

**nwmo**

NUCLEAR WASTE  
MANAGEMENT  
ORGANIZATION

SOCIÉTÉ DE GESTION  
DES DÉCHETS  
NUCLÉAIRES

# Implementing Adaptive Phased Management 2013 to 2017

**What We Heard – Comments  
Received About *DRAFT PLAN***

**MARCH 2013**



# Introduction

Every year since 2007, when the Government of Canada selected Adaptive Phased Management as the preferred approach for the safe long-term management of Canada's used nuclear fuel, the Nuclear Waste Management Organization (NWMO) has published a five-year strategic plan. Titled *Implementing Adaptive Phased Management*, the Plan describes how the NWMO will implement Adaptive Phased Management in the planning period. The NWMO invites all interested individuals and organizations to get involved in the long-term management of used nuclear fuel. To encourage public review and comment, the Plan is distributed by mail to 2,500 individuals and organizations that had previously expressed interest, and posted on the NWMO's website with an invitation to comment by making a submission, sending a letter, completing a web survey or filling out the comment form.

The purpose of this document is to report on the comments received from more than 45 individuals and organizations about the most recent Plan, *Implementing Adaptive Phased Management 2013 to 2017 (Draft for Public Review)*, and how the NWMO will take these comments into account in work going forward.

Five questions were identified for consideration during review of the Plan:

1. The draft Plan is built around seven strategic objectives. Are the objectives that we have identified appropriate? Have we missed key areas?
2. The draft Plan identifies work and activities we propose to undertake to accomplish these objectives. Have we set out appropriate activities?
3. The draft Plan is intended to anticipate the challenges ahead and plan for them. Over the next five years, what are the key challenges that will need to be addressed?
4. What will the NWMO need to put in place to respond to these challenges?
5. Other comments, questions or suggestions?

The NWMO greatly appreciates receiving comments and suggestions about its work programs and plans. We continue to welcome your thoughts as we move forward together to implement Canada's plan for the long-term management of used nuclear fuel.

# Overview of Key Refinements

Comments received about the NWMO's strategic objectives were generally positive, and most people found the objectives and associated activities appropriate. A number of key challenges were highlighted by people who provided comments for special attention in coming years, and the sum of this input provided helpful insight that guided revisions to the draft Plan.

The table that follows briefly summarizes the key refinements made to the draft Plan in response to comments received and the ongoing work of the NWMO. Comments and suggestions that were received about challenges that need to be addressed going forward are summarized and discussed later in this document.

Page number (Refined Implementation Plan)	Comment Received and Refinements Made
Page 1	Update made to the text to reflect this document is no longer a draft for discussion, but has been revised in light of comments and represents the current plan of work.
Page 2	<b>It was suggested that adherence to federal and provincial regulatory standards be more explicitly referenced.</b>  Wording was refined to include more explicit reference.
Page 4	<b>Although the NWMO Annual Report reports on the NWMO's progress in achieving its work plan, it was suggested that the NWMO provide a brief report on its progress related to the seven strategic objectives over the previous year in the Implementation Plan as important context.</b>  Additional information has been added to report on progress over the past year at a high level. This information is in the form of a table that reflects the high-level summary contained in the Annual Report. The Implementation Plan reader is encouraged to review the more detailed discussion in the Annual Report.
Page 6	<b>It was suggested that some language on this page referring to the regulatory oversight of Adaptive Phased Management be clarified.</b>  Revisions were made to clarify the joint regulation by the Canadian Nuclear Safety Commission and Transport Canada, and the text was simplified to reference only regulatory requirements, as suggested by the title on this page. The NWMO continues to be committed to adhere to the requirements of other programs such as the <i>CBRNE</i> and <i>Federal Nuclear Emergency Plan</i> , even though reference to these programs has been removed from this section.

