



Choosing A Way Forward:

Report

La Ronge, Saskatchewan Dialogue

Kikinahk Friendship Centre
La Ronge, Saskatchewan
May 26, 2005

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Presented to the Nuclear Waste Management Organization

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Preamble

Beautiful La Ronge, Saskatchewan was the site of another successful northern community dialogue workshop, featuring presentation of the Nuclear Waste Management Organization's Draft Study Report and recommendations in May 2005. The Draft Study Report was received with interest by Northern Community representatives and attending private industry representatives from Cameco Corporation and Areva Resources. Attendance at the workshop was hampered by a week of rainfall, making for tedious driving conditions on most northern roads into La Ronge. In spite of the road conditions, 13 northerners, representing 11 communities attended the workshop, presented by Dr. R. Anthony Hodge, Senior Advisor to the NWMO. In addition to the community representatives attending were four uranium industry professionals and an observer from the Assembly of First Nations.

The group assembled for the presentation included 13 community representatives (Métis Local Presidents, Mayors, First Nations Councilors and members) from 11 northern communities, plus mining industry professionals and an observer from the Assembly of First Nations. A total of 20 people took part in the presentation, plenary and small group discussions, offering reaction to the groups' favoured recommendation, "Phased Adaptive Management". The draft report and its recommendations will be exposed to review by Canadians prior to delivery to the Minister of Natural Resources Canada on November 15, 2005.

NWMO Study Plan Phases

From Conversations about Expectations, begun in 2002, to Evaluation of Management Approaches and Finalizing the Study Report in 2005, the NWMO has advanced through an ambitious study plan with the release of two discussion documents and Draft Study Report for Canadians to ponder and discuss.

In spite of all efforts made to engage Canadians, and particularly Aboriginal people across Canada, several workshop participants were completely unaware of the work of the NWMO to date and of previous opportunities to learn and participate in dialogue. Each participant expressed their gratitude for having the opportunity to attend and begin to learn about the issues of nuclear waste storage facing our country right now.

Opening Plenary Session

To say that the attendees wanted to learn and to be heard would be a gross understatement. The official NWMO presentation was delayed by two hours in order to answer a series of questions raised by invited participants to the NWMO dialogue. Perhaps the most pressing concern expressed was that important decisions were to be made this very day, and that informed input was expected from the participants. Dr. Hodge assured the group that no decisions would be made through the workshop, this would be a “starting point” for a conversation about the management of Canada’s spent nuclear fuel. (A list of the most common questions and answers is provided in Appendix D: FAQ.)

Excellent questions came one upon another, from “duty to consult” and the notion of NWMO possibly discharging further duty to inform without properly preparing the people to participate, to comments about the lack of time and context to prepare for this meeting. Participants were assured that the workshop is a place to begin participation and not to worry that each one had not “prepared”. Dr. Hodge repeated “there is time”, to allay fears that the decisions regarding nuclear waste storage would be made before northerners had opportunity to become fully aware and informed of the study process.

Dr. Hodge handled all the questions and comments in a positive and effective manner, welcoming each comment and concerns to the rest on the table. When each issue had been received, heard and understood, the participants settled, taking interest in Dr. Hodge’s “Presentation to the Northern Saskatchewan Dialogue” (see Appendix D), in support of the next stage of the NWMO Study process, “Choosing a Way Forward.”

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Once the group settled, Dr. Hodge was permitted to make his presentation and pose three study questions for participants to discuss in a small group format. The participants were, for the most part, overwhelmed at the thought that they might contribute to the study process with limited background and context, wherein it was repeated that this is a “place to start”.

Participants emphasized their desire to have more information in order to better represent their communities, with time to go back and have dialogue at the community level. The issue of nuclear waste management for Canada was taken very seriously, with participants wishing they had been engaged in the study process years ago. Much was said about continuing the educational process of communities by engaging more people to travel and conduct workshops, distribute material in the Aboriginal languages and take the information into the schools.

Following the presentation by Dr. Hodge and a hearty traditional meal served by the catering staff at the Kikinahk Friendship Centre, the plenary broke into two small groups for productive and involved discussion on three questions,

1. Is the recommended approach appropriate for Canada?
2. What are the conditions required to successfully implement the approach?
3. What special Aboriginal insights and/or concerns should be kept in mind by the NWMO as implementation proceeds?

