

NWMO Citizen Panels Aggregate Report: Phase Three

NWMO SR-2008-10

July 2008

Navigator Ltd.

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES



Nuclear Waste Management Organization
22 St. Clair Avenue East, 6th Floor
Toronto, Ontario
M4T 2S3
Canada

Tel: 416-934-9814
Web: www.nwmo.ca

Nuclear Waste Management Organization

The Nuclear Waste Management Organization (NWMO) was established in 2002 by Ontario Power Generation Inc., Hydro- Québec and New Brunswick Power Corporation in accordance with the *Nuclear Fuel Waste Act (NFWA)* to assume responsibility for the long-term management of Canada's used nuclear fuel.

NWMO's first mandate was to study options for the long-term management of used nuclear fuel. On June 14, 2007, the Government of Canada selected the NWMO's recommendation for Adaptive Phased Management (APM). The NWMO now has the mandate to implement the Government's decision.

Technically, Adaptive Phased Management (APM) has as its end-point the isolation and containment of used nuclear fuel in a deep repository constructed in a suitable rock formation. Collaboration, continuous learning and adaptability will underpin our implementation of the plan which will unfold over many decades, subject to extensive oversight and regulatory approvals.

NWMO Social Research

The objective of the social research program is to assist the NWMO, and interested citizens and organizations, in exploring and understanding the social issues and concerns associated with the implementation of Adaptive Phased Management. The program is also intended to support the adoption of appropriate processes and techniques to engage potentially affected citizens in decision-making.

The social research program is intended to be a support to NWMO's ongoing dialogue and collaboration activities, including work to engage potentially affected citizens in near term visioning of the implementation process going forward, long term visioning and the development of decision-making processes to be used into the future. The program includes work to learn from the experience of others through examination of case studies and conversation with those involved in similar processes both in Canada and abroad. NWMO's social research is expected to engage a wide variety of specialists and explore a variety of perspectives on key issues of concern. The nature and conduct of this work is expected to change over time, as best practices evolve and as interested citizens and organizations identify the issues of most interest and concern throughout the implementation of Adaptive Phased Management.

Disclaimer:

This report does not necessarily reflect the views or position of the Nuclear Waste Management Organization, its directors, officers, employees and agents (the "NWMO") and unless otherwise specifically stated, is made available to the public by the NWMO for information only. The contents of this report reflect the views of the author(s) who are solely responsible for the text and its conclusions as well as the accuracy of any data used in its creation. The NWMO does not make any warranty, express or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information disclosed, or represent that the use of any information would not infringe privately owned rights. Any reference to a specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or preference by NWMO.



NAVIGATOR

NWMO Citizen Panel Aggregate Report Phase III

NUCLEAR WASTE MANAGEMENT ORGANIZATION
JULY 2008

AGGREGATE REPORT OUTLINE

1. NWMO Citizen Panel Background

- a. Citizen Panel
- b. Panel methodology

2. Discussion Summary

- a. Emerging issues since last Panel
- b. Draft Implementation Plan

3. Dialogue: Strategic Objectives

- a. Building Relationships
- b. Building Knowledge – Technical and Social Research
- c. Review, Adjust and Validate Plans
- d. Collaborative Design and Initiation of a Siting Process
- e. Others as available
 - i. Financial Surety
 - ii. Governance Structure
 - iii. Becoming an Implementing Organization

4. Questions & Discussion, Technical Representative

- a. Safety
- b. Site Selection
- c. Timeline
- d. International Comparison
- e. Transportation

5. Panel Work Plan

Appendices

- i. Profiles of the Panels
- ii. Navigator Personnel
- iii. Discussion Leader's Guide
- iv. Excerpts from Draft Implementation Plan (used as individual worksheets)

1. NWMO CITIZEN PANEL BACKGROUND

a. Citizen Panel

Building on previous qualitative research studies, the NWMO contracted Navigator to initiate Citizen Panels in 8 cities across Canada. The goal of the Citizen Panel project was to further explore the feelings, attitudes and perceptions of Canadians toward the long-term storage of Canada's used nuclear fuel.

The Citizen Panel project is markedly different from the qualitative research projects that have preceded it. The intent of the Citizen Panel format used in this project is to allow for the discussion to be formed and driven by the views of the individual Panelists. These Panelists have had a brief introduction to the NWMO and are aware of rudimentary facts surrounding Canada's used nuclear fuel such that an informed discussion can occur.

Phase Three of the Citizen Panel project occurred in late April and early May 2008.

A general outline of discussion objectives, as well as the discussion document intended to guide the work of the Panel, were prepared in advance of the Citizen Panel. Reproductions of all materials shown to the Panel can be found at the end of this report as appendices.

b. Panel Methodology

These Citizen Panels have been designed, as much as possible, as collaborative discussions facilitated by a Discussion Leader. They are separate and apart from focus groups in that they empower individual Panelists to raise questions and introduce new topics. The role of the Discussion Leader, in this format, is merely to introduce new topics of discussion and lead the Panel through a number of discussion exercises.

As well, additional measures were incorporated into this Citizen Panel format to empower individual Panelists. Each Panelist was made aware of their independence and responsibilities to both contribute to, and lead, the Panel discussion. A transcriber, traditionally taking contemporaneous notes behind one-way glass or in another room, was, in this case, placed inside the discussion room. Panelists were empowered to direct him or her to take special note of elements of the Panel discussion they felt were important, or ask him or her to recap any part of the discussion upon request. A commitment was made by the Discussion Leader that the notes taken would be sent to Panelists for review, possible revision and approval, to give Panelists faith that they are in control of the proceedings and ensure their contribution is reflected accurately.

Potential Panelists were originally selected through random digit dialling among a general population sample in the wide area in which each Panel was held. Individuals called underwent a standard research screening survey in which they indicated that they were interested and able to participate in a discussion about a general public policy issue with no advance notice of the specific topic. Individuals were screened to include community-engaged opinion leaders in at least one of these topics: community, environment, and/or public/social issues. Those that passed the screening process were asked to participate in a traditional focus group on the perceived trust and credibility of the NWMO, which allowed an introduction to the topic of used nuclear fuel and topics such as Adaptive Phased Management. The discussions were neutral in tone and did not presuppose any outcome on issues such as nuclear power generation and siting for used nuclear fuel.

At the end of this research study, participants were asked if they would be willing to continue in discussions on the topic of used nuclear fuel. Those that expressed interest were placed on a “short list” of potential Panelists for the four-phased Citizen Panel project. Research professionals at Navigator subsequently used this pool to select Panelists that would ensure a diversity of age, gender and experience in the Panels. Only participants who demonstrated both a willingness and ability to contribute to group discussion and complete exercises were included in the pool. The content of each participant’s contribution in the focus groups was not reviewed by Navigator professionals. Rather, the only qualifiers were that individuals could speak clearly and were able to grasp concepts introduced to them at a basic level.

A target Panel population of 18 was determined for each location in the interest of ensuring the long-term viability of each Panel over the course of four discussions.

Phase One Citizen Panels occurred in late Fall 2007. Panel discussions began with an in-depth review of the NWMO's *Moving Forward Together* brochure. Individually, Panelists were asked to mark the document with red and green pens, green indicating they felt positively about a certain point and red indicating that they felt negatively. Furthermore, Panelists were asked to circle the items they felt the most strongly about, both positively and negatively, with the "Sharpie" marker. Panelists were then asked to write down what they thought about the brochure, what they would say about the brochure and how the brochure made them feel. This metaphorical or projective exercise was an attempt to get a more nuanced view of the brochure and to have Panelists share some of their internal reservations they may have been holding back from the Panel. Following the "Think, feel, say" exercise, Panelists reviewed the NWMO's strategic objectives and were asked to rate how important each strategic objective was to them, as well as how appropriate the particular objective was to them. Lastly, Panelists were provided with an excerpt of the draft NWMO's draft approach to transparency. The exercise was introduced with a reminder to Panelists about the frequency with which they raised the issue of transparency as an important pursuit and focus for the NWMO in the previous research phase of the study. Panelists were asked to discuss whether or not the NWMO's proposed approach to transparency met with their general expectations. At the conclusion of the Panels, Panelists were provided with post-session work (homework) to complete following the Citizen Panel. The work consisted of a simple seven question survey to be completed after a brief review of the NWMO website. Those without any access or ability to use the internet were exempted from the exercise.

Although successful in terms of the richness of data collected in all 8 Panel locations, it was clear upon completion of the Panels that it would be necessary to hold Supplementary Citizen Panels in four locations (Toronto, Montreal, Regina and Sault Ste. Marie) due to smaller than expected Panel populations, as well as a difficulty experienced by some Panelists to honour their commitment to attend, as was confirmed on the day of the Panel.

Supplementary Citizen Panels occurred in early January 2008 and consisted of 6 new recruits, selected by random digit dialling, to replicate the experience by which all other Panelists had been selected. New recruits were sent a reading package in advance and then had a one hour "lobby" session immediately prior to the Supplementary Citizen Panel. This session replicated a condensed version of the Preparatory Phase research and allowed for any questions Panelists might have had about the NWMO. Following the "lobby" session, the Supplementary Citizen Panel continued, adding Panelists who had confirmed but, for a myriad of reasons, could not participate in the Phase One Citizen Panels.

Following the completion of the Supplementary Citizen Panels, those that demonstrated a willingness and ability to continue were added to the pool for Phase Two Citizen Panels.

