

Summary Report

# Roundtable Dialogue with Youth at the International Youth Nuclear Congress

DPRA Canada

## **Discussion Document 1: Asking the Right Questions? – What Canadians are Saying**

The NWMO has committed to using a variety of methods to dialogue with Canadians in order to ensure that the study of nuclear waste management approaches reflects the values, concerns and expectations of Canadians at each step along the way.

A number of dialogue activities have been planned to learn from Canadians whether the elements they expect to be addressed in the study have been appropriately reflected and considered in Discussion Document 1. Reports on these activities will be posted on the NWMO website. Your comment is invited and appreciated.

### **Disclaimer**

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**Nuclear Waste Management Organization  
The Future of Canada's Used Nuclear Fuel  
"Asking the Right Questions?"**

**International Youth Nuclear Congress Round Table**

**Wednesday, May 12th, 2004  
The Courtyard Marriott Hotel Downtown Toronto  
475 Yonge Street  
Toronto, ON M4Y 1X7**

**Summary Notes**

**1. Participants**

The following were in attendance at the NWMO International Youth Nuclear Congress Round Table – May 12, 2004:

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Ari Ikonen	<a href="mailto:ari.ikonen@posiva.fi">ari.ikonen@posiva.fi</a>
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**2. Session Overview**

Youth were invited to participate in the National Stakeholder and Regional Dialogue Sessions. Following one of these sessions, the possibility of holding a similar session during the International Youth Nuclear Congress was raised. The International Youth Nuclear Congress (IYNC) works to stimulate innovative thinking and debate amongst young professionals (between the ages of 18 and 37) from around the world who work in the nuclear industry. Every two years an international conference is organized where delegates share their views in an open and frank atmosphere to further advance the aims and ideals of the IYNC. The most recent IYNC was held in May 2004, in Toronto.

The NWMO roundtable dialogue session was held on Wednesday, May 12<sup>th</sup> at the Courtyard Marriott Hotel in Toronto, during the 2004 IYNC. While a number of individuals visited for a short time, twelve Congress registrants participated in the complete session, including researchers, staff from various waste management organizations; government and regulatory affairs; etc. Donna Pawlowski and Ginni Cheema representing the NWMO and the DPRA staff (Constance Ramacière, Jim Micak – facilitators; Rachelle Laurin-Borg (recorder) attended.

A presentation was given by Donna Pawlowski who explained the origin of the Nuclear Waste Management Organization, its mandate and recent activities. She then reviewed the content of Discussion Document #1, focusing on three areas:

- The Challenge/Opportunity Facing Canada
- The Range of Possible Technical Methods
- The Proposed Analytical Framework

She described the various dialogue processes underway, and noted that by November 2005, the NWMO must provide a report with recommendations to the Federal government on a long-term management approach for the management of Canada's used nuclear fuel. Following the presentation, a question and answer session was held.

The round table discussion then focused on three key questions:

- **The Challenge Facing Canada** – Has the NWMO described the problem correctly?
- **The Technical Methods** – Is the characterization of technical methods appropriate? Should other technical methods be considered in the study beyond the three required by legislation? If so, on what basis?
- **The Analytical Framework** – Does it capture the key issues? What changes should be considered? Is it comprehensive?

Following is a summary of the main comments that were put forward by individuals as they reflected on these different discussion areas. No attempt was made to achieve a consensus or agreement on the various comments. Where agreement was evident, it is noted.

### 3. Asking the Right Question? Has the problem been correctly described?

#### (a) Is it 'Waste'

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There was general discussion regarding the characterization of used nuclear fuel as 'waste':

- It was noted that 99% of the fissionable material remains when the bundle is removed from the reactor. Although not economical today, it is a valuable resource for possible use by future generations.
- One participant mentioned that any human action generates waste, and the emphasis should be changed from generating the waste to explaining that used fuel is currently being managed in an ethical manner. The participant felt that management of used nuclear fuel should be compared with other waste streams.

- Used fuel is a potential energy resource; it is irresponsible to characterize it as waste.

### **(b) The Nature of the Hazard and Public Perception**

There was considerable discussion around the concept of public perception and opinion and the nature of the hazard.

- Participants offered that the general public believes that radiation in any amount is harmful. Efforts should be made to better inform the public on the true effects of radiation.
- A participant offered that there is information that supports that small amounts of radioactivity are beneficial in that it can stimulate the damage control system in our bodies and reduces congenital deformations. The NWMO should in their document provide a balance of good scientific information to better inform Canadians.
- Some participants offered that even nuclear experts can't agree on facts and that if there is professional disagreement, the public will lose confidence.
- Another participant offered that you don't build public confidence by trying to make people believe that used fuel isn't at all harmful or that it is extremely dangerous. Don't lay the foundation for myths by providing incomplete information.
- There may be no requirement for the long-term management of used nuclear fuel and that path, exposure, dose and adaptive response must be considered to understand the hazard.
- It was suggested that if NWMO is striving for social acceptance, it should be based on good information.

### **(c) Public Education, Confidence and Social Acceptability**

- There is a need for public education, find a way to get the public to understand what needs to be done rather than prescribing a technical solution. People don't respond well to scientific information, they need to be re-assured that there is no harm.
- Another view was that the technical and social components of the study should not be treated as separate entities – they need to be intertwined.
- It was suggested by some that there might be a need for an authority that provides honest clear facts e.g. teaching institutions, international bodies, and government.
- Used fuel is currently being stored in containers. Some expressed the view that long-term storage is already being carried out and that the real issue is that deep geologic disposal is inevitable. The challenge is how do we make it socially acceptable?