Small Group Discussion

Participants broke up into two groups for discussion of the three questions posed in the morning's presentation. Each group designated a recorder take notes and report responses at the next plenary session.

For a complete citation of responses from the small group discussion, refer to Appendix A.

Closing Round Table Discussion

It is good to have a transitional period – things change so fast and we are never ready. It is good to have thirty years to think about the issues and make the long term decisions. It's a good thing that this issue (nuclear waste management) is not being handled like the (uranium) mines, we (northerners) weren't ready for that. Only 12 people from Pinehouse working in the mines in 19 years shows we weren't ready. Hopefully government will pay to train our people as scientists. Paycheques are good, but there is a negative side too. Mining companies like to brag about the wages they inject into the communities, but what about the substance abuse that has come with it?

People are concerned about nuclear waste coming to Saskatchewan. Its good people are talking about it. Its good the NWMO is honest because others have not been honest with us (speaking of revenue sharing agreements, building a technical school in the North – this has not happened as promised.) We (northerners) need to look at the last 22 years since the Bayda Inquiry, look at the social impacts of the uranium industry as well as the financial. Education is key for our young people today, the old people know and knew long ago that change was going to come, and they encouraged us to get educated. I am not against the mines, thanks for the jobs, but we need more than jobs. NWMO has been honest in their dealings with us. We need some industry on which to base our economy. We need to educate the communities, need to be honest with people. We need to hear the pros and cons of everything.

I appreciate the efforts made by the NWMO to seek input from "ordinary" Canadians, to value the input of the non-technical people.

I like the adaptive phased approach, and believe we should look at recycling the spent fuel to get more out of it in the future.

I am interested in the issues of nuclear waste management, you have done a good job in explaining. Please go to the other communities, since you are so good at explaining this.

This is the third such meeting I have attended for the NWMO, learning more each time. I suggest more of this type of meeting going on, with information going to

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each community. There is not enough time to educate communities prior to the recommendation going ahead in November, what will be the recommendation? What will be the reaction? We had people all over the north assuming there would be a nuclear reactor in the north after the last NWMO meeting!

I want to speak in my own language (Cree). We need more Elders, youth at these meetings. I hope we can do this again, more than one day.

This is very interesting information, I had no knowledge of this (nuclear waste management) prior to today. We need to have a lot of "visiting" happen in the communities to inform about this. Thanks to Tony for helping to bring this information to us, it is big, it is going to take time to share the information.

Thank you for including me, this is very important and I am glad I was here.

I am thankful I was invited today. There is usually a lot of animosity about nuclear issues, but not here. There have been disagreements, but good dialogue. If Canada wants to give the uranium back to Saskatchewan, they should give Saskatchewan back to the Indians.

Our discussions have to be open-minded and fruitful. Its important for our children that we get together and have fruitful discussions together, the Metis, the First Nations, the municipal leaders and the industry people – its hard to organize, but worth the effort and worth the results.

Dr. Hodge closed by reiterating the value of the Aboriginal people's input to this important decision for Canada. He says he is always amazed at how people in remote communities can point straight to the weakness and limitations in any technology, just intuitively, and then put pieces of the solution on the table. Lack of technical knowledge aside, Aboriginal people have a lot to offer the process. That is why the Draft isn't titled "Designing the Way Forward", because this is profoundly a social acceptability issue. At the heart of the matter, its not just token jobs, not corporate profits, but an opportunity to keep the fabric of society together.

Synopsis

The main themes coming out of the workshop were:

1. Support for the proposed “Adaptive Phased Management Approach”

The majority of participants expressed support for the NWMO draft recommendation, mainly due to the fact that the recommendation buys more time to make a long term decision. The comments indicate that future accessibility is important, leaning toward the long term storage rather than permanent disposal. Across the board it was clear that the waste should be dealt with in a secure location closer to the reactor sites to avoid long distance hauling of the material for storage. Participants expressed an appreciation for the fact that the spent fuel material may be useful in the future, with an optimistic view that new and emerging technology will provide solutions to the storage issues we are facing today.

