Learning from the Experience of Others A Selection of Case Studies about Siting Processes

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nwmo
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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.

Introduction

Learning from the Experience of Others
A Selection of Case Studies about Siting Processes

1. Introduction

The Nuclear Waste Management Organization (NWMO) is reviewing a cross-section of experiences that will provide insight on the commitments (see attachment) established in *Choosing a Way Forward*. These on-going studies, which learn from the experience of others, will assist the NWMO:

- In thinking about an appropriate siting process for the long-term management of Canada's used nuclear fuel; and,
- Plan and prepare for the dialogue which it will launch to develop this siting process collaboratively with potentially affected communities of interest, once the Government of Canada announces its decision on the long term waste management approach to be implemented.

As part of this larger process, Stratos Inc. was commissioned by the NWMO to research and explore a variety of resources (internet searches, books, case study reports, etc.) representing a cross-section of practices and processes in order to explore insights related to site selection processes that would also provide insightful lessons relating to NWMO's commitments. The areas selected for research and exploration were chosen in order to build upon other research being conducted, and to better anticipate and understand the key questions and issues that will need to be addressed by the NWMO both in the siting process to be developed, and in the collaborative dialogue to develop this siting process.

The results of the research and exploration culminated in production of eight case studies and a book review (submitted under separate cover). The eight case studies listed roughly in chronological order, include:

- The Berger Inquiry (NWT)
- Review of the Voluntary Siting Process for the Management of Low Level Radioactive Waste from Port Hope (Ontario)
- The Adams Mine (Ontario)
- The Canadian Model Forest Program
- Ekati and Diavik Diamond Mines (NWT)
- Private Fuel Storage, LLC at Skull Valley Goshute Reservation (USA)
- Oil Sands Development (Alberta)
- The Northern Boreal Initiative and the Whitefeather Forest Initiative (Ontario)

To the extent to which the case studies lent themselves and information was available, research focused on the following areas:

- Background / Understanding the nature of the project
- Site Selection Process
- Public Engagement / Consultation processes
- Involvement of Local Communities / Community of interest
- Involvement of Aboriginal people and Incorporation of Traditional Knowledge
- Building Public Awareness and Understanding
- Division of roles and responsibilities

The following pages summarize some of the key insights attained through the case studies, supported by information from the relevant case studies. These insights and the accompanying detailed case studies (presented in subsequent tabs of this binder) may assist the NWMO in anticipating the key issues that will need to be addressed in the siting process development.

2. Summary of Insights related to Key Issues

There is not a universal definition of willing host community.

The case studies demonstrate that defining "willing host community" is a difficult task. Considerations that enter into the process of defining "willing host community" range from geographical boundaries (e.g. watersheds), political boundaries and representation (e.g. municipalities, reservations, etc.), to economic factors (e.g. areas of economic hardship, communities that would benefit economically from a new facility, etc.). The case studies cited below are both cautionary (in that they were unsuccessful) and are very much linked to the process for assessing community acceptance described in the next section.

In the Adams Mine case study, defining a "willing host community" became a concern, as communities extending beyond the boundaries of the willing host community (i.e. the three local municipalities that were volunteering to host the landfill) expressed concern about potentially suffering from downstream ill effects (i.e. contaminants from the landfill spreading through the watershed).

Further, it is unclear whether or not in the Adams Mine case there was a true "willing host community". This is due in part to the fact that the site was located in an "unorganized" area which meant there was not a municipal government. Using Metro Toronto's definition of willing host, this means that if a nominated site is located in an area without municipal organization, a resolution is required from neighbouring municipalities as may be deemed appropriate by the provincial government. Notre Development Corporation (the owner of the mine and the proponent of the landfill)

signed agreements with the three neighbouring communities of Kirkland Lake, Larder Lake and Englehart and resolutions were subsequently passed in those communities[1]. However, it has been debated that perhaps these three communities may not have been appropriately defined as the "hosts". According to Notre, these communities constituted the catchment areas for the miners previously employed at the Adams Mine, and it was hoped that the proposed landfill would offset some of the economic losses that occurred when the mine closed. However, other surrounding communities felt that those that would be affected by the facility should actually have defined the "host communities".

Similar challenges arose in defining "willing host community" in the Private Fuel Storage (PFS) case study. Here, the community that was the focus of the study was the Skull Valley Goshute reservation. This is a small group of 25-30 First Nations people residing in Utah, in a desolate geographic location, surrounded by military bases and hazardous waste industries and has little hope of economic diversification. In this case, it was the Band's elected leaders that accepted to host the spent fuel storage facility. However, even the small size of the band and the dearth of economic alternatives did not make consensus easy to achieve or to maintain: some local residents challenge the legitimacy of the decision their band representatives have made; other Goshute band members living off reserve disagreed with the decision; so did the nearest city (Salt Lake) and the State (Utah).

There are many approaches to measure community acceptance.

Related to definition of willing host, is the issue of community acceptance. Communities may choose various ways to demonstrate their willingness to host the facility, and may also have a variety of mechanisms for citizens to express their views. One common approach that is used is a referendum. However, such an approach brings forth two concerns – the question posed on the referendum and the acceptable level of approval. Another approach is to establish checkpoints along the process, where citizens can express their opinions on their willingness to become a host community.

In the Low Level Radioactive Waste (LLRW) case, the five-phase siting process included many "gates" that required the community, task force and other levels of government to determine public support for the process and to guide their actions and continued commitment to the process. Gauging public support at many points was an important element for allowing public engagement throughout the process, and in this case lead to a decision to abandon the process when support for the project was lost.

In the Adams Mine case, a referendum was used to gauge public acceptance. The referendum question asked if the citizens wanted an environmental assessment of the proposed facility. The positive response (69% of Kirkland Lake residents) was then used

[1] [Note – details on the resolution passed are not readily accessible]

as the basis for the resolutions that the host communities signed entering into an agreement with Notre Development Corporation. The residents, however, did not say they wanted the facility in their community. Rather, unofficial surveys conducted in the host and neighbouring communities indicated an overwhelming opposition to hosting the facility.

In the PFS case study, Skull Valley's acceptance to be a willing host for the storage facility cannot be fully substantiated. On the one hand, the PFS website indicates that "by signing resolutions, two thirds of the voting members of the Tribe authorized Tribal executives to sign a lease with PFS and begin the project". However, other evidence indicates that while three members of the Tribe's Executive Committee may have signed the PFS lease, this document had never been seen, voted on or approved by the Tribe's General Council.

