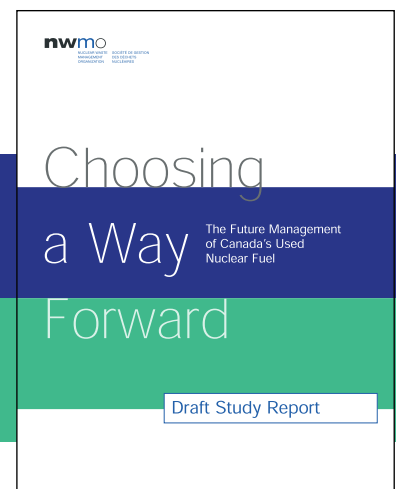


Dialogue Report

Dialogue on *Choosing a Way Forward* The NWMO Draft Study Report Saint John, NB - July 5-6, 2005

Stratos



NWMO Background Papers

NWMO has commissioned a series of background papers which present concepts and contextual information about the state of our knowledge on important topics related to the management of radioactive waste. The intent of these background papers is to provide input to defining possible approaches for the long-term management of used nuclear fuel and to contribute to an informed dialogue with the public and other stakeholders. The papers currently available are posted on NWMO's web site. Additional papers may be commissioned.

The topics of the background papers can be classified under the following broad headings:

1. **Guiding Concepts** – describe key concepts which can help guide an informed dialogue with the public and other stakeholders on the topic of radioactive waste management. They include perspectives on risk, security, the precautionary approach, adaptive management, traditional knowledge and sustainable development.
2. **Social and Ethical Dimensions** - provide perspectives on the social and ethical dimensions of radioactive waste management. They include background papers prepared for roundtable discussions.
3. **Health and Safety** – provide information on the status of relevant research, technologies, standards and procedures to reduce radiation and security risk associated with radioactive waste management.
4. **Science and Environment** – provide information on the current status of relevant research on ecosystem processes and environmental management issues. They include descriptions of the current efforts, as well as the status of research into our understanding of the biosphere and geosphere.
5. **Economic Factors** - provide insight into the economic factors and financial requirements for the long-term management of used nuclear fuel.
6. **Technical Methods** - provide general descriptions of the three methods for the longterm management of used nuclear fuel as defined in the NFWA, as well as other possible methods and related system requirements.
7. **Institutions and Governance** - outline the current relevant legal, administrative and institutional requirements that may be applicable to the long-term management of spent nuclear fuel in Canada, including legislation, regulations, guidelines, protocols, directives, policies and procedures of various jurisdictions.
8. **Workshop Reports** - provide information on the outputs and outcomes of some NWMO engagement activities including discussions and expert workshops.
9. **Assessments** - provides perspectives on the advantages and limitations of the management approaches under study.

Disclaimer

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Dialogue on *Choosing A Way Forward*
The NWMO Draft Study Report
Saint John, New Brunswick, July 5-6, 2005

DIALOGUE REPORT

August 8, 2005

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DIALOGUE ON
CHOOSING A WAY FORWARD
THE NWMO DRAFT STUDY REPORT

– DIALOGUE REPORT –

Saint John, New Brunswick
July 5 & 6, 2005

Submitted to:

Nuclear Waste Management Organization

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1 Introduction

1.1 Session Objectives

The Nuclear Waste Management Organization (NWMO) hosted the third of six dialogue sessions on its *Draft Study Report: Choosing a Way Forward - The Future Management of Canada's Used Nuclear Fuel* in Saint John, New Brunswick on July 5 and 6, 2005.

Participants to the dialogue sessions were invited on the basis of their prior involvement during the NWMO study process, including the compilation of background information, as well as workshops, roundtables, contributors to technical studies, and dialogue and engagement activities on a broad range of issues undertaken by NWMO since November 2002. A total of 15 participants attended the sessions. Appendix I provides a listing of the NWMO research and engagement activities from which the Dialogue Session participants were identified.

The purpose of the dialogue session was to:

- Provide an opportunity for participants to comment on the draft NWMO recommendation and *Draft Study Report*;
- Provide a forum for an exchange of views; and
- Provide the NWMO with the opportunity to improve the recommendation before it is finalized.

This report is a summary of views expressed at the dialogue session. The meeting was not intended to reach consensus among participants, though the report notes areas of general agreement.