2. Emphasis on community involvement, should Northern Saskatchewan become host to the spent nuclear fuel.

Discussions about the possibility of Northern Saskatchewan hosting the spent fuel repository were carefully qualified by statements that it would take “thirty years to select a site”, and the “community would have to be willing” to have the repository. Discussion of the spent waste facility as a potential economic benefit to Northern Saskatchewan highlighted the thinking that job creation alone is not enough – the participants were clear that community ownership/partnership would be required and that there be co-management of the resource. Existing agreements in Forestry and Fishing utilize co-management boards in communities to give input and make decisions about harvesting and other management issues. This same model was brought up as a necessary feature if nuclear waste storage were to come to rest in northern Saskatchewan.

3. Involvement of Elders and Youth in the community consultation process.

Delegates from the northern communities each expressed concern about taking information back to their communities, and requested that resources be made available to include Elders and Youth in the consultations, through inviting these groups to similar workshops or hosting special workshops just for Youth and Elders.

4. The level of importance of the issue warrants the material be made available to students, who could then hold their own discussions, dialogue on the energy issues and nuclear waste management issues. There should be education taking place in the school system on this very important subject of the

management of Canada's used nuclear fuel. Many adults receive information through what their children bring home from the school, so this could be a good way to disseminate the information to the communities, via the schools, and especially SchoolNet (Internet) which can reach every community in the north.

5. Relevance and Importance of traditional knowledge – not only the knowledge of Aboriginal scientists, but Aboriginal traditional knowledge holders.

The Elders have understanding of some very complex technical issues related to the resources of the earth, using the resources and managing the resource. This knowledge, understanding is important for the NWMO to consider as it moves toward implementation of its recommendation. A specific fact-finding exercise should be undertaken to collect Aboriginal traditional knowledge about uranium/nuclear fuel waste disposal.

6. The language barrier is an issue to the participation of more Aboriginal people in dialogue on the nuclear waste management issue.

Concern was expressed that the NWMO materials need to be translated to the main Aboriginal languages, predominantly Cree (-th dialect), Dene and Michif for Northern Saskatchewan, so that the people can engage in the study and decision making process in a fully informed and meaningful way.

7. Northern Saskatchewan people are very concerned and interested in Canadian Energy Policy.

From the group assembled in La Ronge, we had a range of people from different occupations and backgrounds, each attending in the interests of a community represented. Each participant emphasized their appreciation for the information and desire to have more material, more information and to attend more meetings like this in the future.

Appendix A Small Group Summary

Group A.

1. Is the recommended approach appropriate for Canada?
 - Let's take our time
 - Keep (the spent fuel) accessible for future use.
 - Sealing it in the ground should be a last resort
 - Safety and monitoring is important
 - Who will monitor (the spent fuel disposal site)?
 - Provincial government should be involved
 - Community should have a role in monitoring
 - Temporary storage – Ontario is best.
 - Some northern communities have expressed some interest in discussing siting (of a nuclear waste storage facility).
2. What are the conditions required to successfully implement the approach?
 - Transportation is a big issue
 - Who decides community support (for the site of a nuclear waste storage facility) public vote? What about neighbours?
 - Identify advantages/disadvantages for the community
 - Store at reactor sites – space problems
 - Engagement – co-management
 - One community can't independently decide (for a region)
 - See minimal economic advantage if (storage site) placed in a northern community
 - Should be sited close to the power plants
 - Having a thirty year transition period is a good thing.

What special Aboriginal insights and/or concerns should be kept in mind by the NWMO as implementation proceeds?