Page Number (Refined Implementation Plan)	Comment Received and Refinements Made
Page 10	<p><b>Specific revisions were suggested:</b></p> <p>Ongoing learning and research activities are designed to help refine and demonstrate aspects of the Adaptive Phased Management design. This includes the composition of sealing materials for the repository, and wording has been clarified to reflect that although bentonite clay is the sealing material identified in the reference design, work continues to confirm sealing materials.</p> <p>Adaptive Phased Management has been designed to manage only used nuclear fuel that is produced in Canada. In response to a suggestion, a reminder of this commitment was included on this page with mention that no foreign waste will be placed in the facility.</p> <p>The NWMO continues to receive suggestions on how the roles and responsibilities with respect to the long-term management of used nuclear fuel and the implementation of the project might be more clearly described. Refinements were made to the wording on this page related to the transportation of used nuclear fuel to enhance clarity of the description.</p>
Page 11	<p><b>It was suggested that the reference to Step 4 of the site selection process on this page was confusing because the site selection process had not been introduced in detail at this point in the document.</b></p> <p>Refinement in wording was made to reduce the potential for confusion.</p>
Page 14	<p><b>It was suggested that the NWMO should expand on why it is important to specifically engage Aboriginal peoples.</b></p> <p>Refinement was made to wording in the text box at the bottom of page 14 to bring greater clarity to the NWMO's commitment to engage Aboriginal peoples in the implementation of Canada's plan.</p>
Page 15	<p><b>It was suggested that the briefing of waste owners on the progress of implementation of Canada's plan, so they may ensure their used fuel strategies are aligned with the implementation of Adaptive Phased Management, is an important activity and should be identified in the list of activities.</b></p> <p>Refinement to the list of activities was made.</p>
Page 16	<p><b>It was suggested that, in talking about interweaving Aboriginal Traditional Knowledge into NWMO activities, referral to "western science" as a counterpoint is unhelpful and inappropriate as the concept of science is not limited to western culture.</b></p> <p>The NWMO is continuing to learn about how Aboriginal Traditional Knowledge may be interwoven in the NWMO's activities. Wording has been refined to reflect this suggestion.</p>

Page Number (Refined Implementation Plan)	Comment Received and Refinements Made
Page 18	<p><b>Specific changes to the wording of Step 7 were suggested to improve clarity.</b></p> <p>The NWMO continues to receive suggestions on how to more clearly describe the various steps in the site selection process. In response to suggestions, refinements were made to the text to improve clarity.</p>
Page 19	<p><b>It was suggested that more explicit reference be made to work to assess groundwater safety issues in the work plan.</b></p> <p>The NWMO's ongoing work to ensure safety, and protect people and the environment, includes the design of the repository and the use of multiple barriers to contain and isolate used nuclear fuel including from groundwater. The text was refined to reflect the importance of groundwater safety issues in the ongoing work.</p> <p><b>It was suggested that the passage about transportation may incorrectly lead the reader to believe that a safe transportation route is the only requirement of a safe site, when in fact there are many additional requirements which must be met.</b></p> <p>Refinement to the text was made.</p>
Page 20	<p><b>It was suggested that the NWMO more clearly reflect the challenges that will need to be addressed in building awareness and understanding, and in finding an informed and willing host community.</b></p> <p>Refinements were made to the text to better reflect the challenges ahead in this area.</p>
Page 23	<p><b>It was suggested that the NWMO include the possibility of transportation package failure in the NWMO's safety and long-term financial planning strategies.</b></p> <p>The NWMO's ongoing work on the design of a transportation container includes the consideration of "what-if" or disruptive scenarios. Refinements were made to the wording of text on this page to more explicitly reflect this ongoing work.</p>
Page 24	<p><b>It was suggested that the NWMO be clearer in how Aboriginal Traditional Knowledge is interwoven in the activities of the NWMO.</b></p> <p>The NWMO continues to learn about how Aboriginal Traditional Knowledge can be interwoven with its activities and continues to refine this work plan in light of learning. A small refinement has been made to wording on this page to reflect evolving understanding and implementation in the NWMO's work.</p>

Page Number (Refined Implementation Plan)	Comment Received and Refinements Made
Pages 25 and 30	<p><b>It was suggested that the NWMO include additional detail on the use of international best practices and experiences.</b></p> <p>The NWMO is an active participant in and contributor to international collaboration activities to identify and explore best practice, knowledge and experience, and to demonstrate technologies. A new passage was added to page 25 that references some of the NWMO's joint research projects with its international counterparts, as well as international projects led by the European Commission and the Nuclear Energy Agency.</p> <p>Additional text was added to page 30 to highlight participation in various Organisation for Economic Co-operation and Development activities and international research projects.</p>
Page 26	<p><b>It was suggested that the activity regarding upgrading the Canadian Nuclear Safety Commission certificate for the NWMO used fuel transportation container be clarified.</b></p> <p>Clarification was made to the sixth bullet point on this page.</p>
Page 27	<p><b>It was suggested that clarification be made to the description of work related to the Used Fuel Transportation Package and Used Fuel Repository Container.</b></p> <p>Refinements to the text were made to the sixth bullet point, additional information provided in the form of a new text box called Used Fuel Repository Container was developed, and refinements were made to the text in the existing text box (Used Fuel Transportation Package).</p>
Page 28	<p><b>It was suggested that ensuring the prudent use of resources be acknowledged as an important factor and included in the discussion.</b></p> <p>As the mission and strategic objectives outlined in this plan highlight, the NWMO is committed to collaboratively implementing Canada's plan for the safe and secure long-term management of used nuclear fuel in a manner that is socially acceptable, technically sound, environmentally responsible and economically feasible. In this context, text has been refined on this page to acknowledge the NWMO's commitment to the prudent use of resources as among its responsibilities in implementing Canada's plan.</p>