1.2 Session Opening

Elizabeth Dowdeswell, President of the NWMO, provided participants with an overview presentation on the work of the NWMO and the draft recommendation described in detail in its *Draft Study Report*.

Ms. Dowdeswell informed participants that all inputs to the *Draft Study Report*, including reports on previous dialogue and engagement sessions, are available on the NWMO website (www.nwmo.ca). Finally, she reminded participants that the NWMO is required to submit its final recommendation to the Minister of Natural Resources Canada by November 15, 2005.

2 Participant Views on the Recommended Approach

2.1 Requests for Clarification

Participants raised a number of questions with respect to nuclear power and used fuel issues in general, and with the *Draft Study Report* and development of the draft recommendation in particular, including:

- The manner in which comments submitted on the Draft Study Report to the NWMO will be handled and respond to;
- The engagement activities that the NWMO has undertaken with faith-based communities of interest;
- What will be done prior to construction of a centralized facility - with used fuel that is currently stored in containers and facilities which are coming close to the end of their planned service life;
- Citizen engagement and dialogue processes that have been undertaken in Sweden, Finland, the United States and any other jurisdictions that are developing plans for managing used nuclear fuel;
- Canada's obligations, or right of refusal, with respect to used nuclear fuel imports from other countries that have purchased the CANDU technology or Canadian uranium;
- As the USA has selected Yucca Mountain as the site for storage of their used nuclear fuel, one participant questioned whether it would be a suitable North American solution for Canada to transport its used nuclear fuel to this facility once it becomes available; and
- Who has ultimate responsibility (NWMO, Government, or others) for site selection choices?

Elizabeth Dowdeswell and Sean Russell of the NWMO responded to these requests for clarification and directed participants to specific details contained in the *Draft Study Report*, where appropriate.

2.2 General Views on the *Draft Study Report*

Participants expressed strong support for the engagement and dialogue processes undertaken by NWMO to date. Participants also expressed strong support for the transparency and objectivity demonstrated by NWMO and recognized the difficulty the NWMO faces in balancing the need for a timely decision with the need to recommend the most appropriate and lasting solution. The NWMO's efforts and support for engaging Aboriginal communities were especially noted. One participant suggested that the opportunities and resources

made available allowed for Aboriginal peoples to gain a better understanding of the nuclear industry in general, and the management of used fuel in particular.

While offering support for the *Draft Study Report*, some participants expressed the view that the NWMO should recommend that the generation of used fuel be stopped. These participants suggested that the only lasting solution to the issue of nuclear waste must involve the cessation of nuclear power generation. Other participants strongly disagreed and indicated their support for ongoing and expanded nuclear power generation. Regardless of their views on the future of nuclear power production in Canada, all participants strongly agreed on the need for decisions on the management of used nuclear fuel to be reached now.

With respect to New Brunswick in particular, participants suggested that reaching agreement on the management of used nuclear fuel in that province could be particularly difficult due to a combination of factors including:

- The ongoing debate on the appropriateness of retrofitting the Point Lepreau nuclear generating station; and
- The implications of Aboriginal title with respect to much of New Brunswick, including the area where the Point Lepreau nuclear facility is located; and
- Perceptions that the Province and New Brunswick Power's past engagement and dialogue activities on nuclear power generation have been deficient.

2.3 Views on the Appropriateness and Key Characteristics of the Recommendation

Participants expressed a high level of comfort with the recommendation as a whole and supported the NWMO's identification and recommendation of a "Fourth Option" that combines the strengths of each of the three options required to be studied.

Centralized Containment and Isolation

Participants generally supported the NWMO recommendation of centralized containment and isolation of used nuclear fuel in a deep geologic repository in a suitable rock formation. They suggested that this method would be most cost-effective and provide for the greatest levels of security in both the medium and very long time periods. While supporting this recommendation in principle, some participants requested more detailed information on anticipated costs for New Brunswick under this option, and a comparison of the costs to the Province of constructing a facility to manage only its own wastes. Several participants also

noted that the transportation activities associated with this option would concern citizens. It was felt, however, that the risks associated with transportation were both acceptable and manageable, but that NWMO will need to undertake significant activities to increase confidence among communities on transportation routes. It was suggested that this could be done, in part, by providing more detailed information on transportation aspects such as possible routes, expected number of trips under different transport modes, safety and security provisions, etc.

