

Final Report Nuclear Waste Management Organization Public E-Forum Summer, 2005

Introduction

The Nuclear Waste Management Organization (NWMO) was created in 2002 to research, consult the public, and make recommendations to the federal government concerning the long term management of nuclear waste. In 2003, NWMO commissioned a series of concept papers on risk and uncertainty, sustainable development, the precautionary approach and adaptive management. These papers strongly encouraged public participation as a tactic for overcoming the uncertainty surrounding the issue of nuclear waste disposal. In 2003 Dr. Ann Dale of Royal Roads University was initially commissioned to conduct a series of three on-line synchronous e-Dialogues; the first around the concept of risk and uncertainty around the management of nuclear waste, which featured a panel of experts, the second a round table focusing on whether the NWMO assessment framework is comprehensive and balanced and whether there were specific elements that must be built into an implementation plan, and the third on decision-making under conditions of risk and uncertainty, once again with an expert panel.

Several key points of public concern emerged from these initial dialogues. These points include the following.

- There is concern over the framing of the question. Although the issue of nuclear energy in particular is outside the scope of the NWMO, all panelists agreed that the resolution of its wastes could not be separated from its costs and benefits as an energy source. The future role of nuclear energy production and more largely, energy security is part of the domain of any decision-making concerning the managing of used nuclear fuel.
- There is concern over who has authority and who gets to make the decisions, which involve complex issues of trust, procedural design and social process. Panelists agreed on the critical necessity for a reasoned debate on future energy policy but expressed skepticism over the probability of success. There has to be a role for wider political discourse and established procedures for accountability in

decision-making, as well as for smaller scale exercises in deliberation, and the challenge lies in successfully articulating the two.

- There is a clear desire for a flexible used fuel disposal process. The selected management approach should be able to be modified to fit new or unforeseen circumstances, including the possible benefits of additional research into the management of nuclear fuel waste. The approach should provide flexibility to future generations to support improved management options, change decisions, and not place burdens or obligations on future generations that will constrain them. The approach should be able to function satisfactorily in the event of unforeseen surprises, and allow future generations to benefit from the development of improved management options.

NWMO further contracted with Royal Roads University and Dr. Ann Dale to lead an on-line public forum on their Draft Report, *Choosing a Way Forward: the Future Management of Canada's Used Nuclear Fuel*. The summary that follows documents this process.

Background

The synchronous on-line e-Dialogue methodology developed by Dr. Ann Dale at Royal Roads University continues to evolve and be refined. The format is particularly suited to enhancing dialogue around issues such as the management of used nuclear fuel. The first three dialogues demonstrated the format's ability to reveal the deeper questions and concerns beneath the discussion of the details of the disposal methods. E-dialogues are grounded in collaborative inquiry methods that are designed to expose dialectical thinking as a means to identifying solutions to some of the complex issues facing Canadian society. Second, it responds to the increasingly plural nature of Canadian society by trying to identify points of consensus around public policy issues. Third, this methodology has proven itself as a viable way to bring together disparate expertise and disciplinary backgrounds in an e-space designed to facilitate dialogue. Fourth, e-dialogues allow for more critical reflection in the absence of normal physical cues in face-to-face meetings. Fifth, they are ideally suited to bringing together diverse groups of people, eliminating time and place constraints through reduced transportation and transaction costs. Sixth, they eliminate expensive transcribing costs and the full record of the meeting is available on-line for future analysis and referral. Lastly, the website and archived record are completely transparent and accessible to the Canadian publics.

Further website design was conducted by the research team, Drs. Ann Dale and Lenore Newman to provide background for the additional dialogue. The document "Choosing a Way Forward: The Future Management of Canada's Used Nuclear Fuel" was made available for participants to review. This new material was presented with the goal of furthering education and literacy, as well as the key objectives of NWMO's mandate.



Access to the background material for the first three dialogues was maintained. This information was chosen with three educational objectives in mind. Firstly, the concept of complex issues with large uncertainties was introduced in order to communicate why a very involved decision making process is needed. Secondly, the idea of a precautionary principle was outlined in order to suggest a methodology for engaging such problems. Lastly, a short description of the waste fuel bundles was included to help, in layman's terms, to define the scope of the problem and outline some of the potential risks posed by the spent fuel.

Methodology

The fourth dialogue was in the form of an asynchronous electronic forum, running from July 1st, 2005 to August 15th, 2005. Concern was expressed about the timing of the on-line forum as many people are not available during the summer, however, the timing is dictated by the mandate of the organization and is not flexible.

The draft study report *Choosing a Way Forward*, was linked to the forum, along with the executive summary. To provide context, an on-line personal interview was conducted between Dr. Ann Dale, and Elizabeth Dowdeswell, President, Nuclear Waste Management Organization. This interview took place on June 13th, 9am – 1pm EST. This interview was then published on the website to provide additional context to the draft study report.

The on-line public forum was designed to facilitate access to Canadians who prefer to communicate using internet technologies, to facilitate reflection on the NWMO recommendations and to record comments and concerns on the part of the wider Canadian public. Several framing questions were posed.

- In what way, if any, do you think the proposed Adaptive Phased Management approach is an appropriate approach for Canada?
- What concerns, if any, do you have about this approach?
- What improvements, if any, would you like to see made?
- What more would you like to know about the proposed approach, or more generally about the work of NWMO?