## **4) Basis for Determining Whether to Study Technical Methods**

After a presentation on the technical methods, the participants were asked to consider the range of technical methods presented in Discussion Document #1 – Chapter 4, specifically whether a rationale existed for the NWMO to study technical methods other than the three required to be studied by

legislation (deep geologic disposal, on-site storage, centralized storage). Participants were asked to provide comments on two groups of methods:

- (a) Technical Methods of Limited Interest
- (b) Technical Methods Receiving International Attention

#### **(a) Technical Methods of Limited Interest**

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- Concerns were expressed by many of the participants with methods that dispose or ‘hide’ the waste.

#### **(b) Technical Methods Receiving International Attention**

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- An alternative was proposed for the term ‘reprocessing’. It was suggested that the term recycling is more positive and that Canada should examine recycling its used fuel. At the same time it was noted that there is a residual waste stream that arises after recycling that also needs to be managed, and that concerns expressed over non-proliferation may not be relevant.
- Considerable discussion arose around the use of international repositories, the following points were raised:
  - Canada should look at the use of international repositories. It was suggested the United States may want to handle Canada’s nuclear waste because Canada does not have the same level of military security; using Yucca Mountain as a repository was viewed by some as offering a high-level security and better control over the used fuel; that this would be more efficient; Yucca Mountain could provide an interim, centralized storage solution as research or work on a Canadian repository continues.
  - Concerns were expressed that Yucca Mountain has already been through such a social and political struggle and Canada already has experienced challenges with transporting household waste to the United States. As a result, the use of Yucca Mountain by Canada is unlikely.

#### **(c) General Comments**

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- The waste needs to be cared for and monitored while research continues to find new solutions so that we don’t limit future possibilities.
- It should be recognized that society is not ‘all-knowing’ and there is a need to give others the opportunity to utilize other options.
- The materials need to be effectively managed, not just released.
- A question was raised as to whether the methods chosen outside of the three mandated would be studied as comprehensively as those mandated.
- It is viewed by some that the government of Canada’s hands are tied beyond the three mandated methods. We have experience in the three mandated methods and should focus on these.
- In terms of dry storage, it was suggested that current structures will last much longer than 100 years and that the situation is not urgent – time allows for a full study of the methods.

- An alternative view was that this would be treading on dangerous ground. The public needs guarantees as to the safety of dry storage beyond the 50-year container design.
- It was viewed by some, that the technical methods seem to include either institutional control or not, which provoked a discussion regarding the need for or reliance on institutional controls. Some felt that there is a public demand for institutional controls.
- It was also suggested that deep geologic disposal with the possibility of retrieval and monitoring for hundreds of years was a preferred method. Sealing the site would require a parliamentary decision. In principal the waste could be left in the event of failed institutional control.

## **5) The Analytical Framework**

The participants were asked to provide comments on the proposed NWMO analytical framework considering it as a whole, and by considering each of the 10 aspects and related considerations..

### **(a) General Comments**

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- A question was raised regarding the treatment of educational issues and how to approach education within the framework.
- A concern was expressed that the nature of the hazard did not warrant consideration of such an extensive range of matters.
- With science comes uncertainty – this should be reflected. perhaps a section on unknowns.
- A concern was expressed that the questions posed are unanswerable.

Following are specific comments on selected questions that make up the Analytical Framework which the group focused on:

### **Q1- Institutions and Governance**

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- Governance should include a keynote role for governments. It is the view of some that the public will never allow privatization.
- There was support by the group that the fundamental principals of openness and accountability need to be considered.

### **Q2- Aboriginal Values**

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- It was viewed by some, that by singling out aboriginal communities, that we are assuming that the solution will be implemented on aboriginal lands.

### **Q3 – Synthesis and Continuous Learning**

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- Considerations should include a commitment to public education to inform people.

#### **Q-4 Social Aspects -Human Health, Safety and Well-Being**

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- Need to be more explicit. The question refers to ‘people’. Who specifically?
- It was suggested that the definition of community should be very broad.

#### **Q5- Environmental Aspects**

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- The focus of the environmental aspect is on used fuel. It would be interesting to discuss the environmental effects of other energy sources and compare.

#### **Q6 – Economic Aspects - Viability**

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- Need to be more explicit. The question refers to ‘community’. What community? How defined?

#### **Closing Statements**

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All participants were asked to provide a closing statement or summary perspective, which included:

- Don’t drag this out by the heels, but something in place, ensure that there is a management system or plan in place (this was echoed by many);
- Regarding governance and decision-making - , this should not be strictly a government decision, it needs to be very broadly based;
- Need to consider this holistically, need to consider other sources of electricity generation and the environmental aspects of those as well;
- In times past, the question of nuclear waste and nuclear power were coupled - now the question of new nuclear power can only be addressed after a management system is in place for the waste;
- Openness, transparency, and accountability are key (this was echoed by many);
- Develop a timetable and stick to it; ensure that it is understandable to all, including the politicians; be open and honest
- Use simple and plain language; good science; examine and make explicit underlying assumptions (this was echoed by a few)
- Look to good practices within the nuclear industry, the use of operating experience; bench-marking; and international collaboration.

#### **Follow-up Actions**

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- Distribute participants email list to all participants.

#### **Status of Notes**

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- These are the summary notes of the workshop and are not intended to represent a verbatim transcript.