



NUCLEAR WASTE  
MANAGEMENT  
ORGANIZATION SOCIÉTÉ DE GESTION  
DES DÉCHETS  
NUCLÉAIRES

June 11, 2014

Mayor Richard Harvey  
Township of Nipigon  
52 Front Street  
P. O. Box 160  
Nipigon, ON P0T 2J0

**Re: Adaptive Phased Management Site Selection Process –  
Interim Report from Step 3, Phase 1 Preliminary Assessment**

Dear Mayor Harvey,

Further to your request of May 21, 2014, I am pleased to provide an interim report on findings to date from the Phase 1 Preliminary Assessment being conducted at the request of the Township of Nipigon. I understand that you wish to have this interim report to inform your Council's decision as to its continued involvement in the site selection process for the Adaptive Phased Management (APM) project.

Although Phase 1 studies are ongoing, uncertainties are emerging about the potential for the Nipigon area to meet project requirements, both in terms of the geological characteristics and the social, economic and cultural considerations. Findings to date are summarized below and in the attached technical memorandums.

**Background - Phase 1 Assessments**

The process for identifying an informed and willing host community for a deep geological repository and Centre of Expertise for the long-term management of Canada's used nuclear fuel is designed to ensure, above all, that the site selected is safe and secure for the protection of people and the environment, now and in the future.

Assessments guide the identification of areas with strong potential to meet siting requirements to be the focus of progressively more detailed study. Over time, the site selection process will identify a single, preferred safe site with an informed and willing host community.

The purpose of Phase 1 is to provide feedback to communities about their potential to meet the robust safety and community well-being requirements for this project. There are four overarching questions which guide this early phase of assessment:

1. Safety, security and protection of people and the environment are central to the siting process. ***Is there potential to find a safe site?***
2. The project will be implemented in a way that will foster long-term well-being of the community. ***Is there potential to foster the well-being of the community through implementation of the project, and what might need to be put in place (eg., infrastructure, resources, planning initiatives) to ensure this outcome?***

3. At a later step in the process, the community must demonstrate it is informed and willing to host the project. ***Is there potential for citizens in the community to continue to be interested in exploring this project through subsequent steps in the site selection process?***
4. The project will be implemented in a way that will foster the long-term well-being of the surrounding area. ***Is there potential to foster the well-being of the surrounding area and to establish the foundation to move forward with the project?***

During Phase 1, these broad questions are addressed through a combination of studies. Some studies, such as the assessment of geological characteristics of the area, are led by expert consultants. Other activities are undertaken in partnership with the community, for instance, exploring potential for the project to contribute to the long-term well-being of the community.

The potential to meet siting requirements is addressed through initial assessment of the geology, environment and safety, engineering, transportation and social, economic and cultural considerations. At this early phase of study, uncertainties have been identified in two important study areas:

- **Geoscientific** characteristics of the community and area including geological settings and geologic structural histories, and associated complexities and uncertainties. Areas with greater geoscientific uncertainties are considered to have less potential to meet project requirements as it would be more difficult and challenging to develop a robust safety case.
- **Social, economic and cultural** considerations, which address the potential for the APM project to align with the priorities and objectives of the community, and the potential for the community to sustain interest in learning about the project. Sustained interest would be needed for a future demonstration of informed willingness – an important requirement once all safety requirements are met. Where there is not a strong alignment with community aspirations or where this alignment is unclear, and where the ability to sustain interest is weak or uncertain, the NWMO considers the potential for informed willingness at a later stage of work to be lessened.

Interim findings on geoscience and social, economic and cultural considerations for the Township of Nipigon are summarized below, and outlined in more detail in the attached technical memorandums.

### **Interim Report – Findings to Date**

In 2011, the Township of Nipigon entered the siting process to learn more about the APM Project. Following an initial screening, the Township requested a Phase 1 preliminary assessment for the area.

The interim findings provided for the Township draw on findings that have emerged so far from:

- Desktop studies exploring potential to find a site that can safely and securely contain and isolate used nuclear fuel from people and the environment for the long time period required; and
- Ongoing work with the community over the last three years, to explore potential for the project to align with the community's longer-term vision and to sustain interest in learning about the project through subsequent phases of work to support informed decision-making.