Phase Two Panels occurred in mid-to-late January 2008. The Panel discussion began with the Discussion Leader asking Panelists if they had thought any more about the NWMO

since the last Panel, or if they had just gone back to their daily routines and not given the organization much additional thought. The Discussion Leader then distributed a document for discussion, the Executive Summary of the NWMO's study *Choosing a Way Forward: The Future Management of Canada's Used Nuclear Fuel*. The document was given both individual consideration, as well as collective consideration. Individually, Panelists were asked to mark the documents with red and green pens, green indicating they felt a certain point was helpful to their understanding and red indicating that they did not find the point helpful. The intent of the individual document review was to serve as a launching point for further collective consideration and discussion of the more complex strategic objectives of the NWMO. The Panel discussion concluded with Panelists reviewing the answers provided by the NWMO to the questions Panelists had posted in the Parking Lot in Phase One.

Again, Panels were successful in the richness of the data gathered. Furthermore, Panelists have begun to demonstrate a higher degree of ownership in the process with impressive attendance, commitment to the discussion and, in some cases, engaging in extra work, such as assembling their thoughts on paper and seeking out additional information.

Phase Three Panels occurred in late April and early May 2008. Unlike previous Panels, Phase Three Panels were divided into two parts: a discussion portion and a question and answer portion with a technical representative from the NWMO.

The discussion portion of the Panel began with a general discussion on Panelists' thoughts, if any, on the NWMO since the last Panel session and then turned to the Draft Implementation Plan that had been distributed to Panelists upon their arrival. Similar to Phase Two, the document was not reviewed by Panelists but, rather, used to inform Panel discussion on the NWMO's strategic objectives. Although Panelists were given an opportunity to comment on all objectives, as well as the document as a whole, they were asked to concentrate specifically on four of the seven NWMO strategic objectives: Building Relationships; Building Knowledge: Technical and Social Research; Review, Adjust and Validate Plans; and Collaborative Design and Initiation of a Siting Process. These objectives were rated by Panelists in Phase One as highly appropriate and important for the NWMO. For each strategic objective, Panelists were given a summary that outlined items the NWMO plans to implement over the next five years (2008-2012) and asked for their feedback; specifically whether they felt the NWMO was moving in the right direction with these plans and whether they felt that anything important had been overlooked.

Due to a timing issue in Montreal, Montreal Panelists were only able to concentrate on three of the seven strategic objectives during the Panel discussion: Building Relationships; Building Knowledge: Technical and Social Research; and Review, Adjust and Validate Plans. As a result, all Montreal Panelists present for the Phase Three Panel discussion were contacted by the Francophone Panel Manager to schedule an in depth interview to discuss the remaining objectives not covered in the Panel: Collaborative Design and Initiation of a Siting Process; as well as Financial Surety, Governance Structure and Building an Implementing Organization. Panelists scheduled for the individual in-depth interviews were provided with a copy of the Implementation Plan in

advance of the discussion and, as was the case in the Panel discussion, were given a chance to provide their feedback on the objectives outlined above.

Once the discussion on the Draft Implementation Plan was complete, in seven of the eight Panel discussions, a technical representative from the NWMO was invited into the Panel discussion for a question and answer session. This was not the case in Saint John, New Brunswick, where the technical representative from the NWMO was brought into the Panel prior to the discussion of the Draft Implementation Plan. All eight Panel discussions concluded with a wrap-up discussion, including feedback on the question and answer portion of the discussion.

Panelists continue to demonstrate ownership in the process with impressive attendance, commitment to discussion and a desire to seek out additional information between Panel discussions.

2. DISCUSSION SUMMARY

a. Emerging issues since last Panel

As in Phase Two, the Discussion Leader initiated the Panel by asking Panelists if they had thought any more about the NWMO since the last Panel, or if they had just gone back to their daily routines and not given the organization much additional thought.

A number of Panelists stated that they had continued to think about the NWMO after the last Panel and many had engaged in discussions with friends, family, or co-workers about both the NWMO as well as the topic of used nuclear fuel. Most Panelists who shared details of their conversations with others cited that those they spoke with had very little awareness of the topic and had not heard of the NWMO.

Unlike previous Panels, however, there was an admission by a minority of Panelists that they had taken it upon themselves to inform others of the NWMO and its mandate.

Panelists, by and large, have amassed an above-average awareness of a topic unfamiliar to most Canadians. Participating in three Panel sessions and reading the accompanying literature has, by this point, made the Panelists more aware of the field of nuclear waste. As a result, Phase Three Panel discussions contained numerous indicators of increased knowledge of the material, and a perceived “us”/“them” divide between the Panelists and the general public regarding awareness. In fact, a number of Panelists are increasingly viewing themselves as “ambassadors” of the NWMO mandate, an evolutionary development largely based on an increased awareness of the subject matter.

For instance, one Panelist in Saskatoon, Saskatchewan prefaced their comments with a gentle reminder to the Discussion Leader that they were no longer representative of the general public anymore *vis-à-vis* the ability to participate in a survey requiring specialized knowledge,

One of the things that struck me as not too helpful is completing telephone surveys. By being involved in this process, I've received an education so now I can talk a little more about this subject. If you call the average person, they won't have any idea at all of what they're talking about.

One of the reasons for the Panelists' increased knowledge was their steady supply of reading material from NWMO, most recently the NWMO's annual report.

The majority of Panelists are taking far more ownership of the information that has been provided to them, such as the Annual Report which was sent to them earlier this year. At the same time, many Panelists are acutely aware of the time it has taken them to get to the point they are at and the effort they made to learn more about the organization. These Panelists are far more aware of the importance that education plays in becoming more comfortable with both the NWMO and its mandate.

A Panelist in Scarborough, Ontario described a recent encounter with a friend in which they related their experience as a Panelist and what they had learned about used nuclear fuel. Seeing the friend's reaction, the Panelist realized that they had similar views at the start of the process, but that they now had a higher degree of comfort with more information and even used the NWMO Annual Report as an example of what they felt was information that might defuse their friend's anxiety.

This is an important evolution in Panelist opinion, as previous documents were viewed with some scepticism as Panelists were concerned that they were primarily "sell" documents. This has evolved to the majority of Panelists viewing NWMO documentation not as advertising, but as informative and useful with some Panelists voicing their appreciation for the blunt, straightforwardness of the writing.

The underlying principle many Panelists valued, in this case, is transparency. Whether or not it is likely the average Canadian will make the time to read NWMO reports was less important to many of the Panelists than the fact that they did have access to them and could read them if they wished. With an issue as important as the handling of used nuclear fuel, a greater-than-necessary degree of transparency is expected.

NWMO documents, such as the Annual Report and the Draft Implementation Plan, were seen as informative by most Panelists and were considered to be presented in an authoritative and transparent way. After reading the Draft Implementation Plan, specifically, a number of Panelists appeared to place far more faith in the organization than seen in previous Panel sessions, such as one Panelist in Kingston, Ontario who said the following,

*They're responsible people. Everyone is involved here, even us.
Everyone is involved so they're going to make sure that things are
going to go right for themselves as well as the rest of us.*

In short, no Panelist in Phase Three accused the NWMO of performing a "hard sell" using their literature. To the contrary, Panelists have consistently made reference to the NWMO using their documents to inform and to disclose – even if casual readers would find the publications dry and technical.

It was clear in all Phase Three Panel discussions that the views of the majority of Panelists have, and continue to, evolve over time. A significant number of Panelists exhibited a greater understanding and openness towards the NWMO, as well as Adaptive Phased Management. Although some elements of APM continue to challenge a number of Panelists, such as adaptability and the timeline of APM, many Panelists appeared more open to elements that have, in the past, garnered a great degree of scepticism. For instance, a significant number of Panelists seemed far more open to the notion that a "willing host community" might actually exist. Although some Panelists continue to struggle with what they perceive to be the "euphemistic nature" of the term, there appeared to be a greater understanding of the potential spin off effects.

This was illustrated in a statement made by a Panelist in Saint John, New Brunswick,

We welcome stuff like that all the time for financial reasons...it's going to be contained. What's wrong with that?

This evolution of Panelist view demonstrated the importance of engagement. It has become increasingly clear that engagement leads to understanding which, in turn, can lead to increased trust in and acceptance of both the NWMO and its mandate. Panelists demonstrated a greater acceptance and confidence in the organization, far more than has been seen in previous Panel discussions.

b. Draft Implementation Plan

During this Phase of Citizen Panels, the NWMO's Draft Implementation Plan was reviewed by Panelists in advance of a general discussion. While a significant amount of Panel discussion was directly related to the four strategic objectives identified as most important and appropriate for the NWMO by Panelists in Phase One Panels, time was dedicated for a more general discussion among Panelists.

The Draft Implementation Plan was well-received by most Panelists, who felt it was well-thought out and informative. The majority of Panelists preferred the Draft Implementation Plan to previous NWMO documents they had reviewed but, as was the case in Phase Two, some acknowledged that their preference and understanding might stem from their familiarity and existing knowledge on the subject matter. Again, many Panelists felt their level of understanding had increased more than in Phase Two which might account for their preference of the Draft Implementation Plan.

In nearly all Phase Three Panel locations, however, few Panelists made occasional comments about the overall subject matter being complicated and, at times, the wording chosen was perhaps not as clear as possible. The majority of Panelists would not normally be reading a draft implementation plan, or a business plan, and, as a result, had some challenge putting into context the purpose of the document overall, as well as some of the more advanced concepts and vocabulary. However, they did feel it was a very informative and useful document and appreciated the level of detail provided on how the NWMO plans to conduct its work as it moves forward. As stated by a Panelist in Saint John, New Brunswick,

...some of the wording I didn't understand, but it gave me a much better understanding.