The siting process can be lengthy and its outcome may be uncertain.

By necessity, a siting process will span several years, and the ultimate outcome remains unknown until the end of the process. Due to the length of the process, it is likely that changing circumstances (such as changing politics, personnel and policies) will occur. Allowances for these factors will have to be built into the NWMO process. Observations made in the case studies, as cited below, indicate that there is a need to provide adequate time to allow for effective input and decision-making, yet on the other hand, the more time provided for the procedure also increases the likelihood of the process being impacted by extraneous changes.

Passing of time can have advantages in some site selection processes. For instance in the Berger Inquiry, Judge Berger was appointed to provide advice to a government that had essentially made up its mind to build the Mackenzie Valley pipeline. By 1977, circumstances had changed as an alternative pipeline route to the Mackenzie Valley became available. This gave Berger greater leverage. He used his awareness of the strategic context and the expanding options available to the government in crafting his report. Berger, however, also prepared the grounds by briefing senior government officials, including the Prime Minister, about his thinking well before he tabled his report.

The LLRW case study highlights a valuable lesson about the maintenance of collaborative, joint decision-making processes over the lifespan of a project. Starting in the fourth phase, the LLRW process began to move away from a joint decision-making process and began to focus on the priority of building a site. Evidence indicates this was mainly due to growing impatience at the federal level with the progress of the voluntary siting process with the leadership of the task force expressing concerns that the process had become too costly, participatory, complicated and time-intensive. To overcome what the task force saw as obstacles to completing the project, they acted to limit consultations with neighbouring and access-route communities and pushed to finalize

the agreement with the Deep River community. This change in the process was opposed by the willing community, other nearby communities and the Community Liaison Group, and was one of the contributing factors to the failed process.

The Adams Mine case spanned fifteen years and was dramatically affected by changing provincial politics and changing policies on waste management. Over the life of this case, three different provincial political parties were in power (at one time or the other). For instance, when the New Democratic Party (NDP) came into power in 1990, it took over from the process started by Metro Toronto, only to be later disbanded by the Progressive Conservative government when they came to power in 1995. As well, the original approach taken by Metro Toronto included consideration of both local and broader siting options, but this approach had to be abandoned when the NDP provincial government made it policy that all municipalities in the province were to handle their wastes locally. Additionally, the environmental assessment hearing process was dramatically changed by Progressive Conservative legislative amendment to the *Environmental Assessment Act* that allowed for scoped hearings. As a result, the environmental assessment hearing for the Adams Mine was reduced to the single issue of hydraulic containment design, and took only 15 days to complete (rather than the typical 1 –2 years that would be expected for an environmental assessment hearing for a similar case). It was also by a legislative enactment of the Liberal government that the Adams Mine project was abandoned completely as an option in 2004. A new government could repeal this legislation and reopen the case.

The PFS case study also demonstrates the reality of a lengthy process. In this scenario, Executive Committee members of the Skull Valley Goshute General Council signed the lease with PFS in 1997. It is also clear that both parties were actively engaged in the issue of nuclear waste storage for some time prior to the signing of the lease. However, it was not until 2006 (nine years later) that the Nuclear Regulatory Commission issued the license for the facility. Even so, PFS still must get several other approvals before the construction can begin and faces legal challenges that could delay the project further.

Finally, the Community-based Land Use Strategy developed by the Pikangikum First Nation under the Northern Boreal Initiative demonstrates how a lengthy and iterative process worked effectively for this community. Because the Land Use Strategy is a visionary, long-term planning tool, appropriate time was allocated to the process, and as a result appears to have worked effectively with the First Nation community's needs, priorities and culture. The degree to which this kind of approach (in terms of length and its iterative nature) will work in a project with tighter temporal and geographic boundaries remains uncertain.

To effectively incorporate traditional knowledge into the site selection process, build in appropriate time allowances and culturally sensitive communication and research methods.

Opportunities exist for working in partnership with First Nation communities, but planning is required. Traditional knowledge can be incorporated into the site selection process, if properly anticipated and built into the framework. First Nation communities also embrace opportunities to work in partnership with other organizations, again if approached and worked with in a culturally sensitive manner.

In the Berger Case study, opportunities to integrate Aboriginal input were built into the community hearings process. Here, the Berger Inquiry was designed so that not just the spokesmen for the native organizations were approached. Rather, the Inquiry remained in each community as long as was necessary for every person who wanted to speak to do so. It was through these hearings that Berger was able to capture traditional knowledge and integrate it into the assessment.

The Ekati and Diavik diamond mines illustrate how traditional knowledge can be accessed and applied. What is most striking about this case study is that two neighbouring mines, developing the same mineral, built one right after the other, and involving the same stakeholders appear to have had quite different experiences in establishing relationships with the community and incorporating traditional knowledge in decision-making. Indeed, Diavik raises greater environmental problems than Ekati yet appears to have invited fewer criticisms from stakeholders. It is difficult to explain what accounts for this difference on the basis of a literature review alone. However, part of the explanation for this difference may include Diavik benefiting from being the second mine in the region. This meant that more information was available from traditional knowledge studies already started; and that organizations and aboriginal communities were more familiar with processes for engagement and brought more value to the table when they participated. Secondly, Diavik was very proactive in its communication with aboriginal communities. It started public meetings with potentially affected communities in 1993, four years before environmental assessment processes formally began.

Under the Northern Boreal Initiative, the Pikangikum Community-based Land Use Strategy was created and is being driven by the Pikangikum First Nation. The aboriginal sense of relationship with nature, traditional land uses, and other First Nations is very prominent in the Strategy. This messaging is a valuable lens through which other communities of interest begin to understand the ways of the First Nations.

Building capacity can add rigour and value to the process.

Community engagement of an informed citizenry can build rigour into the site selection process. Mechanisms for building capacity vary, but a number of best practices exist

such as intervenor funding, media coverage, agreements, etc.

To ensure a more rigorous review of the pipeline proposal, Berger built up the capacity of interested parties by giving them time to prepare and money to conduct studies. Berger recommended that northern business, municipalities, aboriginal organizations and environmental groups be funded so that they could participate in the Inquiry. Five criteria were established to guide the intervenor funding, resulting in almost $1.8 million being allocated. Media coverage, travel to communities and the provision of simultaneous interpretation also helped Mackenzie Valley residents to participate in the Inquiry more effectively. This support was rooted both on a philosophical premise – ordinary people have a political right to participate fully – and a legal practice – truth will emerge more readily from the rigorous testing of evidence. Such testing can only occur through the clash of ideas. This clash, in turn, requires all parties to be able to conduct research and hire experts.