One participant suggested that the NWMO erred in reporting that the used nuclear fuel will remain a hazard for up to 1 million years, suggesting that the NWMO need only be concerned with deep geological storage over a period of 250 to 500 years.

Phased Decision-Making

Participants strongly supported NWMO's recommendation for phased decision making, arguing that this provision allows for a decision to be made now and responsibility to be taken by this generation, and also allows for:

- Decisions to move as quickly or slowly as necessary;
- Continued technology development;
- Flexibility to accommodate more or less waste; and
- Future generations to be proactively engaged in the management of the used nuclear fuel.

Participants did caution, however, that this provision carries the risk of the project intent being changed or the project itself being shelved entirely at a future date. It was suggested that such risks could be overcome by:

- Initiating implementation activities as soon as possible;
- Establishing a timeline with fixed decision points and sticking to it; and
- Bringing youth – the future generations – into the decision making process.

Interim Shallow Storage

Participants generally supported the provision for centralized interim shallow-level storage, indicating that it also provides for increased security of the material and additional time for technological development in support of containment and isolation of used fuel in a deep geologic repository. Some questioned whether this provision was necessary, however, and were concerned with the additional costs involved. Other participants felt that NWMO needed to do a better job of explaining the benefits of centralized interim shallow level

storage against those of leaving the used fuel at the reactor sites until the deep geologic repository is available.

Continuous Monitoring

Participants also offered strong support for continuous monitoring of the used fuel, but suggested that the report should provide more details on what will be monitored and how. Questions were also raised with respect to who should be responsible for conducting ongoing monitoring and how and to whom monitoring information would be communicated.

Retrievability

Participants offered mixed support for the provision of retrievability. For some participants, used nuclear fuel represents a valuable resource that should be available to future generations, should they wish to take advantage of it¹. These participants viewed the addition of this provision in the recommendation as an improvement over past design recommendations and thought that some consideration should be given to ensuring that the used nuclear fuel is retrievable, with suitable security, for all time. However, they also suggested that the final study report should provide a better discussion of why reprocessing of the used nuclear fuel is not feasible at the present time and also indicate the amount of energy contained in the used nuclear fuel and which will remain available for future generations.² Other participants offered strongly divergent views, stressing that a truly lasting solution to the nuclear waste issue would be one that puts the used nuclear fuel effectively out of reach for all time. These participants also expressed the view that the provision for retrievability will contribute to more difficult decision-making at a later date, when the question of ownership over the material may be less clear. Some of these participants suggested that the inclusion of this provision created the impression that the nuclear industry wants to ensure future access to this material in order to ensure its future growth, and that the *Draft Study Report* demonstrates a bias towards meeting industry's desires in this respect.

2.4 Opportunities for Improving the Draft Study Report and Recommendation

Participants suggested that the final study report and recommendation would benefit from increased clarity of language and by making the report more

¹ One participant suggested that NWMO is a misnomer as used nuclear fuel is a resource and not a waste. This participant suggested that the name of the organization be changed to better reflect this view.

² This participant suggested that the used nuclear fuel contains up to 70 times as much energy as produced when it was inside the CANDU reactor.

understandable and accessible to the general public. They proposed that Part 1 of the report include short discussions of key areas of public concern identified during the dialogue sessions. Other suggestions included:

- Making some of the information and arguments more relevant to Canadians by, for instance:
 - Translating the cost estimates for implementing the recommendation into a cost per kilowatt hour of electricity generation;
 - Translating the transportation discussion into estimates of the number of trips that will be required to move the fuel from existing reactor sites under each of the possible transportation methods (e.g. road, rail, ship);
 - Providing clarity on the amount of space that will be required for the centralized repository under different future scenarios³ and an explanation of how the facility will be designed to safely accommodate each of these possible outcomes;
 - Describing in more detail what “monitoring” will entail in the future; and
 - Making the report more locally relevant by providing a more detailed breakdown of the projected costs, including transportation costs for each nuclear generating province, New Brunswick in particular.
- Providing additional material and information in the final study report, such as:
 - A “road map” within Part 1 of the report, which provides details on where additional information on key issues can be found;
 - Details on NWMO’s transition plans, as it moves from a planning to an implementing organization.
 - Inclusion of the *Nuclear Waste Act*, in its entirety, as an Appendix to the final study report; and
 - Providing explicit references to Government of Canada policies on nuclear non-proliferation.