Some Panelists appreciated what they perceived to be the NWMO taking their thoughts and input from previous Panels into consideration. For instance, many Panelists were quite pleased with the glossary provided in the Draft Implementation Plan. The perception that their thoughts and input were being taken into consideration gave a number of Panelists more confidence in the organization and its commitment to collaboration. In the words of a Panelist in Saint John, New Brunswick,

...It feels like they are really taking input into consideration.

Many Panelists reacted positively to what they perceived as far more definitive language used by the NWMO in the Draft Implementation Plan. More deliberate language signalled action to many Panelists, rather than continued deliberation. The use of this language, to a number of Panelists, gave them the impression that the NWMO is now moving forward in its mandate with confidence, which a number of Panelists were pleased to hear. According to a Panelist in Kingston, Ontario,

This document sounds very confident to me. They have this plan in place and they will achieve these points by the year 2012. It

sounds like they're very confident that they're going in the right direction and know what they're going to do. It's going in the right direction. It looks pretty good to me.

Many found it quite interesting to see how far things had progressed throughout the Citizen Panel process. In the words of a Panelist from Saint John, New Brunswick,

I feel like it's advanced a lot. They're coming right out and saying that they're looking for a site, and they didn't even mention that in the first group.

Demonstrated confidence on the part of the organization was viewed as a virtue to many Panelists. Panelists seemed assured by solid plans, rigorous scientific backing (even though they might not fully understand it) and unambiguous direction.

Some Panelists, nonetheless, wrestled with the scope of the planning process. While these Panelists seemed to appreciate the completeness of the Draft Implementation Plan, its incrementalism and multi-decade timeline was hard for some Panelists to comprehend. While they understood that the process was, in fact, meaningful, some Panelists struggled with the breadth and scope of the process, specifically whether it would be ultimately be achievable. In the words of a Panelist in Saskatoon, Saskatchewan,

It is good that they are covering all their bases, as long as they are still spending enough time in producing results.

Of course, many Panelists would admit that “planning” and “doing” on a scale as large as this are not mutually exclusive, but it was difficult for many Panelists to grasp the idea of a document about, essentially, “deciding how to decide.”

While most Panelists applauded the NWMO for its plans to publicly consult, some wrestled with the consultation process if it would ultimately delay a 60 year timeline. For these Panelists, the need to consult was no less; it was more an inability to comprehend the proposed timeline, as well as the time it will take for consensus to build.

When challenged by the Discussion Leader as to how the NWMO might scale back its consultative process to reduce its proposed timeline, however, Panelists generally felt that none of the NWMO's proposed actions should be eliminated.

Panelists were aligned on the value of educating younger Canadians about nuclear power and its by-products starting in schools. Many Panelists would agree with the idea that “it is never too early” to teach the next generation about the realities of nuclear power and the management of used nuclear fuel as, ultimately, they will inherit our generation's used nuclear fuel. Some felt the education that the Panelists had received through the Panel discussions and reading could be taught in schools over a student's career.

A Panelist in Toronto, Ontario raised the idea of introducing a progressively more challenging nuclear curriculum starting in public schools,

Actually, if you build programs for different school levels. Public school kids should be learning where the power comes from. Then high schools, a little bit more, this is how it works. Then university, you'll start getting some interest; this is something they'll want to get into. Start discussion groups at that level.

Education, coupled with a bigger public awareness effort, struck some Panelists as a good way to enhance transparency.

Other Panelists agreed that since nuclear energy is perceived as a technology of the future, it is an issue that is not only going away but, as well, is largely tied to an increased awareness of environmental issues, namely greenhouse gases and global warming. According to a Panelist in Montreal, Quebec,

Yes, I've spoken about it with others. After all, nuclear waste management is a very current issue. And with the increasing problem of greenhouse gases, nuclear energy is becoming an increasingly viable solution and there is a growing number of projects under way right now to establish new reactor sites. So, in other words, it's not an area of technology that's on the brink of extinction. In fact, it's quite the opposite – it's the technology of the future.

An issue that garnered less consensus, but produced more spirited debate than education, was that of what other countries are doing with their nuclear waste. The issue raised plenty of questions (sometimes asked honestly, sometimes with scepticism) to the NWMO technical representatives, as well. A number of Panelists were keen to know what countries such as the United States, Iran, Pakistan, and China were doing with their nuclear waste. According to a Panelist in Montreal, Quebec,

And there are nuclear power plants being built all over the world, including China and Iran... just the fact that countries like Afghanistan have nuclear power is not the most comforting thought.

The partner countries always cited by the NWMO in terms of technology-sharing, such as Sweden, France and Finland, were not the countries that generated worry.

One of the only other palpable moments of scepticism among Panelists arose with the differentiation of Canadians and Aboriginal Peoples. Despite clarification from the Discussion Leader, some Panelists continued to struggle with why such a differentiation was necessary. For a minority of Panelists, the consistent differentiation and what they perceived to be a repeated emphasis on Aboriginal Peoples in NWMO documentation led

to an unfounded assumption that the organization had plans to locate the repository site on Aboriginal Land. In the words of a Scarborough, Ontario Panelist,

I noticed on this sheet, as well as in the Annual Report, that about 1/7 of the mentions with building relationships has to do with the Aboriginal community. I don't recall ever seeing that we are going to establish a repository on Aboriginal land, yet there seems to be, as opposed to specifying other specific communities, a very strong push towards dealing with Aboriginals. Is it a fait accompli that this is where it's going to be?

This sentiment was echoed by a Panelist in Toronto, Ontario, who assumed that the repository site would be located on Aboriginal land since it couldn't very well be placed in an urban city centre,

...It's not going to be [stored] in a factory in Hamilton – it's going to be somewhere on Crown land, or native land basically...I think we're all sort of getting the idea that it's something along that line. Because the Aboriginals are constantly being mentioned.

Another theme throughout the Citizen Panel project has been the fascination with the reprocessing of used nuclear fuel. The concept and word seems to have entered the Panelists' lexicon. Perhaps after two decades with local curb side recycling programs of the some sort, Canadians instantly understand the concept. In the words of a Panelist in Saskatoon, Saskatchewan,

Are they looking for ways to get more use out of this waste? Can they use anymore of it? They don't even mention ways to recycle the waste so it becomes further depleted.

In just a couple of generations, Canadians have witnessed firsthand some amazing developments in technology, not the least miraculous of which has been the growing role of stable nuclear power. Although Panelists are not aware of what exactly reprocessing entails, specifically the extensive resources required and the technological challenges associated with it, a minority of Panelists voiced a desire to see every opportunity for reprocessing factored into the NWMO's decision-making process.

Overall, Panelist feedback on the Draft Implementation Plan illustrated that both the Plan and, by extension, the NWMO is on the right track. Panelists, for the most part, felt the NWMO is moving in the right direction and were impressed with the breadth of the NWMO's plans to transition from a study to an implementing organization. The Draft Implementation Plan was thought by most to be an improvement on documents reviewed in the past, as well as, in the eyes of some Panelists, reflective of feedback provided in previous Panel discussions.

3. DIALOGUE: STRATEGIC OBJECTIVES

In the Phase One Citizen Panels, seven strategic objectives were shared with Panelists. Panelists were asked to examine each objective and then to give an indication of their relative importance and appropriateness. Although all strategic objectives seemed largely in line with the majority of Panelists' expectations, there were consistently stronger views on four of the seven strategic objectives: Building Relationships; Building Knowledge – Technical and Social Research; Review, Adjust and Validate Plans; and Collaborative Design and Initiation of a Siting Process. As such, these four objectives were selected as the primary objects of discussion in Phase Three for reasons of time availability.

Panelists were given the NWMO's Draft Implementation Plan to review in advance of the Phase Three discussion. The Plan outlined each of the NWMO's seven strategic objectives, as well as what the NWMO plans to do in the coming years to fulfill each objective. To inform the discussion of the strategic objectives in the Phase Three Panel discussion, each Panelist was given a colour-coded worksheet for each of the 4 objectives identified above as primary objects of discussion. Each worksheet outlined the items the NWMO plans to implement over the next five years (2008-2012). A more comprehensive overview of each objective in the Draft Implementation Plan document was flagged with the same colour of the worksheet for quick reference should Panelists have wanted or required more information. After reviewing each of the four objectives, Panelists were asked for their feedback; specifically whether they felt the NWMO was moving in the right direction with these plans and whether they felt that anything important had been overlooked.

After reviewing and discussing the four objectives mentioned above, Panelists were provided with an opportunity to provide feedback on the remaining three objectives: Financial Surety, Governance Structure and Building an Implementing Organization. Panelists were asked by the Discussion Leader if any of the remaining objectives now struck them as more important, given the increase in their knowledge on the subject matter since Phase One.

The following is an overview of feedback provided by Panelists in all 8 Panel locations.

a. Building Relationships

Panelists reviewed the items the NWMO plans to implement over the next five years, also known as the organization's "engagement strategy", in an effort to fulfill its commitment to both build long-term relationships with interested Canadians and Aboriginal Peoples, as well as involve them in setting future direction for the organization.