<b>Page Number</b> <small>(Refined Implementation Plan)</small>	<b>Comment Received and Refinements Made</b>
<b>Page 31</b>	<p><b>It was suggested that reference on this page to Generation III reactors be clarified.</b></p> <p>Wording was clarified to specify “CANDU type and other”.</p> <p><b>It was suggested that the NWMO needs to monitor the activities of Canada’s nuclear industry for potential impacts on NWMO planning.</b></p> <p>The NWMO monitors on an ongoing basis the plans of nuclear waste producers for the purpose of anticipating future fuel volumes and the characteristics of the waste which the NWMO ultimately will need to manage. In order to reflect this activity, an activity was added to the list identifying the NWMO’s ongoing work in this area: “Continue to monitor, assess and plan for changes in industry waste management activities and plans.”</p>
<b>Page 38</b>	<p><b>It was noted that the concept of shallow underground storage was mentioned in the document without definition or discussion and that a definition should be added to the glossary.</b></p> <p>A definition of “optional shallow underground storage facility” has been added to the glossary.</p>

# Input on Key Challenges

The NWMO received thoughts about the ongoing challenges and issues that will need to be addressed in the next five years as part of implementing Canada's plan and that will need to be considered in the development of future plans. Comments on challenges are briefly described below.

- » **Build confidence in the safety of transportation of used nuclear fuel:** Transportation remains a broad concern for many, and addressing these concerns will be a key challenge going forward. It was noted that the NWMO must comprehensively assess the risks of transportation – including the risk of transportation package failure – in order to ensure the safety of the public, people living in communities along transportation routes, and workers involved in transportation and handling.
- » **Ensure understanding of the project:** Comments highlighted the importance of building understanding about Adaptive Phased Management and the siting process. A number of comments specifically identified public education as a challenge, and advocated for proactive engagement, as well as enhanced educational and communications materials to help build understanding.
- » **Build public confidence in the accountability of the NWMO:** Maintaining accountable governance and demonstrating prudent use of resources was identified as essential in providing Canadians with ongoing confidence in the NWMO's siting and implementation activities.
- » **Gain social acceptance for the project:** A few comments explicitly identified sustaining long-term social acceptance for Adaptive Phased Management as a key challenge that the NWMO should address. Concern was raised about how willingness will ultimately be measured and assessed, and it was suggested that the NWMO consider the possibility of a scenario where a willing community is not found. Challenges associated with gaining acceptance were not seen to be limited to finding a willing and informed host community, but also included addressing the concerns of the public in surrounding communities and along transportation routes.
- » **Appropriately and effectively involve Aboriginal peoples:** Comments reflected the importance of ensuring the NWMO respects the rights of Aboriginal peoples in engaging them over the course of implementing Adaptive Phased Management. Building awareness and capacity for participation among Aboriginal peoples was also specifically identified as a challenge to be addressed. Appropriately engaging Aboriginal peoples on the subject of Aboriginal Traditional Knowledge was also identified as a challenge.
- » **Identify emergency management plans and procedures:** Comments raised the need for appropriate emergency plans and procedures to be identified and examined for the transport of nuclear waste (i.e., in the unlikely event of an accident en-route), and also for the transfer of used nuclear fuel within the deep geological repository.

Other areas of comment included:

- » **Other management options:** The NWMO received a few comments suggesting that alternative storage and management options of nuclear waste should be considered. Some interest was also expressed about the feasibility of reuse of used nuclear fuel.



# Dialogue Continues

The NWMO continues to receive comments and suggestions about its work programs and plans, even after the close of the official comment period for the 2013 to 2017 Plan. All comments are welcome as the NWMO continues to develop and adapt its plans.

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