In the Athabaska Tribal Council case study, the core agreement provides an example of a "state of the art" capacity building agreement for a large project involving several First Nations, industry stakeholders, and levels of government. Long-term and high-level commitment and leadership from industry and the First Nations were major factors in the success of the Athabaska Tribal Council agreements. There is a strong commitment to Aboriginal development at the corporate executive level among many of the industry stakeholders, as well as at the First Nation chief level.

The Industry Relations Corporations (IRC) created by the Core Agreement provides a successful model for a First Nation-managed and industry-funded consultation body. Research has shown that proponent-funded capacity building for negotiation teams and a comprehensive treatment of impacts and benefits are desirable. The range of issues addressed through the Industry Relations Corporations, such as sustainable employment, traditional knowledge, and prescription drug abuse, appear to demonstrate an evolution towards a more holistic view of community benefits and impacts that goes beyond the provision of jobs and training for individuals.

Partnerships can be an effective tool.

Stakeholders representing a range of issues and interests will be involved in the site selection process. Opportunities to build partnerships exist. Benefits from partnerships can range from sharing information and resources, to building trust, and improving communication. However, there are risks involved in partnerships too, such as evolving and changing relationships, extraneous influences such as policies and politics, etc.

The Canadian Model Forest Network brings together individuals and organizations with a variety of forest values. In each model forest, partners are provided a unique forum to gain a greater understanding of conflicting opinions; share their knowledge; and

combine their expertise and resources to develop innovative, region-specific approaches to sustainable forest management. However, evidence also indicates a turnover of partnerships in model forests from one year to the next. Although an explanation for this turnover is not readily available, it is important to note that the format of the model forest network does not provide a consistent partnership base year after year.

The collaborative approach taken by the Pikangikum First Nation and the Ontario Ministry of Natural Resources is a good example of a partnership in a situation of competing interests (i.e. private sector development, provincial statutory obligations, and First Nation interests). This Community-based Land Use Strategy may set the bar for future development opportunities in the northern boreal.

Finally, in the Athabaska case study, the Core Agreement and its management structures coexist with a variety of other organizations that contribute to the capacity building, environmental monitoring, socio-economic monitoring, and consultation activities of the Athabaska Oil Sands region. These organizations include the Regional Issues Working Group and the Wood Buffalo Environmental Organization.

Engage communities strategically and with transparency.

Although met with mixed successes, the case studies generally demonstrate the importance of ensuring that the site selection process is fully transparent. Clarity of process will build trust, particularly with the communities. As well, when engaging communities, it is worthwhile to consider the variety of audiences to be involved and determine the best way to engage them. All actors - citizens, businesses, environmental groups, regulators, etc. - all have different needs that must be understood and built into the engagement processes. The consultation approaches used to engage the actors must resonate with them.

Berger put in place several practices to improve transparency, such as full disclosure of documents by all the parties, intervenor funding, community hearings, media outreach, and independent role of Inquiry counsel. These practices not only created greater transparency and openness but also helped to reveal unexpected flaws in the pipeline application. Specifically, Berger ruled that each party – the pipeline companies, the government and all intervenors - would have to prepare a list of all the reports and studies in their possession relevant to the Inquiry and circulate it to all participants. This made this information available to all and, in Berger's view, raised the quality of the debate at the Inquiry. Further, Berger's twin track of formal and community hearings was widely seen as radical at the time. It gave far greater influence to the concerns of affected people than a conventional expert-led process. Given the depth of these concerns and the nature of the unresolved claims in the Mackenzie Valley, Berger's emphasis on the social, and not only the technical, acceptability of risk was a distinguishing feature of his approach.

In the case of the LLRW, the five-phase process was designed to engage potential willing hosts from preliminary expression of interests through to feasibility work and site characterization. The development of this five-phase approach involved eight months of consultation and was published in a report that described the recommended process. A Technical Advisory Committee was also established to provide communities with information on safety standards, guidance on waste issues and licenses. Additionally, mandatory Community Liaison Groups (CLG) were established in each interested community, as a mechanism for engaging the local people. These Groups were created to inform communities of the risks and safety issues, judge community support that did include in some cases public referendums, and to advise local councils on community support for continued participation in the process.

The Adams Mine case study illustrates the importance of transparency and continuity to maximize public support. When Notre Development took over from Metro Toronto as the proponent, the public consultation process changed and as a result drew criticism from the public. Citizens in the surrounding communities expressed frustration around the lack of public accessibility (both citizens and the media) to meetings of the Advisory Group and the Peer Review Process Committee. Further, the public criticized Notre for hosting inconveniently located open houses, which were staffed by minimal technical support.

3. Conclusion

The insights gleaned from these case studies are consistent with the NWMO commitments. The lessons learned from these situations confirm that the approach the NWMO intends on taking with respect to site selection rings true with what others have experienced.

The challenge that lies ahead for the NWMO process is to stay true to its commitments, stay transparent in the process, consult widely, and engage communities – First Nations, citizens of the willing host communities and those beyond the boundaries, regulators, and others – in strategic and appropriate ways.

Invariables in the process are challenges such as defining willing hosts and coping with long time frames and the changes those bring. To mitigate, the NWMO will need to develop and implement a site selection process that is transparent, and has the integrity by which decisions can be made with clear, well-understood and well-communicated criteria (i.e. determining community acceptance, defining boundaries of a willing host, etc.).

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Attachment – NWMO Commitments Concerning the Siting Process

- Siting process is to be developed and implemented collaboratively with affected communities of interest. The siting process, and the engagement process to support it, to be the subject of a specific dialogue immediately following a government decision.

- Seek an informed, willing community to host the long-term management facility. The potential host community will determine how it will demonstrate its willingness to host the facility and how it will invite its citizens to express their views.

- Ethical obligations of siting process and preliminary scientific and technical siting factors identified

- Fairness is best achieved with the site-selection process focused within the provinces directly involved in the nuclear fuel cycle: Ontario, New Brunswick, Quebec and Saskatchewan. Communities in other regions which identify themselves as interested in possibly hosting the facility will also be considered. NWMO will respect Aboriginal rights, treaties and land claims.