The majority of Panelists felt the NWMO was moving in the right direction with its engagement strategy and were impressed with the breadth of the strategy the NWMO plans to undertake, as well as the breadth of those they intend to involve. As stated by a Panelist in Montreal, Quebec,

In fact, they have quite an extensive list of targeted groups to be involved in the process, including citizens, regional and community-based organizations, interest groups, researchers, industry, governments and the general public, etc. and I think that shows a real, genuine effort on their part to include everybody and to disseminate the information as widely as possible.

Many Panelists had expressed a desire to see the NWMO increase its public profile, as well as educate and engage Canadians, through increasing its media presence, as well as increasing its presence in the community through events such as town halls. As such, many were pleased to see the NWMO's commitment to identifying speaking engagements, community-based presentations and media opportunities to develop awareness, as well as its commitment to meeting with editorial boards and other media. A number of Panelists felt that the media was a key way of educating and engaging Canadians, largely because of its scope and accessibility. In the words of a Panelist from Saint John, New Brunswick,

I think it's important, especially seeking meetings with editorial boards...When you hit that level, it will take on its own life. The big media is where you get the real public interest.

Looking to themselves as examples, a number of Panelists stressed the importance of education to the evolution of opinion and understanding. As previously stated, the majority of Panelists are far more aware of their level of awareness on the subject matter, which has grown significantly throughout the process. However, they are also acutely aware of the time it has taken to get to the point they are at currently, as well as the importance that education plays in becoming more comfortable with both the NWMO and its mandate. In the words of a Panelist in Scarborough, Ontario,

I believe the best way to communicate to Canadians is to have them informed.

As such, many Panelists stressed the need for educating the general public on the NWMO and APM. However, as mentioned previously, a number of Panelists were clear that they

felt the onus was on the NWMO to educate the public, not for the public to educate themselves. These Panelists felt that it was up to the NWMO to educate and inform the general public, rather than assume the public will seek out information on the organization themselves.

A recurring theme throughout all three Panels has been the importance of engaging and educating youth. As we have heard throughout the Citizen Panels project and in previous research, if the challenge is to cope with an intergenerational challenge, what is the obligation to the next generation? As asked by a Panelist in Saint John, New Brunswick,

They are obviously the ones that are going to have to deal with it too. They should be involved, it's going to be their generations that have to deal with it.

What is not clear is whether or not this is seen as necessary for continued debate to ensure that a dialogue also continues over more than one generation or if this is a transference such that the current generation seeks to absolve itself and transfer the responsibility.

Many Panelists felt that to inform and educate the general public and, in turn, build relationships, it would be important to have a balance between language that demonstrates competence and language that is accessible to the average Canadian. For instance, in the Draft Implementation Plan, a number of Panelists had difficulty with some of the terms used, such as, "Corporate Citizenship Program." In the words of a Panelist in Montreal, Quebec,

I didn't understand "Establish a corporate citizenship program." That wasn't clear to me. What exactly do they mean?

The language "corporate citizenship program" was foreign to many Panelists and debate around its meaning ensued in almost all Panels. In some cases it was viewed to be a stewardship program, in others a governance training exercise. The notion of who might qualify as a corporate citizen was not clear.

A small number of Panelists acknowledged and applauded the NWMO's intention to undertake a communications audit to support the design of its new communications strategy. In the words of a Panelist in Saint John, New Brunswick,

They are a pain in the butt if you are on the receiving end, so it's a good thing. It will identify weak links.

Similar to previous Panel discussions, a number of Panelists expressed some unease about the language convention of differentiating between Canadians and Aboriginal Peoples. This differentiation has proven to be a perennial theme, as it is consistently raised by Panelists in each Phase of Citizen Panels. Despite repeated clarification from the Discussion Leader that this distinction is, in fact, legislated by the government, as well as preferred by many in the aboriginal community, a number of Panelists continue to

question whether it is necessary or if it is the NWMO's attempt to be neutral on an issue that has the potential to generate controversy. As stated by a Panelist in Kingston, Ontario,

...by saying that, you are putting yourself on one side of the fence when you could make it more neutral rather than being neutral.

Although a small number of Panelists appreciated the importance of consulting with Aboriginal Peoples, given their traditional knowledge and relationship with the earth, many Panelists were far more sceptical. A minority even went so far as to question whether the level of attention paid to Aboriginal Peoples by the NWMO's might signal the organization's intent to target aboriginal land for the long-term storage. For instance, according to a Panelist in Montreal, Quebec,

But my question is, are they considering disposing of the nuclear waste on aboriginal land because they seem to be consulting the aboriginals in an extraordinarily intense manner and it would make sense because they usually live in quite remote territories, so...

This sentiment was echoed by a Panelist in Kingston, Ontario,

By reading between the lines, I'm seeing that they're already thinking about where this is going to be because if they're consulting this much with Aboriginal Peoples, they're looking for a remote, Northern community...

A common theme in all eight Panels when discussing this strategic objective was building relationships internationally with countries undergoing similar processes. Few Panelists felt that the NWMO could put a greater amount of emphasis on building international relationships and collaborating with countries that are ahead of Canada in their siting and, as such, may have useful suggestions, advice or recommendations as the organization moves forward with APM.

b. Building Knowledge – Social and Technical Research

Panelists reviewed the items to implement over the next five years to effectively advance research and to broaden the NWMO's foundation of technical and social knowledge. Feedback was primarily positive, with a number of Panelists stating that the NWMO's commitment to research built confidence. Panelists were generally impressed that research would remain a long-term undertaking of the NWMO and not cease to be a priority after a willing host community was selected or the waste transferred to a repository.

However, there was a notable divide among some Panelists as to the length of time the NWMO's planned technical and social research will take. Some Panelists felt that the project timelines and research outlined in the Draft Implementation Plan was very well thought out and, in fact, necessary given the nature of the process. These Panelists were quite clear that they appreciated the thoroughness and time devoted to technical and social research, such as a Panelist in Scarborough, Ontario who said the following,

They're very good with their planning. You don't want a bunch of cowboys out there. All this has to be taking into consideration, taken very seriously. It's very technical.

A Panelist in Kingston, Ontario echoed this sentiment,

If you go forward 20 or 30 years and you start doing this and then something goes wrong, the first thing that will be asked is how did it go wrong and why did it go wrong. When people were starting this process, didn't they give consideration to a slow and methodological process making sure that things didn't go wrong? I think it would be negligent to not proceed at a snail's pace. Think of the consequences on the other end. They are enormous. Maybe a snail's process is required to say that we did everything we possibly could.

Again, the issue of building knowledge among today's youth was raised by some Panelists. These Panelists felt it would be important to start discussion groups at a much younger age. Rather than concentrate all efforts on speaking with Canadians of a certain age, perhaps it would be of use to engage youth by building discussion programs at different school levels. As stated by a Panelist in Toronto, Ontario,

Actually, if you build programs for different school levels. Public school kids should be learning where the power comes from. Then high schools, a little bit more, this is how it works. Then university, you'll start getting some interest, this is something they'll want to get into. Start discussion groups at that level.

Questions surrounding reprocessing were consistently deferred to the question and answer session with the NWMO technical representative where more information on the

what, how and why of reprocessing was provided. A number of Panelists did indicate that they were pleased the NWMO addressed reprocessing in the Draft Implementation Plan.

Panelists have always cited the importance they put in Canada consulting with and accessing the experience of other nations. A number of Panelists questioned why growing powers like India, China and Brazil were not listed with Finland, France and others. Although, these Panelists were not sure a partnership with China and Russia would be appropriate and some questioned if there were standards to which Canada felt countries had to adhere to be a good partner on exploring solutions for nuclear waste.

Certain technical terms raised numerous questions from the group, in particular, references to “hydride cracking” and “uranium dioxide dissolution rates.” The nature of both terms raised a red flag for a minority of Panelists, who, without a proper definition provided, found the terms concerning. For some Panelists, various terms were still fairly technical and scientific and, as such, hard to understand. In the words of a Panelist in Sault Ste. Marie, Ontario,

We’re not geologists, we’re not scientists. Give us the straight stuff.

General technical concerns extended to whether or not the ultimate storage repository might be big enough to accommodate just the waste created by the current reactors in Canada or if it was adaptable in size to accommodate waste from other jurisdictions or waste from possible new reactors in Canada. There was overwhelming sentiment expressed in the Panels that the importation of waste would not be supported.

The discussion of transportation was meaningful to Panelists and was repeatedly raised in all eight Panels. Many Panelists had numerous questions and concerns about transportation, and frequently used examples relevant to their own lives, for instance by making a reference to a mode of transportation or a route through their community. Usually, questions centred on how safety would or could be planned for. Scenarios in discussion extended from whether or not local safety officials and “first responders” would have ever been trained to engage in a task as complex as dealing with used nuclear fuel to the mode of transport and type of container. More than one Panelist cited personal knowledge of other forms of waste or hazardous material that traveled by truck through communities that both traveled safely and people were not generally aware of. In the words of a Panelist in Montreal, Quebec,

But that’s where we get into the issue of transport and I think it’s the transportation of nuclear waste that makes people more nervous than anything because that’s where the most potential exists for an accident. That being said, the longer the distance that has to be covered for transport and the more difficult it is to access the storage site – bad roads, poor weather conditions, etc. – the more dangerous it is and the greater the risk for a catastrophic event. So, it’s transport that’s really the problem.

