

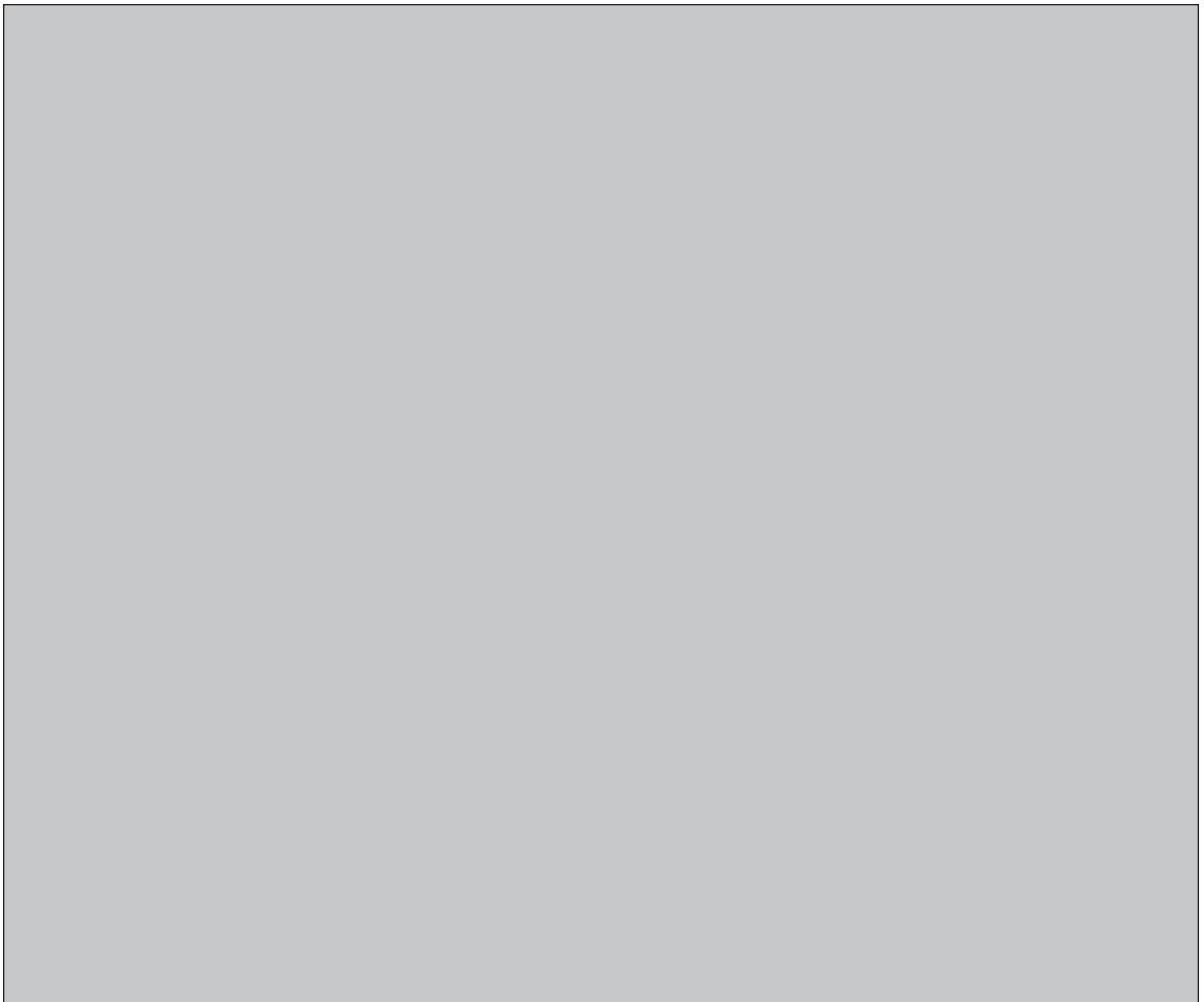
**NWMO BACKGROUND PAPERS**

**2. SOCIAL AND ETHICAL DIMENSIONS**

**2-4 LONG-TERM MANAGEMENT OF NUCLEAR FUEL WASTE  
ISSUES AND CONCERNS RAISED AT NUCLEAR FACILITY SITES 1996 – 2003**

**EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

The Nuclear Waste Management Organization's (NWMO) mandate is to recommend a long-term approach for managing Canada's used nuclear fuel that is socially acceptable, technically sound, environmentally responsible and economically feasible.