- During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the: objectives of the exercise; principles that would apply; major steps in the site-selection process, including the process that will be used to determine suitability and confirm acceptability, at each step along the way; factors and criteria to be applied and how they would be used; processes and mechanisms to integrate Aboriginal Traditional Knowledge; information sharing that would be undertaken and studies required at each stage; and processes and mechanisms to engage and support potential willing host communities, from the initial solicitation of expressions of interest, to the identification of a preferred site.

- Conceptual foundation for all NWMO engagement activity includes: judgments about acceptable risk and safety at each point in the process to be made collaboratively with those most potentially affected; detailed implementation plans to be developed in an iterative and collaborative manner with those most potentially affected; transparency and openness in decision-making to be facilitated through the design and implementation of engagement program; continuous learning and adaptation are important goals of engagement program; educational outreach and development of an informed citizenry, as well as a culture of vigilance, to be enhanced through engagement process; a special responsibility is owned to potentially affected Aboriginal peoples.

Case Study

The Berger Inquiry

1. Purpose

This is one in a series of internal memos prepared for the Nuclear Waste Management Organization (NWMO) as background information on processes and approaches to engage the public and to integrate traditional ecological knowledge (TEK) into decision-making. The purpose of each of these notes is to help raise understanding of the key milestones in an appropriate siting process, the sequencing of these milestones, appropriate approaches for engaging various communities of interest, including Aboriginal peoples and possible issues that may arise through the process.

2. The Inquiry

The Canadian government named Judge Thomas Berger in March 1974 to examine the social, environmental and economic impact of a proposed gas pipeline up the Mackenzie Valley. He was named during a minority government at a time of growing public concern over the implications of the Mackenzie pipeline. The Liberal government, supported by the NDP, hoped that the appointment of Mr. Berger – a former provincial NDP leader -- would publicly demonstrate its readiness to examine the pipeline's full impact despite years of behind-the-scenes policy support for it.

The inquiry Berger headed was ground-breaking for a number of reasons:

- The scale of the industrial development under review -- a multi-billion-dollar, technically-complex, project in a remote region inhabited primarily by aboriginal peoples;
- The standard he set for public involvement, a standard arguably not repeated since for a similar issue;
- His consideration of traditional ecological knowledge, one of the very first examples of such consideration in decision-making.

This review will focus primarily on the Inquiry's second characteristic[1].

Berger approached his mandate with the view that "this Inquiry is not just about a gas pipeline: it relates to the whole future of the North" (p 242)[2]. He traveled to the affected communities by himself before the hearings to introduce himself and familiarize himself with

[1] Traditional knowledge was not formally recognized at the time and it is difficult therefore to ascertain what role it played in the Report's conclusions.

[2] All quotations are from Volume Two of the report of the Mackenzie Valley Pipeline Inquiry. An additional reference was Bregha: *Bob Blair's Pipeline* (Lorimer, 1981).

some of the issues. He also traveled to Alaska to learn about pipeline construction there and Washington to learn about procedures to conduct environmental assessments.

Berger held preliminary hearings soon after his appointment to seek the views of all interested parties on how the Inquiry should be conducted. He received 37 submissions. Berger writes that "these were very useful: it became apparent that the environmental groups and the native organizations would require time to get ready for the main hearings, … and would require funds to prepare for and participate in the hearings. It also became evident that rules would have to be laid down for the production of all the information in the possession of government, industry and other interested parties" (p 225).

Production of studies and reports

Berger ruled that each party – the pipeline companies, the government and all intervenors - would have to prepare a list of all the reports and studies in their possession relevant to the Inquiry and circulate it to all participants. This made this information available to all and, in Berger's view, raised the quality of the debate at the Inquiry.

These studies included reports from the Environment Protection Board an industry-funded but independent technical and engineering group. The pipeline applicant had created the arms' length EPB to review its application and increase confidence in its proposal. The EPB provided a useful alternate source of information on several technical subjects.

Intervenor funding

The Mackenzie Valley Pipeline Inquiry was a complex undertaking involving many parties. There was an applicant (later two) and several intervenors representing environmental, commercial and aboriginal interests.

There were no precedents for government funding of public intervenors in large environmental assessments before Berger. Berger recommended that northern businesses and municipalities, as well as aboriginal organizations and environmental groups be funded so that they could participate in the Inquiry. He laid down five criteria:

1. There should be a clearly ascertainable interest that ought to be represented to the Inquiry.
2. It should be established that separate and adequate representation of that interest would make a necessary and substantial contribution to the Inquiry.
3. Those seeking funds should have an established record of concern for, and demonstrated their own commitments to, the interests they sought to represent.
4. It should be shown that those seeking funds did not have sufficient financial resources to enable them adequately to represent that interest.
5. Those seeking funds had to have a clearly delineated proposal as to the use they intended to make of the funds and had to be sufficiently well-organized to account for the funds.

There were no strings attached beyond these criteria. Over the course of the Inquiry, the government allocated almost $1.8 million to intervenor funding (1975 $), more than a third of the Inquiry's total cost. This funding enabled the Inquiry's lead environmental intervenor, the Canadian Arctic Resources Committee, to develop from a small NGO with almost no staff to an effective organization staffed by professionals. It also boosted the capacity of aboriginal organisations in the NWT.

Hearings

Berger faced a key decision at the beginning of his Inquiry in determining who was affected by the pipeline proposal and therefore should have the right to be consulted. Communities along the pipeline route were clearly affected. But what about more distant Western Arctic communities? what about southern Canadians who would consume the gas carried by the pipeline? Berger chose to define the community of interest broadly, based on two overarching considerations:

1. People directly affected by the pipeline had a right to be heard. Berger expressed this premise by observing that "it is not enough simply to read about northern people, northern places and northern problems. You have to be there, you have to listen to the people, to know what is really going on in their towns and villages and in their minds" (p 227).
2. The construction of the pipeline raised issues of national interest and many southern Canadians asked for an opportunity to speak to the Inquiry. Berger therefore held day-long hearings in 10 major cities from Vancouver to Halifax to hear submissions from southern Canadians.

In order to avoid "turning the Inquiry into an exclusive forum for lawyers and experts", Berger decided that there would be two types of hearings: formal and community. He held formal hearings in Yellowknife to hear the evidence of the experts using traditional rules of procedure, including the swearing in of witnesses and cross-examination. These hearings lasted from March 1975 to November 1976 – much longer than the government had originally expected.