It became clear in Phase Three Panel discussions that transportation has emerged as a perennial theme in all Panels. Emphasis on transportation plans and methods that will be employed by the NWMO largely stems from the fact that transportation is the one aspect of APM that is not abstract in the minds of many Panelists. Furthermore, most Panelists have first hand experience with transportation accidents and, as a result, have and will continue to approach the topic with some degree of scepticism and worry. A number of Panelists, however, previously expressed that transportation is the one aspect of the storage process that does not require complete transparency for the sake of safety.

c. Review, Adjust and Validate Plans

One particularly striking observation about many Panelists is that they are increasingly engaging in a debate amongst themselves about the degree to which simply sharing information qualifies as “transparency” or if being a transparent organization requires working also to get the public’s attention.

Some Panelists indicated that publishing everything to a website and offering frequent public disclosure is an adequate measure, as this would allow those Canadians interested to access the information. Conversely, others felt too small a population would be interested and that a broader public education or information effort might be required to both inform and gain some status as a top-of-mind issue.

Still, many Panelists would concede the value in at least making information available for the interested. As this Panelist from Kingston, Ontario noticed,

In terms of transparency, something like that is a must. Whether people read it or not, it’s a must to put that on the website.

The belief that full disclosure of NWMO material is essential (even though it is admittedly unlikely to be read by mass audiences) was common amongst Panelists. This was expressed using a more familiar analogy by another Panelist in Kingston, Ontario,

It’s like a library. You have to have everything there, but whether you chose to read it or not is another thing. Otherwise, you can’t call yourself transparent.

A Panelist from Sault Ste. Marie, Ontario echoed a similar belief that a baseline measure of transparency is earned by publishing regular periodic releases and updates. While the NWMO’s Draft Implementation Plan may not be the polished communications-friendly pamphlet that the Panelists demanded in other parts of the discussions, it clearly has great value as a tool for transparency. As stated by a Panelist in Sault Ste. Marie, Ontario,

I like how it’s written; they’re telling us exactly what they’re going to do, explains it to a tee. I like the part about them publishing on an annual basis.

A word of caution came from a Panelist in Scarborough, Ontario, however. This Panelist stressed that while the subject matter is inherently academic in nature, the wording must always be accessible to any interested citizen. A “user friendly” primer on technical terms could be considered in NWMO publications for people who share this commonly held concern,

I know they have to be academic, but they need to be in accessible language. I don’t want to go through a huge glossary to find out what certain words mean. If they want to go read that 36 page paper, that’s fine, but have some sort of aid for the public.

Another popular idea with some Panelists was that of the inherent flexibility offered by APM. When dealing with a topic as foreign as the storage of used nuclear fuel, the notion that steps can always be retraced and new technologies accommodated carried a welcome air of flexibility to some Panelists. These Panelists appeared to appreciate a large organization speaking about being adaptive – just as they might see themselves acting in their daily lives when the unexpected happens. A Panelist from Montreal, Quebec mentioned,

I think it's a good idea to have this built into the plan, to have the flexibility to re-evaluate the plan in light of changing external realities and such in order to stay on the right track and remain headed in the right direction.

A Panelist from Kingston, Ontario also thought that impressive foresight was being demonstrated by the NWMO by being able to accommodate any future upswings in nuclear power generation,

I like that they're mentioning the growth of the amount of fuel bundles they're going to have to store...30 years from now, it's going to be a lot larger...they're making plans for that.

Lastly, a special mention was made by a Panelist from Regina, Saskatchewan, to another important facet of the NWMO's efforts toward achieving greater transparency and dialogue. This Panelist mentioned another crucial element to any public organization's mission: high ethical standards,

I am pleased to see they are working with ethicists. Ethics are very important, especially when working multi-nationally.

Although there was some debate as to what exactly constitutes transparency among a number of Panelists, most have come to regard the NWMO as a transparent and trusted organization, largely based on the information shared with them throughout the Citizen Panel process. Furthermore, many Panelists are now taking as an assumption that materials, reports and scientific data will be shared.

Panelists, for the most part, insist that transparency is essential for an organization committed to adaptability. Furthermore, some Panelists questioned whether the obligation of an organization like the NWMO might be greater than simply “being transparent.” It will be important for the NWMO to continue placing as much emphasis as it has been on transparency through actions such as keeping its website up to date in order not to damage the trust that has been gained throughout the Panel process thus far.

d. Collaborative Design and Initiation of a Siting Process

A number of Panelists continue to struggle with the notion of a siting process for used nuclear fuel. Again, some Panelists expressed confusion in regards to timelines, in this case, why the NWMO is forecasting four to five years to develop a siting process. The majority of Panelists understand the need to get input from Canadians, specifically those that will be directly affected when the siting process begins and, as such, were impressed with the level of collaboration and opportunities for community input in the NWMO's plan to develop a siting process. According to a Panelist in Montreal, Quebec,

The objective is well thought out; they take into account the community, the opinions of people...they are aware it has to be accepted by the community, not just the NWMO.

This sentiment was shared by a Panelist in Toronto, Ontario,

...I think that the community input is vital. Because otherwise, what is the point of putting forward a process that you're saying is transparent?

However, some Panelists had difficulty reconciling the NWMO's promise to consult interested individuals and organizations in a dialogue on the design of a process for a site, with the long timelines involved in the project and the need to proceed as soon as possible. While no Panelist wished to sacrifice public consultation, there was a desire among some Panelists for the NWMO to advance the timeline wherever possible. These Panelists had difficulty wrapping their heads around the necessity to develop, in their eyes, the process to decide upon the process. For instance, as stated by a Panelist in Regina, Saskatchewan,

The first line makes me want them to start moving sooner rather than later.

Furthermore, some Panelists expressed a desire to see siting begin sooner rather than later as, to them, the used nuclear fuel would be far safer underground than sitting above ground, as it is currently. Although this was a minority view, some felt very strongly that storing the used fuel as it is currently posed a greater risk.

Given the length of the proposed timeline, some Panelists expressed some concern about a loss of interest over time as a result of the length of the timeline. Some Panelists question not only whether the interest and investment of those involved will ultimately wane, given their inability to complete the project in their lifetimes but, as well, how the drive to successfully implement APM will be sustained over time.

Some Panelists, however, were actually supportive of moving forward at a slower pace. The hope that countries with which Canada has cooperation agreements, countries which are significantly ahead of Canada in their own siting processes, might offer some suggestions or recommendations was in play here. A small number of Panelists even

suggested that it might save Canada money on research as it could be possible to emulate experiences in other countries with similar geology and processes, as well as avoid mistakes they themselves have made.

This is a departure from the previously held view of some Panelists that Canada should be a world leader, rather than a follower. A number of Panelists felt that, with an issue as complicated as this one, there was some merit to neither leading, nor trailing the pack, but, rather, being somewhere in the middle. Past views of some Panelists indicated that they wished Canada to be leading the pack, but it appears that, for some of these Panelists, their views have changed as there might be a lot to learn and, subsequently, improve as time passes and other countries move forward with their own long-term management approaches.

A significant number of Panelists appreciated the extensive consultation promised by the NWMO, especially in reference to the siting process. These Panelists understood and acknowledged the necessity for the NWMO to have both a technical and social license to successfully identify a site and implement APM. In the words of a Toronto, Ontario Panelist,

As far as technical aspects and safety, the experts are really important. But the public is important in having their input into how the community feels about having the site where they're proposing...and what the social impact [will be] of having the site where they're having it. It's two- tiered.

Another evolution in thought was the openness of some Panelists to the notion that a willing host community might, in fact, exist. In Phase One, a significant number of Panelists perceived the notion of a “willing host community” as unrealistic, as choosing a site for used nuclear fuel would inevitably be quite difficult. Although the notion that it will be a difficult process still remains for most, and some continue to feel that the term is somewhat euphemistic, a number of Panelists demonstrated a much greater openness to the possibility that some communities might, in fact be willing to “host” due to the potential financial and employment benefits that would inevitably occur. This sentiment was especially evident after hearing about experiences in other countries where willing host communities have been identified, as Panelists were interested as to why those communities had expressed interest in being “willing hosts.”

However, one question that did arise on numerous occasions was how the NWMO would proceed if, by chance, a willing host community could not be identified. These Panelists wondered if the NWMO had a “Plan B” should this process not proceed as anticipated. As asked by a Panelist in Regina, Saskatchewan,

What happens if no one wants it? Will there be a Plan B?

A Panelist in Scarborough, Ontario had a similar question stemming from the disclaimer in the Draft Implementation Plan “subject to confirmation of readiness to proceed...”

One thing that kind of strikes me is the schedule draft for 2008-2012 is subject to readiness to proceed. What if we are not ready? Does it become 70-80 years?

If the process is to identify the best science and a willing host community with appropriate geology, some Panelists wondered if there was, in fact, the flexibility to allow for significant recasting of the timelines. This was part of an interesting line of discussion that re-occurred throughout Phase Three Panels about whether or not this conceptual discussion can be had sincerely, and if when the process for siting begins opinions will change. Some Panelists were unsure themselves whether or not their opinion might change dramatically if they were engaged in a debate on siting in their region or province. This sentiment was very well articulated by a Panelist in Regina, Saskatchewan, who stated the following,

Up until now, it has been an abstract process; the siting process will be when the waste hits the fan. People will be polarized on the issue.