- traditional knowledge is key
- relationship to land and traditional use
- land is still important – source of traditional food
- WMO should go to all communities and talk to them
- need traditional land use maps
- community should own facility – more than partnership or co-management
- Aboriginal jurisdiction over environmental issues needs to be dealt with
- dialogue with First Nations and Métis at the same time is a good thing – gives stronger local voice and muscle

Group B:

1. Is the recommended approach appropriate for Canada?
 - We all agree with the “adaptive phased management” approach because nothing has to be decided right away, there is time to make the long term decision over the next several years
 - This recommendation means we are simply committing to a process, not a decision right now. It is good that there is a generous time window allowed for making the long term decision.
 - More people need to be educated and made aware of the work of the NWMO – should develop packages for youth and implement into the school curriculum
 - This meeting is a good starting point for a lot of people, but NWMO may be rushing the consultation/recommendation process.
 - Electricity is a commodity that flows across borders and all over society, so everyone should help to pay, for production, distribution, storage – the whole process. Same with nuclear, the user should expect to pay for the whole process, from source to storage.
2. What are the conditions required to successfully implement the approach?
 - Social acceptance
 - Longer time frame to educate people
 - Need translators to various dialects of Aboriginal languages, notably DENE, which is missing from the Draft Study Report.
 - We need time to understand this (to learn about the issues and implications of choices)
 - More resources are required – need to have more people employed to go out and talk about (nuclear waste management).
 - We should become more aware of energy issues in general, and consider nuclear in the context of alternative energy sources
 - That there be a level of credibility with the public in the agency that is conducting the information and feedback sessions
3. What special Aboriginal insights and/or concerns should be kept in mind by the NWMO as implementation proceeds?
 - NWMO needs to seek out the Aboriginal scientists to interpret the traditional knowledge and traditional land use
 - Special concerns for Aboriginal people:
 - Language barrier – much of the terminology has no translation in Aboriginal languages – the Aboriginal terms need to be developed by our experts in this area, Elders and knowledgeable people for each language.
 - We have a need for written material to share with our communities, that is translated to our languages.
 - If the world thinks uranium should be given back to Saskatchewan, then Saskatchewan should be given back to the Indian people.

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Do the Aboriginal people of Northern Saskatchewan possess some special insight that the NWMO should consider as implementation proceeds?
YES! (You will find out by listening, first we need more information.)

Appendix B: Questions and Answers

Q. Is the NWMO out to recommend a site for the nuclear storage facility?

A. No, siting is not part of the NWMO mandate by law. Siting depends on the management strategy adopted by Canada. The decision of where to locate a storage facility will likely take many years. NWMO is committed to finding a willing host community and in addition to the need to embark on comprehensive discussions with any community before it would have in hand all that it would need to make a good decision, there is a need to establish whether or not any particular area is technically suitable. None of this can be rushed

Q. Is Saskatchewan being considered as a site (for nuclear waste storage)?

A. The NWMO is not considering sites at this time. What we suggest in our Draft Study Report is that from here on in we focus on four provinces which are currently active participants in the nuclear cycle – Ontario, Quebec, New Brunswick (where reactors are located) and Saskatchewan (where the uranium mines are located). However, having this four-province focus doesn't mean that communities in other provinces cannot be considered should they so wish.

Q. Why is Saskatchewan on the short list of “nuclear provinces”?

A. Saskatchewan is on the list because of experience with nuclear material and its particular knowledge base.

Q. The temporary storage at the reactor sites has been going on for thirty years already, how much longer can the storage containers hold the waste before they have to be replaced?

A. The design life for the current containers is about 50 years although experience to date suggests that they may be good for more like 100 years. Regardless, they eventually will have to be replaced.

Q. Why have we not heard about the NWMO and received information prior to today?

A. It has been an exceptional challenge for the NWMO to reach people across the country. Nuclear waste is not a top priority issue for most Canadians even though we find that when asked about whether they think it is important – most signal yes. Our engagement program is very broad, by the end of our 3 year study process we may well have reached to some 50,000 people. However, that's hardly 30 million. We have found that many people are simply not concerned enough, for example, to come out to information sessions or to dialogues. That is the challenge that the NWMO faces because we are committed to building our recommendation on the values and concerns of Canadians. In other words, public input is driving the recommendation – the NWMO is not a cadre of “scientific/engineering experts” working in isolation.

Q. Why are we taking the (nuclear) material out of the ground at all, if it creates so many problems?

A. This question backs up on the issue of overall energy policy. We have heard from many Canadians that this is something that they wish to discuss and we will report that to the government as we are required to do so. However, the issue itself is outside of our mandate that is set by the Nuclear Fuel Waste Act.