He traveled to every settlement in the Mackenzie Valley and Western Arctic, 35 communities in all, to enable all the residents of the region who wished to speak to do so "in their own language and in their own way" (p 226, 7). These community hearings did not involve lawyers but the pipeline applicants were given the right to make presentations whenever it appeared to them that people were misinformed or when they wished to correct what they considered mistaken impressions of their proposals. In his report, Berger wrote:

"In order to give people – not just the spokesmen for native organizations and for the white community, but all people – an opportunity to speak their minds, the Inquiry remained in each community as long as was necessary for every person who wanted to speak to do so. In many villages, a large proportion of the adult population addressed the Inquiry" (p 227). Almost 1000 witnesses spoke at these community hearings. It is through these hearings

that Berger was able to capture traditional ecological knowledge and integrate it to the technical part of his assessment.

But "the most important contribution of the community hearings was … the insight it gave us into the true nature of native claims. … In no other way could we have discovered the depth of feeling regarding past wrongs and future hopes, and the determination of native people to assert their collective identity today and in years to come" (p 228).

Berger's outreach to local communities not only gave them a much greater voice in the process but also helped give him a great deal of legitimacy which in the end meant that the government had to accept his recommendation to prohibit pipeline construction across the Yukon North Slope on environmental grounds and to delay it in the Mackenzie Valley for at least 10 years to allow the settlement of land claims.

It is important to note that Berger's inclusive process also attracted many criticisms: many in industry and government (and some in other quarters) thought Berger exceeded his terms of reference (e.g., by giving undue prominence to aboriginal land claims) and gave too much weight to environmental and social values and not enough to technical merit. It is telling that governments have avoided repeating the Berger process since.

The media

One of the challenges facing the Inquiry was to involve people speaking different languages and living in far-flung settlements. Berger wrote that "when you are consulting local people, the consultation should not be perfunctory" (p 228). In order to bring the Inquiry to the people, Berger made it plain to the media that he regarded them as an integral part of his process. He gave them every opportunity to provide an account of what was being said at the Inquiry. The CBC Northern Service broadcast daily summaries of the hearings in several languages. These broadcasts enabled community residents to participate more fully when the Inquiry visited them because they were already aware of the evidence that had been presented elsewhere.

This local coverage gave the Inquiry much greater exposure than similar processes typically receive and attracted the attention of the national media. The Berger report received two-hour prime time coverage on CBC radio and one hour on CBC TV when it was tabled as well as front page treatment in all major newspapers.

Implementation

The Mackenzie gas pipeline was not built and therefore Berger's recommendations on project implementation became moot. Some of these, however, are still worth summarizing briefly. Berger recommended that two agencies be established to oversee the pipeline's planning, construction and operation:

1. A single regulatory agency to be established by legislation to implement all government actions that bear on the project.

2. An Impact Assessment Group to act as ombudsman and ensure that all parties that could be affected by the pipeline had access to the Agency. The Group would be composed of representatives of local, regional and territorial governments, public interest groups and aboriginal organizations. The extent of aboriginal participation would depend in part on the extent to which aboriginals felt public governments represented their interests and the management structures to be established under claims settlements.

3. Conclusion

While it took place 30 years ago, the Inquiry provides still some useful lessons about how to design an effective public engagement process to engage Aboriginal and other stakeholders around a major industrial plan. More specifically:

- Berger was careful to place the proposed pipeline in its broader societal and environmental context. He reflected this context in the title of his report "Northern Frontier, Northern Homeland". The pipeline was more than a "thread across a football field" in the proponent's analogy because it had the potential to change the North's society and economy radically. As a result, Berger believed there was a broad moral and ethical dimension to the issues that the pipeline raised.
- Berger made sure all relevant information was tabled and made available to everyone. This included studies conducted by the government and the pipeline applicant that might not otherwise have been published. It led to a more rigorous assessment and greater transparence.
- To ensure a more rigorous review of the pipeline proposal, Berger built up the capacity of interested parties by giving them time to prepare and money to conduct studies. Media coverage, travel to communities and the provision of simultaneous interpretation also helped Mackenzie Valley residents to participate in the Inquiry more effectively. This support was rooted both on a philosophical premise – ordinary people have a political right to participate fully – and a legal practice – truth will emerge more readily from the rigorous testing of evidence. Such testing can only occur through the clash of ideas. This clash, in turn, requires all parties to be able to conduct research and hire experts.
- One of the greatest sources of Berger's legitimacy was that he obviously listened to testimony, particularly to that of individual citizens. He not only went to the people rather than wait for them to come to him, he also encouraged everyone to speak. His sensitivity to cultural differences was evident in the way he designed the hearings – different processes for formal and community hearings – and his willingness to travel to communities. The legitimacy he achieved made it politically impossible for the government to reject his recommendations even though these ran against government policy and his power was purely advisory.
- Berger scrupulously demonstrated his independence by developing his own timetable and giving his staff its own separate role in the Inquiry (a US practice). Berger's staff proposed its own recommendations at the end of the hearings, recommendations

that the applicants and intervenors received an opportunity to comment on before Berger drafted his report.

- Berger was appointed to provide advice to a government that had essentially made up its mind to build the pipeline. By 1977, circumstances had changed as an alternative pipeline route to the Mackenzie Valley became available. This gave Berger greater leverage. He used his awareness of the strategic context and the expanding options available to the government in crafting his report. Berger, however, also prepared the grounds by briefing senior government officials, including the Prime Minister, about his thinking well before he tabled his report.

4. Key learnings

The Inquiry was inherently different from the process the NWMO proposes: there were limited routing choices for the pipeline; the process was not collaborative; the concept of a willing community did not exist. More fundamentally, the process was designed by the Inquiry and imposed on the proponent rather than being initiated by the latter. Nevertheless, the Inquiry exhibited similarities to several of the NWMO's features of implementation plans[3]:

- the Inquiry made Aboriginal values and concerns a priority;
- it focused its engagement on potentially affected communities of interest
- it assigned great importance to societal considerations
- it sought to ensure access to the intellectual capacity required to make decisions.

As a result, some of the Inquiry's practices are relevant to the implementation of several of the NWMO's commitments concerning the siting process.

Fairness is best achieved with the site-selection process focused within the provinces directly involved in the nuclear fuel cycle: Ontario, New Brunswick, Quebec and Saskatchewan. Communities in other regions which identify themselves as interested in possibly hosting the facility will also be considered. NWMO will respect Aboriginal rights, treaties and land claims. Instead of focusing only on jobs and the impact of migrant workers, Berger recognized that the proposed pipeline had the potential to transform the northern economy because of the associated development it would bring about. The issues it raised went beyond the availability of construction jobs or impacts on trap lines to encompass the traditional economic economy. Opportunities for southern Canadians, the primary beneficiaries, to participate in the hearings were also integrated.