It appears that one of the challenges facing the NWMO as it moves forward with its mandate is a communications one. It has become increasingly clear that the NWMO has a limited ability to communicate with Canadians before a site is selected. The dialogue process, while useful, is largely abstract in nature and, as a result, garners little attention outside of the Panels and among the general public. However, once a site is selected, the process becomes a tangible one and the NWMO will be thrust into the spotlight. As a result, it is important that the NWMO continue trying to understand what Canadians want, expect and trust in an organization of this nature so that when the spotlight is turned on the NWMO, Canadians will see the kind of organization they want to see in the NWMO.

e. Remaining 3 Objectives: Financial Surety, Governance Structure and Building an Implementing Organization

Not all Panels were presented with the opportunity to discuss the remaining three strategic objectives and, due to time constraints, very little feedback was provided.

4. QUESTIONS & DISCUSSIONS, TECHNICAL REPRESENTATIVE

Technical representatives from the NWMO were present for a question and answer session at the request of the Panelists themselves. Panelists were twice given the option to have a technical representative present at the Panel discussion but preferred to wait until Phase Three as, until this point, felt that they still had more they needed to learn and discuss so that they were able to ask informed and insightful questions.

The technical representatives had approximately 90 minutes with the Panel to offer technical insight, institutional knowledge and a corporate perspective that, to date, only been present in written materials. Panelists were able to present their questions on a “first come first serve” basis with the Discussion Leader keeping a speaker’s list to ensure all were able to address the technical representative.

Technical representatives were not permitted to view the Panel before, nor after, the question and answer session. The Panel was informed of this so that they felt comfortable being frank before and after the appearance of the technical representative and did not feel required to censor themselves fearing observations.

The majority of Panelist questions posed to the technical representative fit clearly into five themes: safety, site selection, timeline, international comparison and transportation. The following is an overview of the nature of the questions, as well as the questions themselves, posed by Panelists, as divided by theme. A list of all questions posed by Panelists is included in each of the individual Panel reports.

a. Safety

A prominent theme in many Panelists' line of questioning was safety. While it was the underlying focus in a great many questions raised to the NWMO technical representatives, it is worth noting that the assumption of deep geological storage as a relatively safe method of handling a dangerous material was an unspoken assumption throughout the Panel research. As a result, in the minds of many Panelists, if the NWMO had done the research and presented documents all dealing with adoption, siting, and long-term storage of the used fuel, Panelists were more likely to assume that the basic safety fundamentals had been satisfied.

Below, please find questions related to safety posed by Panelists in all 8 Panel sessions:

- Will it be really safe in the geological repository?
- Do you think there will be some unrealized side effects? Any harmful effects to health?
- Will it be safe against terrorists? Or a bomb?
- How susceptible are the interim storage sites to possible terrorist attacks? When you hear of sites in the modern age, how susceptible are they to bombings or any other attack? Once this is developed, how secure is it then?
- You talked about the rock being the safest place for it. But it's not just rock being used to build this thing. What studies have been done on the other building materials to see how long they'll last?
- In reference to transportation safety, we know from the past that no matter what we try to do for safety, there is always a contingent factor. What are the kinds of contingency plans the NWMO has in place if there is a spill, if there is an accident?
- I was wondering if any numbers from studies about the rate of cancer or birth defects near nuclear facilities, as opposed to other areas in the province were available?
- What are the actual health effects of radiation?
- What is your idea for safety in containment?
- What are the real things that we have to fear with regard to nuclear waste? What can really happen to us, or the area, or the world? Has this stuff caused a problem at some point in some place?

- What is the difference between the threat to above ground storage and underground?
- You have spoken about the safety issues. Failure tends to be human error in the nuclear area from what I have heard and read. What are your thoughts on possible human error?
- What about theft and security of the sites?
- There's no risk of danger or anything? No uncertainty? Is it dangerous?
- As far as environmental safety, what is the potential risk for soil contamination?

b. Site Selection

Technical representatives in all Panels were faced with numerous questions concerning site selection. Although the majority of Panelists demonstrated a greater understanding of and willingness to believe a “willing host community” could possibly exist, a great deal of attention continued to be directed at site selection. The questions about siting tended to orbit around the notions of complexity, geographic suitability, and community acceptance.

Below, please find questions related to site selection posed by Panelists in all 8 Panel sessions:

- What makes that process of selecting a site so complicated, besides the geological survey? Why does it take them so long if they have already decided there are 5 spots that are possible? Why will it take 10-15 years to decide which one?
- Will the environmental assessment process be by application? An official pick? Or sort of like a lottery?
- The process of choosing one site will take a minimum of 15 years and it will probably take nearly 30 years to pick one. Would you have a second site, just in case there is a problem with a first one?
- If a disposal site is chosen on aboriginal land, do you think the government will have great difficulty in convincing them?
- You say that sites are selected in so-called “consenting communities.” But in a country as large as Canada, with so many vast and uninhabited areas, why do we not just choose a site that’s remote and far from any communities inhabited by people? In other words, does a disposal site really need to be close to any communities of people at all?
- Have there been any studies looking at possible future disposal sites based on the appropriateness of geological formations across the country? Are there any sites that seem more appropriate than others at the outset?
- So there is a possibility they could dig down and not end up using the site?
- Do you know already, or have a vague idea, because of the geological demands of having an underground facility, how available these areas are that you looking at? Is it easy to find the type of rock you need?
- Is it fairly easy to identify a site from a technical perspective?
- Is it the type of rock that determines [the site]?

- We've been discussing the geological formations we would use to contain nuclear waste. Other than the Canadian Shield, can you expand on any other types of rock that would be considered?
- What if they find a site but then people say no? What if it's not okay with the aboriginal community?
- Are they planning on giving monetary incentives to communities in Canada?
- We've heard a lot about types of geology, surveying and host communities. In the next 60 years, most people that would oppose would be dead. If it comes down to there being a best location in Canada, why would it be voluntary?
- Could they not have a map so you could tell ahead of time what would be suitable locations?
- There's a lot of reference to aboriginal communities, and I'm wondering why that is so strong. Is it because there is a sense that it may be located in an aboriginal community?
- Have any other countries ...just chosen, and then put it in there? Instead of a consultative process?

c. Timeline

Again, a number of Panelists demonstrated their continuing struggle with the timelines associated with APM by asking the technical representative a number of questions on why, exactly, the NWMO requires the amount of time outlined in the Draft Implementation Plan. For some Panelists, the fact that the process will far extend their lifetime makes it quite difficult to fully comprehend. Other Panelists were interested to know how the timeline Canada is currently working with compared to the timelines of international countries undergoing the same process. As well, there were a number of questions as to whether we were, in fact, on schedule with our proposed timeline and whether or not there was a possibility of being ahead of schedule.

Below, please find questions related to timeline posed by Panelists in all 8 Panel sessions:

- We were talking about collaborative design and initiation of a siting process. There were a lot of questions about why it would take 4 years to set up the siting process. Is that really necessary time?
- Why so long? What's needed that will make it so long? Some think it is too long, I thought it might not be in order to ensure safety.
- If a site is selected tomorrow, let's say, how long will it take before a repository is built and ready to be used?
- Why is this process so long? Why can't they get a bigger shovel and dig sooner?
- I was interested in the timeframe that [other countries have] been working with on this. Have they been researching? Are they moving ahead at a faster pace than we are?
- Can you tell me why this process timeline is 60 years or something? Why would it take so long? By having a 60 year timeline, it can result in it never happening, because the people who are working there at the moment aren't responsible for the final result. So it would be very easy to just keep postponing it and postponing it.

d. International Comparison

Though it was also raised in the moderated discussions, many Panelists saved their questions about Canada's relationship with other countries for the NWMO technical representative. The questions took a familiar path, dealing with the notions of importing and exporting waste, high-profile countries that weren't mentioned as partners, and collaboration.

Below, please find questions related to international comparison posed by Panelists in all 8 Panel sessions:

- Has any other country gone before us and established anything close to what we're expecting to see?
- You mentioned that Finland started working on their projects in the mid to late 1980s. Can you parallel how far along the Canadian process is in reference to those process? Can you give us some sort of timeline?
- Are there any other countries that have a better idea of what to do in terms of a repository?
- I am curious why these communities in other countries would want this waste near them?
- Can you give us an indication of the siting process in other countries? What have been the criteria? What obstacles have they been able to overcome and how?
- In respect to Finland, where they already have their site in place, what has been the local reaction?
- How much sharing of information is there between countries? Do they have conferences where all of the different countries doing research get together and share information?
- Can you explain why the Swedish people have been so open to this idea of nuclear waste disposal? They haven't chosen a site yet, but you said that two communities have already offered to host to the new site...
- With Building Knowledge, you're looking very closely at Western countries. There's no mention of Russia, China, India or Pakistan. I know that Russia has nuclear plants. Will they be included at any point in the studies? Or at least told about what's going on? Why was the NWMO not focusing on cooperation agreements with those countries?
- Of those 4 [international] facilities that have already been built, have members of the NWMO gone over to take a look at them? How similar in design are they?

How far along is each of them? I'm also curious if any of these 4 have run into problems or setbacks that have delayed the time they have set out?