³ Such scenarios should include: 1) cessation of nuclear power generation, 2) continued generation from existing facilities until the end of their planned service life, and 3) expanded nuclear generation beyond the planned service life of existing reactors

3 Participant Views on the Conditions Required to Implement the Approach Successfully

Participants addressed four key implementation issues and offered their views on how implementation could proceed in a manner that builds public confidence and that leads to successful outcomes. The four implementation issues addressed were:

- Citizen engagement;
- Governance;
- Financing; and
- Siting.

3.1 Participant Views on Citizen Engagement

Participants stressed the need for NWMO to make a concerted effort at public education and outreach in order to build public confidence and create an informed citizenry that can engage in a meaningful dialogue on the management of used nuclear fuel. They recognized the challenges this will involve given what they see as Canadians' low level of understanding and interest. Participants were especially concerned by the perceived lack of awareness and understanding within the Province of New Brunswick. Participants also indicated that NWMO will need to play a strong role and provide sufficient financial support to build the capacities of individuals and communities.

Participants identified a need for a television broadcast information and outreach campaign to inform Canadians generally and citizens of the four identified provinces with significant involvement in the nuclear fuel cycle more specifically. This should begin soon after the federal government decision on the NWMO recommendation. Participants stressed the importance of NWMO leading and having ownership of the advertising campaign, rather than governments or utilities, to ensure balanced and credible reporting and to address public concerns and / or misconceptions. Also in the immediate term, some participants identified an opportunity for NWMO to "piggy back" its outreach and awareness activities on those being undertaken with respect to the refurbishment of the Point Lepreau nuclear facility. Others disagreed, raising concerns over this affecting NWMO's impartiality.

A number of participants strongly encouraged the NWMO to sustain and provide support for dialogue and engagement of Aboriginal peoples, and to keep abreast of court decisions with respect to formal consultations with Aboriginal peoples. Another participant suggested that NWMO increase engagement of faith-based

communities of interest and ensure that the spiritual dimension continues to be considered within NWMO's work. This participant noted that this could assist NWMO by providing a unique perspective on the long time frames associated with implementation of the recommendation. Other participants identified youth as a priority audience for NWMO engagement and dialogue activities. These participants stressed the need to build issues relating to the nuclear fuel cycle into the formal educational system in order to provide future generations with the knowledge needed to make decisions on these issues.

3.2 Participant Views on Governance

Participants exchanged a range of views on key governance issues concerning the NWMO Board of Directors and Advisory Council. Some participants expressed the view that the current composition of the Board of Directors is appropriate, given that its chief responsibility involves oversight of the funds contributed by the utilities themselves. Other participants expressed concern, however, about the ability of NWMO to remain sufficiently objective, given that the organization is solely funded by the nuclear industry and that its Board of Directors is comprised only of representatives from the nuclear industry. These participants argued for a broadened Board that would include some, or even a majority of independent directors, to allow for participation by other interested parties such as Aboriginal peoples, municipalities, and potential host communities. Some participants also expressed concern with respect to NWMO's ability to avoid interference from current or future governments and politicians and suggested a need for NWMO to design and implement mechanisms to ensure that promises made will be kept and decisions reached will be implemented.

Likewise, some participants indicated support for sustaining the current Advisory Council model, involving suitably qualified and knowledgeable individuals without any formal responsibilities to any particular organizations or constituencies. Other participants suggested that the Advisory Council model should be broadened to also include a wider range of voices, such as industry, local communities, technical communities, etc., and that it should be formally accountable to obtain input from and provide information back to their constituencies, even if they are only acting in their individual capacities on the Council.

Participants expressed confidence in the current NWMO management team and urged the organization to continue to build on the basis of suitably qualified personnel with recognized expertise and knowledge of nuclear power.

Participants also called on the NWMO to maintain the high level of transparency it has demonstrated to date and stressed the importance of the NWMO providing the general public with regular updates on implementation progress in addition to its mandated annual reports to Parliament.

One participant stressed the importance of NWMO determining and communicating issues of ownership and liability over used nuclear fuel that may come into its care within a future centralized storage facility and deep geological repository. The participant explained that, in their view, the present *Nuclear Liability Act* does not address joint-venture organizations such as NWMO, or activities that NWMO will be involved with in the management of used nuclear fuel.