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the processes and mechanisms to integrate Aboriginal Traditional Knowledge. In order to give people – not just the spokesmen for native organizations and for the white community, but all people – an opportunity to speak their minds, the Berger Inquiry remained in each community as long as was necessary for every person who wanted

[3] See Choosinjg a Way Forward, pp 225-6.

to speak to do so. It is through these hearings that Berger was able to capture traditional ecological knowledge and integrate it into his assessment.

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the information sharing that would be undertaken and studies required at each stage. Berger ruled that each party – the pipeline companies, the government and all intervenors - would have to prepare a list of all the reports and studies in their possession relevant to the Inquiry and circulate it to all participants. This made this information available to all and, in Berger's view, raised the quality of the debate at the Inquiry.

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the processes and mechanisms to engage and support potential willing host communities, from the initial solicitation of expressions of interest, to the identification of a preferred site. Berger recommended that northern business, municipalities, aboriginal organizations and environmental groups be funded so that they could participate in the Inquiry. Five criteria were established to guide the intervenor funding, resulting in almost $1.8 million allocated.

Judgments about acceptable risk and safety at each point in the process need to be made collaboratively with those most potentially affected. Berger's twin track of formal and community hearings was widely seen as radical at the time. It gave far greater influence to the concerns of affected people than a conventional expert-led process. Given the depth of these concerns and the nature of the unresolved claims in the Mackenzie Valley, Berger's emphasis on the social, and not only the technical, acceptability of risk was a distinguishing feature of his approach.

Detailed implementation plans need to be developed an iterative and collaborative manner with those most potentially affected. There were two proponents to build a Mackenzie pipeline. Arctic Gas, a consortium of the largest North American oil and gas companies, followed an engineering-based approach: it had the best expertise money could buy and it did not believe that stakeholders should tell it how to design or where to run its pipeline. Its competitor, the much-smaller Foothills Pipelines, on the other hand, ostensibly addressed public concerns, especially as they related to Aboriginal land claims, to the point of eventually withdrawing its Mackenzie pipeline application for a completely different route along the Dempster Highway. While Foothills attracted almost universal opprobium from the rest of the industry for its perceived opportunism, it won the regulatory certificate[4].

Addressing the needed and concerns of affected site communities is a key goal of engagement. The Berger Inquiry was a pioneer in this regard. It made the community hearings an important part of the overall process and not a side-show. It went to all the communities. It adapted the hearing process to their needs. It designated senior staff to reach out and organize these hearings.

[4] The pipeline was never built because natural gas prices have been too low.

Transparency and openness in decision-making will be facilitated through the design and implementation of the engagement program. Berger put in place several practices that were innovative at the time – e.g., full disclosure of documents by all the parties, intervenor funding, community hearings, media outreach, independent role of Inquiry counsel. These practices not only created greater transparency and openness but also helped to reveal unexpected flaws in the pipeline application.

The conditions for educational outreach and the development of an informed citizenry as well as a culture of vigilance should be enhanced through the engagement process. Berger traveled to ten major Canadian cities to allow southern Canadians to speak about an issue of national importance as well as traveling through the western arctic. He ensured continuous media coverage in the North. He paid particular attention to the design of his report (lay-out, graphics and pictures, eloquent executive summary) to ensure that it was easy to read[5].

A special responsibility is owed to potentially affected Aboriginal peoples. Instead of focusing only on jobs and the impact of migrant workers, Berger recognized that the proposed pipeline had the potential to transform the northern economy because of the associated development it would bring about. The issues it raised went beyond the availability of construction jobs or impacts on traplines to encompass the traditional economic economy. This approach broadened the Inquiry from focusing on the socio-economic impacts of a pipeline to the viability of the northern economy.

5. Berger Inquiry: major milestones

March 1974	Appointment of Inquiry
April and May 1974	Preliminary hearings
July 1974	Preliminary ruling on procedures
September 1974	Second round of preliminary hearings
October 1974	Second preliminary ruling on procedure
March 1975	Inquiry begins
May June 1976	Southern hearings
November 1976	Inquiry ends
May 1977	First report (recommendation)
November 1977	Second report (terms and conditions)

[5] The report became a best-seller and had to be reprinted.

Case Study

Review of the Voluntary Siting Process for the Management of Low Level Radioactive Waste in the context of NWMO's basic framework for siting process

1. Purpose

This is one in a series of internal memos prepared for the Nuclear Waste Management Organization (NWMO) as background information on processes and approaches to engage the public and to integrate traditional ecological knowledge (TEK) into decision-making. The purpose of each of these notes is to help raise understanding of the key milestones in an appropriate siting process, the sequencing of these milestones, appropriate approaches for engaging various communities of interest, including Aboriginal peoples and possible issues that may arise through the process.

This memo puts the low level radioactive waste siting process (LLRW) experience in the context of the NWMO's Basic Framework for Siting Process- see Appendix A and B for the complete details on this process. The first part of the memo will review the LLRW experience and the second part, compare it with milestone stages and commitments in the NWMO framework.

2. Background

There were many attempts by the federal government to deal with Low Level Radioactive Waste (LLRW) from the Port Hope processed radium facility starting in 1975 when "extensive radioactive contamination" was found in the Port Hope region. In December 1986 the federal government appointed the first independent Siting Process Task Force (SPTF) on Low-Level Radioactive Waste Disposal to advise on a new approach that would overcome the failures of previous processes by being less confrontational and having a strong public participation focus.

Based on the final report of the first siting task force, a second Siting Process task force was appointed in September 1988 to implement a five-phased cooperative siting process. In 1997, after discussions with many communities throughout Ontario the process failed when Deep River, the sole remaining willing community, withdrew from the process.

3. First Siting Process Task Force on Low-Level Radioactive Waste Disposal[1]

The original Siting Process Task Force on Low-Level Radioactive Waste Disposal developed an approach to dealing with LLRW based on 8 months of consultation and discussions with stakeholders, municipal officials, interest groups and concerned citizens. In its final report published 1 year after it was formed, the task force recommended a five-phase approach with established major activities and necessary outputs for a siting process for low-level radioactive waste disposal.