- When you're doing these cooperation agreements, these are relatively small players in the world. Progressive, but small. Why are the big players not at the table? India has roughly 1/6th of the world's population, the Americans have the biggest economy, the Chinese are 1.5 billion of the world's population. Are they backwards? Why are we not watching? When I'm thinking of global climate change, the Kyoto Accord, all those players here have adopted Kyoto, but the big players haven't. I'm wondering if that's the same? Are they just backward?
- We have mentioned Sweden, France and Switzerland. I would think the USA would be the first on the list. Why is the United States not a major partner of the NWMO?
- We find that Canada's participating in cooperation agreements with several countries. Left out of the lists were countries such as the US and Russia. The countries we are working with, do they have the same basic nuclear technologies we have? Is there a specific reason we are not working with the US?

e. Transportation

The technical representatives were peppered with questions that dealt with transporting used nuclear fuel. These questions may have emerged frequently because of two possible trains of thought:

First, transportation and siting are inextricably linked. The question of how fuel will be transported will inevitably arise when siting is discussed because a number of Panelists deeply believe that used fuel would never be stored within city limits, or next to reactors. Secondly, everyone uses highways and have witnessed traffic accidents. One just needs to turn on the television to see a transport truck flipped over on a highway, and everyone knows of spills, leaks, and accidents.

Below, please find questions related to transportation posed by Panelists in all 8 Panel sessions:

- In regards to the capability to review transportation options used to fuel long-term management facilities, can you just explain a little bit about that?
- The breaking down of the fuel has to happen before it's transported, I presume. Is there a breakdown of it?
- I remember how we were talking about 2-3 shipments per month for 30 years. I found that very shocking. Will the transportation be on regular roadways? Trains?
- I'd just like to ask about what we were saying earlier about transportation...is it much more complicated to transport the nuclear waste to far-off remote areas than it is to transport it to some place closer?
- Does the international discussion have much input into transportation?
- What are the biggest risks in transportation? Will we have to make changes to accepted transportation methods to fit our standards?
- How are the bundles we move now shipped?
- With the size of Canada and a central location, there's got to be transportation and that could be quite a trek for the waste to make. What precautions will there be?
- For shipping, will they have a secure convoy? What if a terrorist made an attack on it?
- What transportation methods to other countries use? What are you considering for transportation in Canada?

- A consideration for me is the transportation of materials to the repository. I found it interesting that Sweden is going to be transporting theirs by ship. That concerns me more than by road because if it goes down, it goes down. What type of ship would transport such a thing to ensure that if it went down, it never split open and contaminate the ocean?
- It would take quite a bit of transportation to move from New Brunswick [to Saskatchewan], Would they be looking for a place halfway?
- When we were talking about the transportation safety, we know from the past things like the Titanic, Exxon Valdez, no matter what we try to do for safety, there is always a contingent factor. What are the kinds of contingency plans we have in place if there is a spill, if there is an accident?

5. PANEL WORK PLAN

Phase Four Citizen Panels: June 2008

June 3, 2008	Saskatoon Citizen Panel Saskatoon, Saskatchewan
June 4, 2008	Regina Citizen Panel Regina, Saskatchewan
June 10, 2008	Saint John Citizen Panel Saint John, New Brunswick
June 11, 2008	Montreal Citizen Panel Montreal, Quebec
June 12, 2008	Sault Ste. Marie Citizen Panel Sault Ste. Marie, Ontario
June 14, 2008	Kingston Citizen Panel Kingston, Ontario
June 16, 2008	Scarborough Citizen Panel Scarborough, Ontario
June 17, 2008	Toronto Citizen Panel Toronto, Ontario

APPENDICES

- i. Profiles of the Panels
- ii. Navigator Personnel
- iii. Discussion Leader's Guide
- iv. Draft Implementation Plan
- v. Excerpts from the Draft Implementation Plan

I. PROFILES OF THE PANELS

Saint John, New Brunswick

Date: April 22, 2008

Facility: Qualitative research facility in Saint John

Discussion Leader: Jaime Watt

Transcriber: Courtney Glen

Number of Panelists: 12

Montreal, Quebec

Date: April 23, 2008

Facility: Qualitative research facility in Montreal

Discussion Leader: Mathieu Gagne

Transcriber: Leger Marketing

Number of Panelists: 17

Sault Ste. Marie, Ontario

Date: April 24, 2008

Facility: Qualitative research facility in Sault Ste. Marie

Discussion Leader: Jaime Watt

Transcriber: Courtney Glen

Number of Panelists: 15

Scarborough, Ontario

Date: April 28, 2008

Facility: Qualitative research facility in Scarborough

Discussion Leader: Jaime Watt

Transcriber: Lanny Cardow

Number of Panelists: 13

Regina, Saskatchewan

Date: April 29, 2008

Facility: Qualitative research facility in Regina

Discussion Leader: Jaime Watt

Transcriber: Stephen Leonard

Number of Panelists: 16

Saskatoon, Saskatchewan

Date: April 30, 2008

Facility: Qualitative research facility in Saskatoon

Discussion Leader: Jaime Watt

Transcriber: Stephen Leonard

Number of Panelists: 12

Toronto, Ontario

Date: May 1, 2008

Facility: Qualitative research facility in Toronto

Discussion Leader: Jaime Watt

Transcriber: Courtney Glen

Number of Panelists: 15

Kingston, Ontario

Date: May 3, 2008

Facility: Qualitative research facility in Kingston

Discussion Leader: Jaime Watt

Transcriber: Courtney Glen

Number of Panelists: 12

II. NAVIGATOR PERSONNEL

JAMES STEWART WATT, SENIOR DISCUSSION LEADER

Jaime Watt is Chair of Navigator, a Toronto-based research consulting firm that specializes in public opinion research, strategy and public policy development.

Prior to relocating to Toronto, he was, for ten years, Chair of Thomas Watt Advertising, a leading regional advertising agency and communications consulting firm based in London, Ontario.

A specialist in complex communications issues, Jaime has served clients in the corporate, professional services, not-for-profit and government sectors and has worked in every province in Canada, the United States, the United Kingdom, France, Central America, Korea and Kosovo.

He currently serves as Chair of Casey House, Canada's pioneer AIDS hospice, as well as Casey House Foundation and is a Vice President of the Albany Club. He is a director of the Dominion Institute, Woodrow Wilson Center's Canada Institute, TD Canada Trust's Private Giving Foundation, The Canadian Club of Toronto and The Clean Water Foundation. As well, he is a member of the President's Advisory Council for the Canadian Red Cross and is a member of the Executive Committee of Canadians for Equal Marriage. He was a founding Trustee and Co-chair of the Canadian Human Rights Trust and the Canadian Human Rights Campaign.

CHAD A. ROGERS, SUPPORTING DISCUSSION LEADER

Chad Rogers is a Consultant at Navigator providing strategic planning and public opinion research advice to government, corporate and not-for-profit clients.

He has recently returned to Canada after working abroad with the Washington, DC based National Democratic Institute as director of their programs in Kosovo and Armenia respectively. Chad oversaw multi-million dollar democracy and governance assistance programs directed at political parties, parliaments and civil society organizations in newly democratic nations. He conducted high-level training with the political leadership of Armenia, Bosnia Herzegovina, Iraq, Kyrgyzstan, Macedonia, Moldova and Serbia.

Having previously worked on Parliament Hill as both a legislative and communications assistant to Members of Parliament and Senators, he has an in-depth knowledge of Canada's Parliament and its committees, caucuses and procedures.

He is a board member of the Kosova Democratic Institute and is a member in good standing of the Public Affairs Association of Canada (PAAC) and the Market Research & Intelligence Association (MRIA). Chad has trained at the RIVA Qualitative Research Training Institute.

COURTNEY GLEN, PROJECT MANAGER

Courtney Glen is a Consultant at Navigator assisting in public opinion research, strategic planning and public policy advice for government, corporate and not-for-profit clients.

Courtney most recently worked at the Fraser Institute as a junior policy analyst in health and pharmaceutical policy. In her time at the Institute, Courtney co-authored a major pharmaceutical policy paper and contributed to their monthly policy journal, *The Fraser Forum*.

Prior to that, Courtney worked as a researcher for the Scottish Labour Party in Edinburgh, Scotland, conducting an audit of the Parliament's Cross Party Group on International Development.

Courtney has a Masters in International and European Politics from the University of Edinburgh in Scotland and a Bachelor of Arts Honours degree in Political Science from the University of Guelph.

JOSEPH LAVOIE, PANEL MANAGER (FRANCOPHONE)

Prior to joining Navigator, Joseph Lavoie worked at Citigroup Global Transaction Services where he improved communications within the Transfer Agency Systems department. Joseph achieved this objective via Web 2.0 technologies, which he previously leveraged in developing Santa's Journal, a successful viral marketing campaign that introduced Santa Claus to the world of blogging and podcasting.

Joseph has been active in numerous provincial and federal election campaigns; has provided political commentary for various websites and television/radio programs; and has served as the recruitment director for the Ontario Progressive Conservative Youth Association. In March 2007, Joseph was selected *Canada's Next Great Prime Minister* by Canadians as part of a scholarship program sponsored by Magna International, the Dominion Institute, and the Canada-US Fulbright Program. He currently serves on the Public Affairs/Marketing Team for the Toronto Symphony Volunteer Committee.

STEPHEN LEONARD, PANEL MANAGER (ANGLOPHONE)

Prior to joining Navigator, Stephen attended the University of Guelph where he graduated with a Bachelor of Arts Honours degree in History. Throughout his undergraduate career, Stephen was an active member of the Canadian Forces Army Reserve in Toronto, which he left in June due to medical reasons as a Corporal.

Stephen is head Panel Manager and plays a vital role in the management and organization of the Citizen Panel project.