Outreach

In the last week of June, 2005, the on-line forum was publicized to the research database of over 1200 individuals, Royal Roads students and former alumni, as well as to the Canadian Consortium of Sustainable Development Research (CCSDR). The forum was also publicized on several energy and educational listserves. As well, NWMO publicized the introduction of the on-line forum to its database of contacts. In addition, the forum was again publicized to networks and contacts the last week of July 2005. A copy of the e-flyer is attached as Appendix A.



In spite of the difficult timing for the on-line public forum, there were 577 unique visits to the home page for the e-dialogues, 403 unique visits to the NWMO introduction page. As well, 75 people downloaded the interview with the head of NWMO, and 25 the draft study, compared with previous downloads of e-Dialogue PDFs of 103 hits.

Observations

As predicted before implementation, participation was very light given the time of year. Many people were away on holiday while the forum was in operation, although in July there were 364 hits to the site and 213 hits for the two-week August period, indicating a sustained interest in the subject matter.

As with the previous dialogues, there were a large number of “lurkers” who did not post. Upon questioning several of these people reported that they felt they did not have enough knowledge compared to some of the other posters, and thus they did not let their views be known. This “tyranny of the expert” is of great theoretical interest to us, and poses a practical barrier to dialogue participation. The controversial, value-laden and politically sensitive nature of this issue is enough of a barrier to meaningful dialogue, in addition to this fear of not being expert. Moreover, the vehemence of the vested interests and competing agendas involved in this particular issue make meaningful dialogue particularly challenging, as well as the visceral level of politics. The politics of this complex public policy issue paradoxically can cripple the understanding of the science and the technical issues, thereby making the use of expertise and how well it is communicated to the general public even more critical.

As was the case in the synchronous e-Dialogues preceding the on-line public forum, generally participants felt the NWMO process was good and was integral. The forum, however, was a much more confrontational environment than the previous three synchronous dialogues. There was a high level of mistrust of other posters, the dialogue process, and in some cases even of the NWMO process itself. Several posts diverged into heated discussion between two participants with polarized views, and most of these discussions strayed to the issue of energy production. There was a worry that money going towards used fuel disposal was taking away from the development of alternative energy sources, and that the selection of a used fuel disposal method is a Trojan horse designed to allow for expansion of the nuclear industry. On the other hand, some posters feared that deep burial would destroy the nuclear industry due to its high cost and public visibility. There was suspicion on both “sides” of the issue that continued to override discussion of the specifics of the draft study report and concerns about the future of the nuclear industry. There was a clear view on both sides of this issue that the people on the other side will not listen to reason.

Despite this rather challenging environment, several individual points of interest emerged.



- Participants wondered whether the selected used fuel disposal method be scaled to accommodate a range of future fuel amounts, ranging from a situation in which no new nuclear power generating stations are built to a situation in which nuclear power use in Canada is greatly expanded? In short, is the selected option flexible with respect to the amount of used fuel to be stored?
- Once again there was a strong feeling that the entire fuel cycle needs to be considered. By including Saskatchewan as a potential repository site, the NWMO widened this concern to include the effects of Uranium mining. Several posters felt a “cradle to grave” approach is needed in this industry.
- The issue of used fuel transport was raised briefly, and it was suggested that siting should take this concern into account.
- The question of what constitutes a “willing” community was raised. Some argued that the used fuel should be located away from population centres, others argued that it should be guarded.
- There was confusion about the role of the Nuclear Liability Act, indicating that there needs to public clarification as to who would be responsible for transportation accidents, failure of the containment site, etc.
- It was asked what will happen if the recommendations of the NWMO are rejected.

Conclusions

Two strong and recurring themes highlighted the outcomes of this dialogue series. The first was the desire for flexibility. The public does not want to pursue an option that makes an irreversible choice. The inclusion of this flexibility in *Choosing a Way Forward: the Future Management of Canada's Used Nuclear Fuel* was in general popular with both those who feel the used fuel may be of value in the future and those who hope a better treatment method will be developed. The second, and perhaps strongest theme, is that the disposal of used nuclear fuel should not be considered in isolation from the generation of such fuel, and in a broader sense the entire fuel cycle from mining to disposal. Though such a national conversation is clearly beyond the scope of the NWMO, such a conversation might be necessary before the public will accept any option for the disposal of used nuclear fuel.

The final public forum highlighted that if the NWMO recommendation is to be accepted by the public there must be a concentrated effort to build trust among the public. Canadians are highly polarized in their views of nuclear power, and an appeal to science or “fact” will not likely be enough to convince them of the acceptability of any chosen disposal option. There is a general suspicion of the industry and anger at the amount of money that has gone to the Canadian civilian nuclear program. Though these impressions are arguably unfair given the public's general acceptance and apathy to other byproducts of industry in general and power production in particular, mistrust of the nuclear power industry will prove to be a formidable barrier to implementing a used fuel disposal plan.

In conclusion, we believe that the framing of the issue in such complex public policy matters is interdependent with subsequent public acceptance of any policy recommendations, regardless of the quality of the recommendations, the research and/or the expertise involved. Since the NWMO mandate was restricted to the management of used nuclear fuel and the Government made the decision to separate this from the issue of nuclear energy in general, we recommend that this context be clearly and carefully articulated with the release of the final report, since consistently through our on-line dialogues and public forum, participants commended the quality and thoughtfulness of the NWMO process. We are concerned, however, given the visceral level of politics we saw evidenced to a lesser degree in the e-dialogues and more so, in the public forum, that informed choices will be overridden by the vested interests on both sides of this issue.

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