Q. Does the nuclear waste come in tubes? How much fuel is wasted; can it be “recycled”?

A. The waste comes in bundles of rods (fuel bundles) filled with hard pellets. It's the nature of the nuclear reaction that after a relatively short time, the energy is not usable in the reactors, there is 95% of the energy remaining in the used rods and many look to that and wonder why the used fuel cannot be recycled to be more efficient.

France, Japan, and the USA have technology to re-process the used material. However, reprocessing, while allowing for additional use of the uranium fuel has plutonium as a bi-product as well as a very dangerous residue. Plutonium can be used for the production of atomic weapons, which Canada is against and the residue is as serious a waste problem as the original used fuel. The process is also extremely expensive. Thus for all of these reasons, the NWMO has taken the reprocessing idea off the table.

Q. Won't we come up with a way to manage this problem in the future, with our technology?

A. We have found that: (1) people are pessimistic about trusting government and corporations; while (2) they are optimistic about the capacity of science and technology to provide answers to many questions that remain unanswered at this time. However, in forty years our technological knowledge has not put the answers we seek in front of us. It is for this reason that the NWMO has proposed a way forward that brings safety and security but allows access should new knowledge provide more effective management approaches. We are trying to take a responsible and cautious approach while encouraging learning and leaving the door open to improved approaches should they arise.

Q. I am interested in hearing this whole nuclear energy argument out, because damming rivers is no good. Every time we have a storm in the north, the power goes out. We need a constant source of power and I would like more information about nuclear power, what are the pros and cons?

A. As I mentioned earlier, the issue of energy policy is outside the mandate of NWMO. We will be reporting peoples' interest in discussing this topic to government.

Q. Does the University of Saskatchewan have a nuclear reactor?

A. Yes, a “slowpoke” reactor for research purposes, nuclear medicine.

Q. Aboriginal consultation does not go far enough for us, we are not mandated, we have no way of letting our people know about what is being presented (because of the language barrier). The mines just went ahead (without our input). Will NWMO consider resourcing the communities with a coordinator, to get information out to the people?

A. The NWMO Aboriginal Dialogue is aimed at building the foundation for a strong relationship with Aboriginal Peoples. To that end, resources have been provided to national, regional, and local organizations and communities to design and implement dialogues on nuclear waste that work best for their people.

When the NWMO started the engagement process with Aboriginal people, we sought and received advice from a group of “experts” in Aboriginal relations. At that time, we were encourage to provide resources to Aboriginal organizations so that they could define their own way of informing their people. We were also told to start with the National Aboriginal organizations which we did. Subsequently our program broadened out to include regional and local communities.

In the years ahead we will review our experience and try to build on what has worked well. The management strategy that NWMO has proposed includes time for these discussions in the years ahead.

Q. How can we find out more about this work of the NWMO? We haven’t heard enough about it.

A. Information about the NWMO is available on its web site at www.nwmo.ca

Q. The Seabourne Commission in 1989 did not consult Aboriginal people, the Assembly of First Nations responded by saying that they MUST consult aboriginal peoples, so is that the basis for this position in the NWMO, to consult Aboriginal people?

A. Seabourne started in 1988 and reported out in 1996. They certainly did involve Aboriginal Peoples in their deliberations but the extent of that involvement was found wanting. As a result, they recommended that an engagement program tailored to Aboriginal needs be established. The NWMO has done that. Some of the resulting local dialogues (for example the Northern Saskatchewan local dialogue implemented by the Sakitawak Métis Nation which brought together First Nations, Non-Status Indians, Métis and Non-Aboriginal people) last fall have been very successful and provide new models for effective engagement.

Q. Is this enough consultation? The federal government requirement to consult is entrenched in the Constitution Act.

A. The Nuclear Fuel Waste Act requires the NWMO to “consult with Canadians, in particular Aboriginal people . . .” However NWMO is not motivated by this legal language. Rather, it recognizes that for progress, those who stand to be affected must be intimately involved. The idea is not complicated. This idea has

been championed for many years by Justice Thomas Berger who is one of three members of the NWMO's International Review Panel.

Q. Isn't it true that the ultimate decision will still come from government?

A. Ultimately, the federal government will decide on the management strategy that will be followed. However all orders of government will ultimately be involved as well as a broad range of other interests.