The objective of this study is to support the NWMO mandate by providing the NWMO with an historical perspective on the issues and concerns raised by the public, affected communities and key stakeholders during 17 Environmental Assessment (EA) and planning studies at Canada's nuclear research and power reactor sites, mining and radioactive waste and used fuel management facilities dating back to 1996.

The review covered 67 available reports from which relevant comments, questions and concerns raised during the public consultation process were documented. The raw data gathered from this review are presented in *Appendix A: Detailed Issue Summaries by Document Reviewed*.

Issues were then analyzed and summarized using the following framework:

- Long Term Waste Management;
- Safety, Human Health and the Environment;
- Confidence in the Environmental Assessment Process and Trust in Nuclear Organizations and Regulators;
- Aboriginal Interests;
- Socio-Economic Impacts;
- Security in a Post 9/11 World;
- Deregulation/Privatization; and
- Financial and Liability Considerations.

Our review suggests that the development of long-term waste management approaches for the care of Canada's used nuclear fuel should be informed by at least the following considerations:

- Communities that are currently hosts to interim storage of used fuel the understanding and expectation that:
  - Used fuel will be stored on-site only until an off-site long term used fuel management facility becomes available, and certainly not longer than 50 years (the design life of storage containers);

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- Only used fuel generated at that location would be accepted for interim storage; and
  - Extensions and expansions of used fuel interim storage facilities will not go on indefinitely.
- Transparency, opportunity for full public engagement and the potential to have real influence on decision-making will be critical factors influencing the social acceptability and sense of public ownership of management approaches. This is particularly important given that some NGOs and members of the public lack trust in nuclear organizations and regulatory agencies. Engagement and review mechanisms to address perceived bias in proponent-based Environmental Assessment studies and the provision of appropriate resources for interveners to participate meaningfully in the engagement process are important factors that can increase confidence in the technical viability of management approaches and acceptance of decision-making outcomes. In this regard, decision-making by a third party, independent and technically informed adjudicating body (e.g. panel) is deemed by many to be the preferred approach.
  - First Nations people want to be acknowledged as a unique stakeholder by virtue of their Aboriginal and Treaty Rights, their traditional relationship to “mother earth” and their spiritual, cultural and social values. Acknowledgement of and respect for their interests and insights can play an important role in shaping ethically, socially and environmentally acceptable approaches to the long-term waste management of Canada’s used nuclear fuel. First Nations people want to be assured that:
    - Their way of life will not be unduly put at risk;
    - They will have adequate resources (financial, human, technical and time) to participate fully, meaningfully and continuously in the consultation, assessment and implementation process from planning to final monitoring; and
    - They will share equitably in the economic benefits.
  - The location of many nuclear facilities close to large population centers and adjacent to watercourses which supply drinking water to those populations, coupled with the events of September 11, 2001 have heightened public awareness with respect to potential terrorist threats against nuclear installations. The public in general and host communities in particular want to be assured that management approaches enhance public safety by taking this new security environment into account and reducing terrorist access to nuclear materials.

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- Canadians will want to be assured that deregulation and privatization in the electricity sector will not result in the transfer of responsibility for nuclear waste to profit-oriented private sector organizations. To be socially acceptable, management approaches must be based on institutions under public control and scrutiny.
  - Used nuclear fuel will need to be isolated and contained for millennia, during which time the institutional, governance and biophysical environments will change in unpredictable ways. The public and host communities want to be assured that current and future generations will have the technical and financial resources required to implement and sustain the management approach, to provide for long-term monitoring and to fund mitigation, should it be required.
  - Management approaches need to ensure that the economic viability of a host community is maintained and enhanced, that property and business values are protected and that the residents of the host community benefit in an equitable way from the economic opportunities generated by the management approach.
  - To be acceptable to host communities and the wider public, management approaches must be based on state-of-the-art technologies and best practices designed to safeguard human health and environmental integrity now and in the long term. At the same time, innovation must be balanced with evidence that the technologies adopted are proven, reliable and durable. Flexibility to incorporate new advances in technology, whether for materials recycling, containment or monitoring is seen as a valued feature in facility design.
  - Public anxiety about their health or radionuclides in the air, drinking water and the food chain may not be calmed by technical and scientific studies or risk analyses suggesting negligible impact on the ecosystem and human populations. The explicit inclusion in the management approach of monitoring regimes designed and implemented around public and local involvement can play an important role in enhancing confidence in safety projections and ensuring public trust in ongoing system performance. In the event that periodic reassessments of the management approach are undertaken, public involvement in ongoing monitoring regimes will increase trust in the data used to arrive at conclusions.