### **Geoscientific Findings:**

The geoscientific evaluations are an important foundation for Phase 1 studies as the NWMO examines whether there is potential to find a safe site. Phase 1 geoscientific evaluations of your area are being completed to build upon results from the initial screening through a more detailed desktop review of available information. Led by Golder Associates Ltd., this work is focused on assessing whether it is possible to identify areas that have the potential to satisfy geoscientific site evaluation factors published in the NWMO's 2010 site selection process document.

Golder Associates Ltd. has provided a Technical Memorandum (attached) that summarizes findings to date. Specifically, Golder Associates reports on substantial geological uncertainties which, in its view, reduce the potential of meeting the NWMO's geoscientific site evaluation factors:

"The interim results indicate that there are substantial geological uncertainties in the Nipigon area that reduce the likelihood of identifying sites that will satisfy NWMO's geoscientific site evaluation factors. These uncertainties relate to the potential for lithological heterogeneity, the existence of both sills and dykes in the Nipigon area, and the proximity of the area to major fault zones."

### **Social, Economic and Cultural Considerations:**

Understanding the potential for the APM project to support community well-being as defined by the community is an important part of the Phase 1 assessment and engagement.

Recognizing that this work is still in progress, the firm of DPRA has provided an update on findings to date of the Community Well-Being Assessment that is being conducted as part of Phase 1. The attached Technical Memorandum from DPRA summarizes interim results for Nipigon. The report identifies a range of uncertainties that bring into question the extent to which the project would align well with the Township's priorities. DPRA reports:

"The interim results suggest that the APM Project may have some potential to be a fit for the community of Nipigon. The APM Project has the potential to bring positive net benefits to the community and may help the Township realize some of its aspirations and goals. These are related to population growth, growth in the workforce, access to education/training, and improvement in health and safety facilities and services. The Project would also have positive effects on employment, income levels, business activity, municipal finances and infrastructure.

However, there is some uncertainty, from the community's perspective, as to whether the APM Project aligns with some values and aspirations of community members. There is uncertainty about whether the APM Project will disrupt community cohesion, despite the potential for the APM Project to enhance many social assets. There also appears to be substantial challenges to addressing misinformation about the Project in the area, and sustaining interest in learning about the Project that would be required for the community to make an informed decision in the future."

From the NWMO's perspective, ensuring the project aligns well with community priorities and has potential to support long-term community well-being is fundamental to the siting process. For the Township of Nipigon, there appears to be substantial uncertainty about the potential for the project to foster the well-being of the community as the community defines it, including the extent to which the project aligns with longer-term aspirations and priorities of the community.

In Nipigon, the project appears to align well with some but not all the important aspirations and priorities of the community. Although the NWMO believes that the range of aspirations and priorities valued by the community could be supported through implementation of the APM Project, continued participation in the siting process is likely to require that the community make difficult choices among priorities. This may result in a negative effect on community cohesion, and increased challenges in sustaining interest in learning about the project which would be required for informed decision-making in the future.

#### **Summary Observations:**

Since the start of the community-driven site selection process in 2010, 22 communities have come forward to learn about the project and explore their suitability to host the deep geological repository and Centre of Expertise for the long-term management of Canada's used nuclear fuel. The process of narrowing down communities engaged in site selection is a required and inevitable part of the process, and will continue gradually over several years as technical and social assessments are completed.

Safety, security and protection of people and the environment are central to the site selection process. Ensuring the project aligns well with community priorities and has potential to support long-term community well-being as defined by the community is also fundamental.

In identifying the smaller number of communities to move into the field work studies of Phase 2, the process requires that the NWMO identify communities with strong potential to meet strict safety and social siting criteria.

As noted, findings emerging from studies underway for the Township of Nipigon include geological uncertainties that reduce the likelihood of identifying sites with the potential to satisfy the required evaluation factors. In addition, there are uncertainties about the potential to foster the well-being of the community as the community defines it and to sustain interest in learning that would be required to support informed decision-making in the future.

Understanding that a small number of communities will advance to field work in the next phase of study, the uncertainties identified will weigh heavily in the NWMO's consideration of Nipigon's potential to advance in the site selection process.

I hope that you will find this interim report helpful.

Kind regards,

A handwritten signature in blue ink that reads "Kathryn Shaver". The signature is written in a cursive style with a large initial 'K'.

Kathryn Shaver,  
Vice President, APM Public Engagement and Site Selection

**Attachments:**

Technical Memorandum, Golder Associates Ltd., June 8, 2014

Technical Memorandum, DPRA, June 10, 2014