Q. Where does Saskatchewan Provincial Law fit in?

A. NWMO is governed by all applicable federal, provincial, and municipal laws.

Q. Why did not the mining companies involve Aboriginal people when they put the mines in 40 years ago? Why bother now?

A. We (NWMO) are trying to do the right thing, now. What's done is done.

Q. Has the NWMO considered the international implications of its long term waste management strategy?

A. We are very well connected globally – thirty countries around the world have similar issues to deal with and we share information.

Q. Has the NWMO taken into consideration all the waste that will accumulate over time, especially given new reactors coming on-line?

A. The NWMO has attempted to consider all reasonable scenarios which range from early closure through letting the current nuclear fleet run to its design end and on into expansion of nuclear energy production. Allowing for this flexibility is just common sense from a waste management perspective.

Q. What is the NWMO and Canada's position on the importation of nuclear waste from other countries.

The NWMO is working with the existing nuclear facilities in Canada. Importation of nuclear waste from other countries is not a current policy of Canada. Most nuclear countries adhere to what is called a principle of "self-sufficiency" which means if you produce the waste, you carry the long term management responsibility. Having said that, there are people in the international arena who have raised the idea that having produced the uranium and obtained benefit from it in the first place, Canada should take some responsibility for its long term management. This is not the current policy position of the government.

Q. Has anyone given any thought to establishing an international "think tank" on what the implications of our management strategy might be, three thousand years into the future?

A. Yes, a report has been produced with scenarios going out to 10,000 years in the future. The report is listed as Background Paper 8-5 and can be found at <http://www.nwmo.ca/default.aspx?DN=288,282,199,20,1,Documents>

Q. How can someone with Grade 5 science offer an opinion to this process?

A. The dominant issues driving design of the recommendation are not technical in nature. For example, consider the objective of “fairness.” In this case, each of us is equally expert, regardless of the level of formal education attained. It is extremely important that everyone who wishes, has the opportunity to express her/his opinion. Most people are satisfied if they know they are participating and being heard, even if the decision does not go “their way” in the end.

Appendix C: Workshop Participants

Invitations were extended to Métis Locals, First Nations communities, northern municipal leaders, mining industry representatives, media and the general public to attend the workshop in La Ronge.

List of Attendees:

Philip Tinker, Pinehouse, SK
Jim Favel, Elder, Ile a la Crosse
Paul Montgrand, Turnor Lake, SK Métis Local President/Mayor
Gordon Tcho – English River First Nation
Mike Mercredi, Jim Brady Métis Local
Douglas Ross – Weyakwin Métis Local
Dawn Pratt, Assembly of First Nations, observer
Darwin Roy, Cameco Corporation
John Tosney, Areva/Cogema Resources
Julia Ewing, Cameco
Thompson Charles, Lac La Ronge First Nation, Grandmother's Bay
Kenny Ratt, Lac La Ronge First Nation, Sucker River
Pam Mirasty, Lac La Ronge First Nation
Lorna Lavallee, Timber Bay
Bill Roberts, Lac La Ronge First Nation, Grandmother's Bay
Don Montgrand, La Loche, Métis Local President
Allan Morin, Ile a la Crosse
Alun Richards, Areva/Cogema Resources

Appendix D : Presentation by Dr. Hodge



NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLEAIRES

Presentation to the Northern Saskatchewan Dialogue

R. Anthony Hodge
Senior Advisor, Nuclear Waste Management Organization

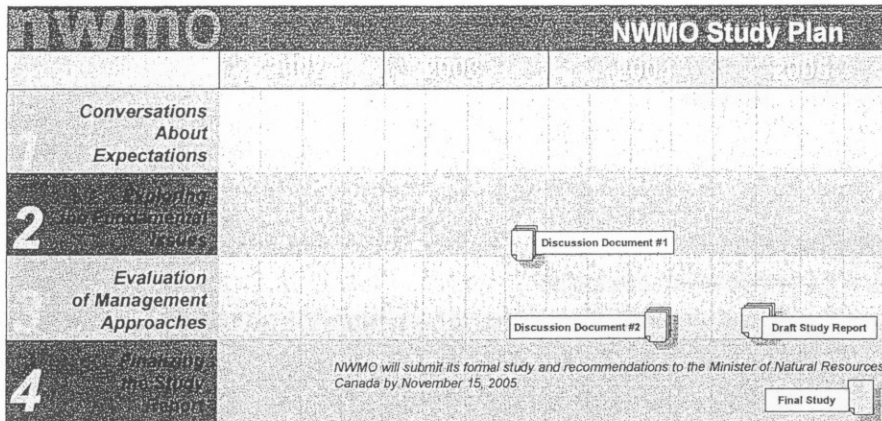
Thursday, May 26, 2005
La Ronge, Saskatchewan

