whether we should be continuing to generate nuclear waste needs to be addressed more strongly, and is a vulnerability of the document. Although it is not in the mandate of the organization, the nuclear energy question will be politically linked with the waste question. Practically speaking, we cannot expect people to have a discussion without talking about the nuclear energy question.
- A fundamental issue for the study is whether we are building a waste management solution for existing waste or for new waste production. NWMO might consider looking at both of these scenarios in its assessment. Or better yet, four options: phase out of nuclear power, maintain existing plants, expand use of nuclear power, repatriation from other countries of nuclear waste from fuel and/or uranium Canada

has sold to other countries. If these scenarios are a possibility, it is unethical not to identify and address them.

- ‘Justification of Necessity’: If the choice of management approach is made under the justification of necessity, that is in order to avoid a greater harm and/or as the best solution of a list of bad solutions, this must be stated. If the justification of necessity is used, this would imply that the creation of more nuclear waste is ethically unacceptable.
- The nuclear energy question was discussed at length by the Roundtable. In the context of this discussion, the following types of considerations were raised and discussed by Roundtable members:
  - It is unethical to talk about disposal without talking about how the waste is generated in the first place.
  - It may be important to keep the nuclear energy question separate from the waste question. Some groups do not want to see any solution to the waste question, because they want to see nuclear power phased out. Is it, therefore, ethical to premise the discussion of the waste question on discussion of the nuclear energy question?
  - Is it unethical not to? It may be important to discuss the conditions for which implementation of a particular waste management solution is appropriate. And these conditions may include the future of nuclear energy.
  - It is difficult to identify and engage the full range of stakeholders unless all four nuclear energy scenarios are considered. If repatriation of fuel is required in the future (scenario 4), many more Canadians will be impacted by the transportation of this fuel.
  - It would be ethical and more balanced for NWMO to take the four scenarios into consideration. Canada is likely to change its energy policy over the time period for which the waste is hazardous. Nuclear energy is likely to be phased out at some point in the future in favour of another technology. This should be considered, even if we cannot identify now what that technology will be.
  - Another reason for considering alternative scenarios, fossil fuels will run out and Canada and the US will at some point need to find other big energy resources. This might lead to the expansion of nuclear power.
  - The nuclear energy question is a crucial contextual question. The minimum issue is what to do with the waste that already exists. The meta question is how difficult is it for a solution to be found for nuclear waste, since the answer to this question is an important consideration to the future of nuclear energy.

- Even though the acceptability of current nuclear generation, and the expansion of nuclear generation, are not questions within the NWMO mandate, we know the waste question will be linked with the energy question politically. Especially by those who think a decision now may lead to a catastrophic situation in the future.
  - It is also a practical question. NWMO can't expect people to have a discussion about nuclear waste without talking about nuclear energy.
  - The uncertainty of what we are doing to our forebears and the environment in creating this nuclear waste in the first place may make it inherently wrong to continue to produce this waste.
  - It is an ethical requirement to address likely alternative scenarios. We might be able to manage existing waste, but not four times as much. NWMO is not ethically enjoined to do this.
  - We recognize the need to do something with the waste that exists, no matter how hazardous it may be, but with obvious implications to how we should continue in the future. If in the end we can only identify a poor approach for waste management, it is ethically unjustifiable to continue to produce waste. Conversely, if there is a good solution to the waste question, then maybe nuclear energy should continue since there are no implications to generating 10 times the amount of waste.
  - Concerned that the credibility of the NWMO process will rest on the opportunity for people to ask the kind of questions about nuclear energy we are raising. NWMO's answer should not be that these questions aren't on the table, and so can't be discussed.
- (NWMO noted that it's approach to this point has been to listen to argument and discussion on the nuclear energy question, and to record it to be considered and addressed later in the study. NWMO has not prevented the question from being raised, nor has it put this question front and centre. The nuclear energy question was considered very explicitly in the scenarios exercise which was convened and reported upon last year. The report from this exercise is intended to be an important input to the assessment process.)

Treatment of ethics in the document:

- The underlying ethical assumptions are situational or utilitarian based rather than principled based. There is more focus on process ethics than substantive ethics. More attention needs to be given to substantive ethical considerations.

- Some discomfort with handling of ethics in such a diffuse manner – although ethics is also identified as an over-arching variable which is considered appropriate.
- The heading “Alternative Perspectives”, and inclusion of ethics under this tends to diminish its importance. Rather should be entitled “Crucial Perspectives” or similar.
- Insufficient emphasis on inclusion of all life forms. Need to start with the principle of respect for all life: human, animal and plant. Page 55, under the heading of “Environmental Integrity”, is the only place the document specifically references life forms and life. All life is not captured well by the last bullet.
- It is legitimate to ask what can we claim from the future as benefits/ future obligation to the past, rather than just present’s obligation to the future. This should be included.
- Document could be more explicit about trade offs, for instance isolation versus recoverability. However, some kinds of trade offs are non commensurable – some kinds of risk may not be able to be compared with other kinds of risk – and this needs to be considered and addressed.
- Page 53, under the heading “Ethical Considerations”, the first bullet has a colon missing after the word “rights”. The bullet should read: “ethical-impact analyses have been undertaken to address problems such as environmental justice and violations of rights: to know, of due process, of equal protection, to life, to free informed consent, and to be compensated for harms/threats of harm”.

Traditional knowledge:

- Cannot see how aboriginal ethics can be applied to finding a waste solution since if these ethics had been applied earlier we never would have embarked on the nuclear energy path which has created this situation in the first place. One cannot possibly guarantee anything for the length of time this material remains hazardous.



## **Next Steps**

Roundtable will attempt to create a list of questions directed at substantive ethical issues, as well as process ethical considerations. Such a list is to be designed to create a common foundation for discussion and debate, would require arguments to be connected with the principles, exceptions from this would need to be justified. Questions may be specific to stages in the process, assuming different values come in to play at each stage

These questions intended to be used to help those working on the assessment framework to think through the ethical issues, be conscious of their values, be required to articulate and explain them as part of the process, and spell out how these values have been reflected in the assessment. List of questions not intended to be a closed system nor any more than the minimum standard to be met. Results of the Citizens Dialogue will be an important input. Starting point will be the IAEA Safety Fundamentals principles.

In preparation for the creation of this list of questions, Roundtable members allocated the balance of their meeting (several hours) to discussion of possible questions and principles.

## **Next meeting**

Next meeting to be timed before Discussion Document 2.

All agreed to extend the mandate of the Roundtable beyond the original three meetings identified.