Understanding The Choices:
An Overview of the Work of Canada’s Nuclear Waste Management Organization

R. Anthony Hodge, Senior Advisor, NWMO
Presented to Pauktuutit – Inuit Women’s Association
R. Anthony Hodge, Senior Advisor, NWMO

Monday, 8 November 2004, Ottawa
Fuel Bundle and Uranium Pellet
Water Pool Storage of Used Nuclear Fuel

- Used nuclear fuel initially very hot and highly radioactive
- Stored in water pools in reactor buildings for cooling and shielding
- Water pool capacity 15 to 20 years of reactor production
Pickering Waste Management Facility
The Nuclear Fuel Waste Act (NFWA)


- The Act requires major waste owners (Ontario Power Generation, Hydro-Québec, New Brunswick Power) to establish the NWMO and its Advisory Council.

- In turn, the NWMO is required to study proposed approaches for the long-term management of used nuclear fuel and to report to the Minister of Natural Resources within 3 years – by November 15, 2005.

- Waste owners, including AECL, are required to finance long-term management of used nuclear fuel through segregated trust funds.

- Following a decision by the Government of Canada, the NWMO will assume responsibility for implementing the recommendation.
A minimum of three technical approaches to be studied:

- Deep geological disposal in the Canadian Shield
- Storage at nuclear reactor sites
- Centralized storage, either above or below ground

NWMO can also study other approaches.

For each management approach, the study must:

- Provide detailed descriptions of technical methods
- Consider ethical, social, and economic implications while taking into account benefits, risks & costs over the short and long term
- Provide a detailed implementation plan

The NWMO is in month 24 of the 36 month study phase.
NWMO Mission Statement

To develop collaboratively with Canadians a management approach for the long-term care of Canada’s used nuclear fuel that is:

- socially acceptable,
- technically sound,
- environmentally responsible, and
- economically feasible.
Management Approach

An approach to the long-term care of used nuclear fuel which encompasses:

- A particular technical method or sequence of methods
- The overarching management system that sustains the technical method(s). For example: (1) principles to guide implementation; (2) internal NWMO organization; and (3) mechanisms that ensure effective financial surety, oversight, monitoring and reporting, public participation in decision making, effective dispute management etc.
- An implementation strategy that sets in place who is to do what, when and with what resources.
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conversations about Expectations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Exploring the Fundamental Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Evaluation of Management Approaches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Finalizing the Study Report</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion Document #1

Discussion Document #2

Draft Study Report

Final Study
Dialogue with Canadians

Assessment Framework

- Public Attitude Research
- Roundtable on Ethics
- Aboriginal Engagement & Consultations
- Nuclear Community Dialogues
- Regional/National Dialogues
- Assessment Team
- National Citizens’ Dialogue
- Scientific & Technical Experts

NWMO Website

Public Submissions

Public Attitude Research

Roundtable on Ethics

Aboriginal Engagement & Consultations

Nuclear Community Dialogues

Regional/National Dialogues

Assessment Team

National Citizens’ Dialogue

Scientific & Technical Experts
Discussion Document 2: Understanding the Choices

Understanding
The Future Management of Canada’s Used Nuclear Fuel

< 2004 SEPTEMBER
Based on the views of citizens and experts, the emerging framework for assessing the management approaches includes:

### Assessment Framework

- **Citizen Values**
  - Safety from harm
  - Stewardship
  - Responsibility
  - Knowledge
  - Adaptability

- **Ethical Principles**
  - Sensitivity to value differences
  - Respect for future generations
  - Respect for people & cultures
  - Respect for life
  - Justice
  - Fairness

- **Objectives**
  - Fairness
  - Public Health & Safety
  - Security
  - Environmental Integrity
  - Worker Health & Safety
  - Economic Viability
  - Community Well-being
  - Adaptability
Technical Method: Storage at Reactor Sites
Technical Method: Deep Geological Disposal or Repository
Technical Method: Centralized Storage
2005 年 

Early 2005:

Choosing A Way Forward (Draft Final Report)

- Includes NWMO’s completed assessment of the options
- Specifies Economic Regions and implementation plans for each approach
- Presents NWMO’s Draft Recommendation on an approach

By November 15, 2005:

Choosing A Way Forward (Final Report to Government)

- Includes NWMO’s final recommendations, with comments from NWMO Advisory Council and summary of comments from public consultations
- Submitted to Minister of Natural Resources Canada and made public