4. Second Siting Process Task Force on Low-Level Radioactive Waste Disposal NWMO

Engagement Program

In phase one through to phase three of the LLRW's process, there were four significant elements to the engagement program. The first was the Ontario wide community information awareness building sessions where all 850 municipalities in Ontario were invited to send two representatives to regional information sessions. The eight sessions in the spring of 1989 provided an opportunity for municipalities to learn about the Cooperative Siting Process and the need for long-term management of LLRW.

The second element of the engagement program was the establishment of the technical advisory committee (TAC) which was done in conjunction with the province wide sessions described above. The TAC was available to advise and provide information to communities who wanted information on safety standards, guidance on waste issues and licenses for operation of the facility.[2]

The third element, which began after the province wide sessions, involved interested communities coming forward to continue further discussion about siting the facility in their community. Once this interest was communicated, the task force conducted a workshop to inform the community's town council and interested members of the public about the siting process.

And finally, the fourth element was the establishment of a Community Liaison Group (CLG). When an interested community came forward as part of the third element, it was required to establish a CLG that was responsible for creating a consultation program to inform community members about the siting process, LLRW, waste management, potential technologies and impact management. The CLG was the mechanism for local engagement and dialogue, and based on these interactions was responsible for advising the town council on whether to proceed at each stage of the siting process.

[1] The DPRA case study only contained a quick review of the first siting task force.
[2] Unfortunately the DPRA case study and a general search of available public documents do not provide any more details on this technical advisory council.

Siting Process

Scope for Management Measures

In phase one, the siting task force was responsible for engaging the public and creating an Impact Management Guideline (IMG) so that all interested communities would be aware upfront of the methods for managing any potential impacts at the facility. A draft version of the IMG was created based on public consultation and workshops held in 1989. It outlined measures of mitigation, compensation, contingency and community relations that would be implemented to manage any economic, environmental, and societal effects from the facility in the willing community. This draft version was subsequently shared with all communities and at all LLRW public meetings in phase 2 and 3.

Establishing Commitment

The five-phase process included many "gates" that required the community, task force and other levels of government to determine public support for the process and to guide their actions and continued commitment to the process. Gauging public support at many points was an important element for allowing public engagement throughout the process. These "gates" included:

1. Gate 1, phase 2 to 3: Expression of interest from community including the formation of CLG.
2. Gate 2, phase 3 to 4: Resolution from council of community on future interest based on CLG recommendation and council discussion.
3. Gate 3, phase 4 to 5: Public referendum
4. Gate 4, phase 5: Finalized Community Agreement-in-principle (agreement between local town and the federal government)
5. Gate 5, phase 5: Endorsement from various levels of government including local town council

Phase 4

Feasibility work and site characterization were left until phase 4 of the LLRW process. This meant that the studies were only to be done in those communities that had continued their support and commitment to the process. As it turned out, the Deep River community was the only community that progressed far enough in the process to begin this phase. Some of the work in this phase – for the complete list see Appendix B – included studying the design options for construction of a mined cavern facility, transportation by rail of LLRW from the source communities, and potential effects on the natural environment (air quality, groundwater, etc). The results for the initial assessments were published in the "Deep River Initial Assessment Report" that was published in 1995.[3]

[3] This document is currently not readily available.

Phase 5 would have been the implementation step and was never reached in the LLRW process as the Deep River community had withdrawn its expression of interest.[4] In part, Deep River withdrew from the process because the concerns raised by communities downstream from the proposed location were not allowed into the process.

The activities and necessary approvals included finalizing the Community Agreement-in-Principle (CAP) and impact management guidelines (IMG), final agreement from various levels of government (including licensing and final environmental assessment approval), and the actual construction of the site.
The CAP would have established the community-based conditions by which the facility would have been developed, operated, monitored and closed. The draft version of the CAP included economic benefits for the community, mitigation, remediation and equity compensation. Of note, the failed negotiations between the Deep River community and the federal government on the CAP were one of the major contributor factors to the failed LLRW process.

5. Key Learnings - Milestones

It is recognized that the planned NWMO process will take a collaborative approach to determining many of the aspects of the siting process. As such it is not yet possible to match up all the phases and activities of the LLRW experience with an established NWMO plan for each stage of a potential siting process.

The first three elements of the LLRW engagement process do not yet have a comparable part in the NWMO engagement program, as that will likely be part of the work conducted during the development of the siting process. However, the fourth element required the establishment of a Community Liaison Group (CLG) to engage the various interests and people in the willing community. There is no equivalent community engagement requirement in the current NWMO process as it allows potential host communities to determine “how it will demonstrate its willingness to host the facility” and “how it will invite its citizens to express its views”.

The DPRA case study highlights a valuable lesson about the maintenance of collaborative, joint decision-making processes. Starting in phase 4, the LLRW process began to move away from a joint decision-making process and began to focus on the priority of building a site. This was mainly due to growing impatience at the federal level with the progress of the voluntary siting process with the leadership of the task force expressing concerns that the process had become too costly, participatory, complicated and time-intensive. To overcome what the task force saw as obstacles to completing the project, they acted to limit consultations with neighbouring and access-route communities and pushed to finalize the

[4] As part of the five-phase process, there was already established guidance on the activities and necessary approvals for this stage that now provides guidance for our review.

agreement with the Deep River community. This change in the process was opposed by the willing community, other nearby communities and the CLG, and was another contributor factor to the failed process.

The NWMO process is still in a formative stage and as such makes a full and complete comparison with the LLRW process impossible. However, the experience of the LLRW process and the comparison of processes where possible do highlight some fundamental themes that should be informative as the NWMO goes forward in the siting process.

6. Key Learnings - Commitments

The LLRW experience is relevant to the implementation of several of the NWMO's commitments concerning the siting process.

Siting process is to be developed and implemented collaboratively with affected communities of interest. The siting process, and the engagement process to support it, is to be the subject of a specific dialogue immediately following a government decision. The attempt to deal with LLRW from Port Hope was formally launched in 1986 when the federal government appointed the first independent Siting Process Task Force on LLRW Disposal to advise on a new approach that would overcome the failures of previous processes by being less confrontational and having a strong public participation focus. Out of that process, a second task force was assigned the responsibility of implementing a five-phase process of extensive community consultation.

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the major steps in the site-selection process, including the process that will be used to determine suitability and confirm acceptability, at each step along the way. The original Siting Process Task Force developed a five-phase approach to dealing with the LLRW. The development of this five-phase approach involved eight months of consultation and was published in a report that described the recommended process. Additionally, mandatory Community Liaison Groups (CLG) were established in each interested community, as a mechanism for engaging the local people.