3.3 Participant Views on Financing

While recognizing the financial surety provisions that have been proposed within the *Draft Study Report*, some participants requested greater clarity about who is responsible for overseeing the management of the established trust funds, and who has ultimate oversight responsibilities for NWMO's spending. Some felt that oversight of spending is and should remain the responsibility of the nuclear utilities financing the NWMO and that are represented on the Board. As noted above, others felt that oversight and Board composition should be broadened to include other perspectives. One participant stated that oversight of spending by the NWMO should be independent of the owners of the used nuclear fuel.

Participants also expressed concern about whether NWMO's estimates allow for contingencies and account for potential cost overruns. Some participants viewed the nuclear industry as having consistently underestimated financing needs in the past. They did recognize that this has been due, in part, to the requirement to continually learn and adjust from their own experiences, as well as those in other jurisdictions. These participants expressed concern that the management of used nuclear fuel could produce similar cost overruns and scope changes throughout the implementation phase.

Participants said the NWMO needs to review and update its cost estimates on a continual basis and ensure that trust fund provisions are maintained accordingly. These participants cautioned NWMO to ensure that the availability of financial resources does not become a restricting factor and that decisions are made on the basis of technical and social appropriateness, not available funding.

3.4 Participant Views on Siting

Participants broadly agreed with NWMO's recommendation of identifying a willing host community, but stressed that NWMO will need to undertake work and provide resources to build the capacities for potential host communities to make informed decisions. They stressed that NWMO needs to ensure that vulnerable communities are not taken advantage of. At the same time, one participant argued that the NWMO should not eliminate options, such as expropriation, that may be needed in the future.

Participants encouraged NWMO to be honest and transparent about risks, benefits, opportunities, and adverse impacts when engaging potential host communities. Participants agreed that NWMO should take the leadership of the site identification and assessment process. Participants suggested that NWMO should narrow down the list of preferable sites and then identify possible host communities based on an agreed set of criteria, including aspects such as:

- Appropriate geology;
- Avoiding protected areas;
- Low population density;
- Minimizing transportation distances from reactor sites;
- Year round access and easy accessibility in case of emergencies; and
- Areas not susceptible to flooding, earthquakes, or other natural hazards.

With respect to benefits and mitigation, participants thought that NWMO should focus primarily on the creation of economic opportunities and improved infrastructure for the host community, such as employment, schools, increased leisure opportunities, etc. Participants felt that mitigation to communities on the transportation corridor or other non-host communities affected by the transportation and siting process should see more limited benefits and mitigation than the host community, and be made available to offset actual expenses only, in areas such as the provision of additional security, road or bridge improvements, road or facility closures, etc.

4 Conclusion and Next Steps

Elizabeth Dowdeswell thanked the participants on behalf of the Nuclear Waste Management Organization. Ms. Dowdeswell noted that it was rewarding to hear that participants felt the *Draft Study Report* and recommendation are on the right track, and to hear their advice and suggestions for strengthening the report. Participants were informed of the balance of the engagement process

with respect to the *Draft Study Report*. Finally, Ms. Dowdeswell encouraged participants to make further submissions to the NWMO via letter, or through the NWMO website at www.nwmo.ca. More information on submitting written comments can be found there.

Appendix I: Dialogue Session Invitations

Participants to the dialogue sessions were invited from the provinces involved in the nuclear cycle - Ontario, Québec, New Brunswick, Manitoba and Saskatchewan. Participants were identified on the basis of their prior involvement with NWMO including engagement and dialogue activities, research activities, and those that expressed an ongoing interest in the work of the NWMO.

In total, Dialogue Session invitees were identified on the basis of their participation in the following NWMO activities:

- Individuals who have made submissions to the NWMO;
- Authors of Background Papers;
- Aboriginal dialogue leaders;
- Traditional Knowledge Workshop;
- Mayors/Municipal leaders and staff of the Canadian Association of Host Communities;
- Ethics Roundtable;
- People from Public Information & Discussion sessions who asked that the NWMO keep them informed; and
- Organizers and participants of key NWMO events:
 - Scenarios Workshops,
 - Technical workshops
 - Public Policy Forum;
 - Community Dialogue Workshops;
 - CPRN Dialogues (those that asked NWMO to keep them informed);
 - National Stakeholders and Regional Dialogues;
 - Nature of the Hazard Workshop.