The NWMO Mandate

- ❖ *Nuclear Fuel Waste Act (NFWA)* came into force November 15, 2002.
- ❖ The NFWA requires major waste owners (Ontario Power Generation, Hydro-Québec, NB Power Nuclear) to establish NWMO and its Advisory Council.
- ❖ In turn, the NWMO must study proposed approaches for the long-term management of used nuclear fuel, consult with the general public and Aboriginal Peoples; and recommend a long-term strategy for managing used nuclear fuel in Canada.
- ❖ **The NWMO must submit its recommendation to Minister of Natural Resources Canada by November 15, 2005.**

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Phases of NWMO Study Plan & Milestone Documents



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The NWMO Mandate

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Engagement with Canadians



Over 10,000 citizens have participated in NWMO's study to date.

- ❖ Summary of comments from the general public and Aboriginal Peoples is provided in Part 2 of the Draft Study Report.
- ❖ Listing of Engagement Activities is provided in Appendix 5 of Draft Study Report.

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Study of Management Options

- ❖ *Nuclear Fuel Waste Act* explicitly requires NWMO study to include, at a *minimum*, approaches based solely on 3 specific technical methods:
 - Deep geological disposal in the Canadian Shield (AECL Concept)
 - Storage at nuclear reactor sites
 - Centralized storage, either above or below ground
- ❖ For each approach, the study must include:
 - Detailed technical descriptions
 - Comparison of benefits, risks & costs
 - Ethical, social, economic and aboriginal considerations
 - Economic Regions for implementation (not sites)
 - Implementation plan

NWMO reports on its response to each legislated study requirement in Parts 3 and 4 of the Draft Study Report.

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First Principles

- ❖ **Pre-eminent requirement to ensure safety and security for people and the environment**
- ❖ **Sustainable approach – social acceptability, technical soundness, environmental responsibility, economic feasibility**
- ❖ **Unique time dimension – longer than recorded history**
- ❖ **Citizen engagement; collaborative approach**

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Foundations

- ❖ **Study foundations were built through:**
 - Dialogue on fundamental values, ethical principles
 - Formal scenarios exercise considering future conditions to be faced over the long term
 - Commissioned background papers on technical, social, environmental and financial considerations – over 60 papers, available on website
 - Conceptual engineering designs and cost estimates
 - Review and screening of 14 management options

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Development of Assessment Framework

- ❖ Began with articulation of concerns voiced by Canadians and captured in the identification of 10 Questions to be posed and answered (Discussion Document 1 – *Asking the Right Questions?*)
- ❖ Assessment framework developed based on 8 objectives against which each option would be assessed:
 - Fairness,
 - Public Health and Safety,
 - Worker Health and Safety,
 - Community Well-Being,
 - Security,
 - Environmental Integrity,
 - Economic Viability,
 - Adaptability

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Comparative Assessment of Options

- ❖ Comparative Assessment of Options through:
 - Analysis of strengths and weaknesses of the 3 approaches in the Act, based on multi-attribute utility analysis.
 - Cost, benefit, risk assessment and modeling of options, taking into account economic regions
 - Topical analysis (risk, monitoring, security)

Summarized in Discussion Document 2, *Understanding the Choices*

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Results of Analyses and Engagement

NWMO analyses and our engagement has indicated:

- ❖ 3 options required for study in *Nuclear Fuel Waste Act* have distinct strengths and limitations
- ❖ No one method specified in the *Nuclear Fuel Waste Act* perfectly addresses all of the values and objectives that are important to Canadians
- ❖ Over the short term, the storage options show well but they rely on active management; on the long term questions arise regarding fairness and risks and uncertainties
- ❖ The deep repository option shows better over the long term particularly from a safety and security perspective but closure of the repository limits choice for future generations and makes it more difficult to adapt to changing knowledge and circumstances; there remain uncertainties about performance as well and concern about the implications of "out of sight, out of mind."
- ❖ The overarching priority for Canadians is safety and security for people and the environment; fairness in the distribution of costs, benefits, and risks is a close second
- ❖ There is a need to balance objectives (eg. Adaptability vs Security)
- ❖ There is an expectation of responsible action now, without foreclosing choices for future generations

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A Fourth Option Emerges: Adaptive Phased Management

NWMO is recommending a Fourth Option: Adaptive Phased Management:

An adaptive risk management approach based on centralized containment and isolation of Canada's used nuclear fuel deep underground. At all times, used fuel is monitored, retrievable, safe and secure.

- ❖ Builds on the features of the other three options and implements them in a staged manner through three phases.
- ❖ Site to be sought that can host both a shallow interim storage facility and deep repository
- ❖ Provides genuine choice and greater adaptability, ensuring safety and fairness.

This recommendation is addressed in full in Part 1 of the Draft Study Report.

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The Three Implementation Phases

Phase 1, 0 – 30 years

- ❖ Used fuel stays by reactors; site is sought with willing host community, research and development, regulatory review, licensing of shallow facility and deep underground research laboratory

Phase 2, 30 – 60 years

- ❖ Used fuel transported, re-packaged as required, and emplaced in shallow storage facility; R and D in the deep underground research laboratory; through engagement program, decide when to construct the deep repository;

Phase 3, 60 – 300 years

- ❖ Licensing of deep repository; package and place fuel in deep repository and begin extended in-situ monitoring; continue monitoring indefinitely future society makes decision to close

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Key Implementation Issues

- ❖ Institutions and governance; accountability and transparency; NWMO to be implementing agency
- ❖ Financial surety – trust funds
- ❖ Establishing a site – willing host community where technical and scientific criteria are met and where the aspirations of people are respected
- ❖ Four province focus: Ontario, Quebec, New Brunswick, and Saskatchewan; though others may express interest
- ❖ Citizen engagement, continuing collaboration and ongoing role in decision-making

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In Summary

- ❖ safety and security for people and the environment paramount
- ❖ fairness in the distribution of costs, benefits and risks across this generation and between generations
- ❖ responsibility – start now, maintain choice
- ❖ adhere to polluter pay principle
- ❖ phased decision-making and implementation; genuine choice is maintained
- ❖ continuous learning and adaptation
- ❖ safe and secure storage plus capacity to monitor and retrieve until future generations have the confidence to close the facility
- ❖ rooted in the values and ethics of Canadians

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Next Steps

- ❖ Release of Draft Study Report with complete Draft Recommendation:
 - Issued as working draft, for public review and comments
- ❖ Invite Public Dialogue and Comments on the Draft Study:
 - Provides for comment period extending to August 31, 2005
 - Dialogues to be scheduled in Ontario, Quebec, New Brunswick and Saskatchewan – engaging participants from earlier phases of NWMO workshops, dialogues, discussion sessions; Aboriginal Dialogue continues
 - Scheduling of other meetings and events upon request.
- ❖ NWMO Refinement of Study
- ❖ Submission of Final Report with Recommendation, Advisory Council comments, and summary of public comments to Minister of Natural Resources Canada; public release – by November 15, 2005

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Workshop Questions

1. Is the recommended approach appropriate for Canada?
2. What are the conditions required to successfully implement the approach?
3. What special aboriginal insights and/or concerns should be kept in mind by the NWMO as implementation proceeds?

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Appendix E: Media Coverage

A media announcement was sent out to the northern radio network, Mississippi Broadcasting Corporation, for distribution through its outlets in most northern communities. The meeting was announced to the public for three days prior, generating interest and calls from the public to the Kikinahk Friendship Centre, host venue of the workshop. MBC conducted an interview with Dr. Hodge by telephone following the workshop, which aired on radio the following week.