III. DISCUSSION LEADERS GUIDE

PHASE THREE CITIZEN PANELS

DISCUSSION LEADER'S GUIDE

ADVANCE OF DISCUSSION

1. LOBBY EXERCISE

- **Review of Draft Implementation Plan**
 - Panelists are provided with the NWMO's Draft Implementation Plan to review in advance of the Panel discussion.
 - Panelists will be asked to “scan” or read the document quickly, indicating they are not expected to have digested it in detail for the discussion

PANEL DISCUSSION

1. OPENING OF PANEL SESSION (0:00 – 0:05)

- Welcome back
- Reminder: Confidentiality of session
- Explanation of NWMO disclosure of proceedings
- Re-introduction of Transcriber
- Re-introduction of Parking lot
- Re-introduction of Panel Managers

2. OVERVIEW OF AGENDA FOR SESSION (0:05 – 0:10)

- Document Review
 - Tonight we will review the Draft Implementation Plan
- Representative from NWMO
 - Guidance for questions

- Speakers list, allowed a limited number of questions, time permitting.
- Briefing details
 - Has read your Parking Lot questions and a summary of your discussions to date
 - Has not viewed a complete session

3. RE-INTRODUCTIONS (0:10 – 0:15)

4. GENERAL DISCUSSION (0:15 – 0:20)

- I am wondering if you thought more about the NWMO after our last session
- Has anyone read, seen or heard anything about NWMO in the media since our last discussion?

5. DRAFT IMPLEMENTATION PLAN (0:20 – 1:35)

- When you arrived, you were given a copy of the NWMO's Draft Implementation Plan to review.
- This Implementation Plan lays out NWMO's thinking about how it will move ahead with its work. In your opinion, overall, do you think NWMO is moving in the right direction?
- In the Draft Implementation Plan, the NWMO provides a detailed overview of all 7 of their strategic objectives. I would like to concentrate on 4 objectives that Panels have previously rated as important and appropriate for the NWMO:
 - Building Relationships
 - Building Knowledge
 - Review, Adjust and Validate Plans
 - Collaborative Design and Initiation of a Siting Process

[For each of the above 4 Strategic Objectives]

[Give Panelists a few minutes to review each objective]

- Discuss the objective after review.
 - Do you think that plans are moving in the right direction?

- When you reviewed the Draft Implementation Plan earlier, you will have seen that there were 7 strategic objectives in total. I'd like you to refer to the remaining 3 objectives in the Draft Implementation Plan:
 - Financial Surety
 - Governance Structure
 - Building an Implementing Organization

[Give Panelists a few minutes to review the remaining 3 objectives in the Plan – all marked with same pink colour tags]

- Do any of the other strategic objectives now strike you as more important?
- Do you have any other comments about the Draft Implementation Plan?
- You are free to take the Draft Implementation Plan with you after this evening's session.

6. NWMO REPRESENTATIVE Q & A (1:35 – 2:50)

- We have a lot of work to do here this evening, and have allocated just over an hour for these questions. If we do not finish in that time we will defer to our parking lot or we will look at bringing the NWMO representative back either in person or by teleconference.

[SHORT BIO INTRODUCTION OF PERSONNEL]

- The individual will not be watching you before or after this session, and they will not see a tape.
- Do you have any questions?
- Guidelines for questions

7. WRAP-UP (2:55 – 3:00)

IV. EXCERPTS FROM THE DRAFT IMPLEMENTATION PLAN USED AS INDIVIDUAL WORK SHEETS

BUILDING RELATIONSHIPS

The NWMO will continue to build long-term relationships with interested Canadians and Aboriginal people and involve them in setting future direction.

In 2008 we will:

- Undertake a communication audit to support the design of our communication strategy;
- Rebuild the NWMO web site to enhance accessibility;
- Develop and implement a strategy to more effectively engage youth in the implementation of APM;
- Work with national, provincial and regional Aboriginal organizations to establish protocols to support Aboriginal involvement in engagement; and
- Establish a corporate citizenship program.

In the period 2008-2012 we will:

- Continue to identify speaking engagements, community-based presentations and media opportunities to develop awareness about NWMO activities;
- Develop communications materials about NWMO, APM, the project and other issues as required;
- Use many tools, including multi-party dialogues, citizen panels, topical workshops and web-based surveys, to invite input from Canadians and Aboriginal people in regional and community-based associations, interest groups, researchers, industry, governments and the general public;
- Broaden NWMO's relationships in the four nuclear provinces to include municipal, regional and provincial associations; Seek advice on engagement of Aboriginal people from the Elders' Forum and Niigani, the working group established by the NWMO Elders' Forum;
- Seek meetings with editorial boards and other media;
- Continue to provide regular updates to provincial and federal government ministers, departments and agencies;
- Maintain protocols with interested organizations, including Aboriginal Peoples; and
- Develop strategies to address knowledge-building as the needs are identified.

Building Knowledge - Technical and Social Research

The NWMO will advance research to broaden its foundation of technical and social knowledge, bringing to bear the most advanced Canadian and international expertise to support implementation of Adaptive Phased Management.

Technical Research

During 2008-2012 we will:

- For the purpose of assessing potential candidate sites, develop the capability to conduct geoscientific aspects of site feasibility assessments, including sub-surface investigations and evaluations, in both crystalline and sedimentary settings;
- Maintain safety assessment system models and data suitable for supporting site feasibility studies;
- Continue to monitor developments in Canada and internationally related to regulatory aspects of used fuel management facilities;
- Prepare an annual report documenting alternative technologies for long-term management of used fuel including reprocessing, partitioning and transmutation; and
- Continue to participate in cooperation agreements with national radioactive waste management organizations around the world, specifically, SKB (Sweden), Posiva (Finland), Nagra (Switzerland) and ANDRA (France). These agreements provide the framework for sharing research information and participating in joint research and development programs in underground facilities such as the Äspö Hard Rock Laboratory in Sweden.

By the end of 2008 we will:

- In the area of geosciences, develop generic geo-scientific siting criteria; and
- In engineering, complete evaluation of container placement methods for the conceptual design of a deep geological repository in crystalline or sedimentary rock; and
- Appoint members to an Independent Technical Review Group and convene the inaugural meeting.
- By June 2009 we will develop the capability to review transportation options to a used fuel long-term management facility for various locations in the four nuclear provinces.

By the end of 2010 we will:

- Develop an improved model for uranium dioxide (UO₂) dissolution rates under deep geological repository conditions;
- Evaluate conceptual designs for optional centralized underground storage of used fuel; and

By 2011 we will support safety assessment and licensing, through completion of two illustrative safety cases, one for a deep geological repository in crystalline rock and one in sedimentary rock.

By December 2011 we will maintain a program to provide assurance of integrity of used fuel while in storage, including completing evaluation of delayed hydride cracking of used CANDU fuel bundles under dry storage conditions.

Social Research

In the period 2008-2012 we will:

- Commission background papers to support the collaborative design of the siting process, drawing on experiences in Canada and abroad;
- Convene capacity-building workshops on selected implementation issues;
- Convene Citizen Panels in each of the four nuclear provinces;
- Convene workshops on Aboriginal Traditional Knowledge;
- Complete telephone surveys for input on siting design and other implementation issues;
- Conduct deliberative surveys on the web site;
- Collaborate with interested academics in Canada and internationally to bring the best knowledge and practices of social and community-based process to NWMO's work; and
- Apply the ethical and social framework developed for the study phase to guide Implementation and report regularly on activities against this framework.

Review, Adjust and Validate Plans

The NWMO will continually review, adjust and validate plans against factors such as advances in technical learning, evolving societal expectations and values, and changes in energy and environmental policies.

In order to facilitate the process of dialogue and adaptation in response to the changes in projected fuel quantities and types, we will:

- Publish on an annual basis information on current and future potential inventories of used fuel volumes and types;
- Seek input from Canadians on how NWMO's plans should be amended to accommodate current and projected inventories; and
- Adapt and develop plans on how to go forward against the framework of the Strategic Objectives and with the guidance of our many advisors including ethicists. Specifically, we will consider the implications of used fuel from nuclear new build in our engagement program, in our technical and social research programs, in our financing formula, on the size and structure of the organization and governance, and on the design of a process for site selection.

We are committed to reporting on developments in technology, societal expectations and energy and environmental policy on an ongoing basis through many communication routes, including:

- Posting research papers and the results of engagement activities on the NWMO web site;
- NWMO Triennial Report to Minister of Natural Resources and public;
- NWMO Annual Report to Minister of Natural Resources and the public; and
- Annual update to the NWMO five-year implementation plan.

Collaborative Design and Initiation of a Siting Process

The NWMO will proceed with the collaborative design of a siting process, supported by a public engagement program, and subsequent initiation of a siting process.

In 2008 we will:

- Prepare a discussion document to initiate and facilitate conversations with Canadians on the design of the process for selecting a site. The document will, among other things, present an initial framework of objectives and principles and key issues that people will likely wish to consider; and
- Prepare information materials, such as fact sheets, to support a public dialogue on the design of a process for site selection.

In 2008-2012, subject to confirmation of readiness to proceed with each step, we will:

- Engage interested individuals and organizations in a dialogue on the design of a process for selecting a site to invite diverse perspectives;
- Draft a siting process proposal, including preliminary criteria, based on input from the previous round of dialogue;
- Test and validate the draft siting process proposal using a public engagement process;
- Develop supporting information and an education and awareness program; and
- Initiate the process for selecting a site subject to validation of the siting process proposal and readiness of the supporting engagement and information program.

RESEARCH | STRATEGY | RESULTS™