Seek an informed, willing community to host the long-term management facility. The potential host community will determine how it will demonstrate its willingness to host the facility and how it will invite its citizens to express their views. The five-phase process included many "gates" that required the community, task force and other levels of government to determine public support for the process and to guide their actions and continued commitment to the process. Gauging public support at many points was an important element for allowing public engagement throughout the process.

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the factors and criteria to be applied and how they would be used. LLRW

Site elimination criteria developed for LLRW included: elimination process governed by five Level One criteria (guided by federal and provincial policies and regulation) and seven Level Two criteria (incorporating previous experience, technological options, etc.).

During the collaborative design of a siting process, the NWMO will seek to develop, confirm and communicate the processes and mechanisms to engage and support potential willing host communities, from the initial solicitation of expressions of interest, to the identification of a preferred site. LLRW's five-phase process was designed to engage potential willing hosts from preliminary expression of interests through to feasibility work and site characterization. A Technical Advisory Committee was also established to provide communities with information on safety standards, guidance on waste issues and licenses.
Judgments about acceptable risk and safety at each point in the process to be made collaboratively with those most potentially affected. In the LLRW case, Community Liaison Groups were created to inform communities of the risks and safety issues, judge community support which did include in some cases public referendums, and to advise local councils on community support for continued participation in the process.

Detailed implementation plans to be developed in an iterative and collaborative manner with those most potentially affected Communities most potentially affected in the LLRW included those located downstream from Deep River. The Deep River CLG wanted them to be included in the consultation process, but the siting task force refused. Ultimately, the CLG withdrawal from the process over this issue was one of the factors in the LLRW's failure.

Transparency and openness in decision-making are to be facilitated through the design and implementation of engagement program. The original task force for dealing with the LLRW was open and transparent in its process for developing the siting process.

Educational outreach and development of an informed citizenry, as well as a culture of vigilance, are to be enhanced through engagement process. Regional information sessions were held across Ontario to invite municipalities to participate in the LLRW process.

Appendix A: Voluntary Siting Process for the Management of Low Level Radioactive Waste Basic Framework diagram

Phase One: Initiating the Cooperative Siting Process

- Information awareness building
- Inviting municipalities to participate
- Commence Siting Process
- Siting Task Force Established
- Basic Guidelines Established
- Site elimination criteria developed
- Technical Advisory Committee established

Phase Two: Regional Information Sessions

- Regional Information Sessions
- Expression of Continuing Interest

Phase Three: Community Information and Consultation

- Community Information and Consultation
- Council Resolution for Continued Interest
- Review of communities expressing continued interest

Phase Five: Implementation

- Negotiations and Agreements for Implementation
- Endorsement and agreement from various levels of government
- Board of Directors Established
- Design and Construction
- Operation

Phase Four: Project Assessment

- Project Assessment
- Public Review Impact Management Commitment
- Measure Community Acceptance
- Public Referendum

Commitments Concerning the siting process

- Mandate of the SPTF: To implement the Co-operative Siting Process and find a community to volunteer a site for the proposed LLRW facility
- Process to be focused on community consultation and choice at the community level regarding whether or not to accept a LLRW storage facility
- Process is aiming to deliver an outcome that will improve the management of the historic low-level radioactive waste accumulations produced from past practices and located in Port Hope, Scarborough and at the Welcome and Port Granby sites."
- Process designed to ensure public involvement and commitment at every stage of the process.

Appendix B: Voluntary Siting Process for the Management of Low Level Radioactive Waste Basic Framework

Phase One: Initiating the Cooperative Siting Process

- Information awareness building
  - Province-wide community consultation program to reach out to interest groups, government agencies, the media and local communities.
- Inviting municipalities to participate
  - Invitation to all 850 municipalities in Ontario to send two representatives to attend regional information sessions.
  - Community Liaison Group (CLG) guidelines created: to facilitate community participation and ensure that the siting process reflected all community interests.
- Commence Siting Process
  - Siting Task Force Established
  - Basic Guidelines Established: process adjustments and clarifications made based on public comments.
  - Site elimination criteria developed: elimination process was governed by five Level One criteria (guided by federal and provincial policies and regulation) and seven Level Two criteria (incorporating previous experience, technological options, etc.). *Criterion are part of a document that is not readily available.*
  - Technical Advisory Committee established: provide communities with information on safety standards, guidance on waste issues and licenses.

Phase Two: Regional Information Sessions

- Regional Information Sessions: Provide municipalities with a chance to learn about the Cooperative Siting Process and the need for long-term management of LLRW. Eight sessions held with over 400 participants attending the sessions to request information and express concerns.
- Expression of Continuing Interest: 26 municipalities requested further information with 21 continuing process to Phase three

Phase Three: Community Information and Consultation

- Community Information and Consultation
  - Task force presents process to town council and members of the public.
  - Interested communities form Community Liaison Group (CLG) with responsibility for creating a consultation program to inform community members about the siting process, LLRW, waste management, potential technologies and impact management.
  - Community communication process included information packages; guest speakers; Lewiston and Port Hope area site tours; Thunder Bay meeting of all CLG chairpersons and facilitators; Newspapers, video, television and radio, printed material, presentations to the community, open houses, information displays, informal meetings, questionnaires, and polling.
- Council Resolution for Continued Interest
  - CLG's make recommendation to council about communities continued participation in process
  - Councils decide on resolution
- Review of communities expressing continued interest

- SPTF review and recommendation as to which volunteer communities should continue to phase four
- Assessment based on many considerations *not listed or provided*

Phase Four: Project Assessment

- Project Assessment
- Public Review
- Impact Management Commitment
- Measure Community Acceptance - Public Referendum

Assessments were carried out on the following:

- Construction of a mined cavern facility within the municipal boundaries of the Town of Deep River;
- Excavation of LLRW from the existing storage sites and transportation to a rail terminal;
- Remediation and decommissioning of the existing sites;
- Transportation by rail of LLRW from the source communities;
- Relocation of bulk wastes currently stored in Deep River and managed by AECL;
- Design options for a mined cavern; and
- Phased closure of the mined cavern facility and implementation of a long-term monitoring program.

The potential effects of a site in Deep River on the natural environment were assessed for:

- Air quality (including dust, radon and vehicle emissions);
- Noise and vibration;
- Groundwater;
- Surface water;
- Aquatic habitats and species;
- Terrestrial habitats and species; and
- Valued Ecosystem Components.

Phase Five: Implementation

The details below represent the work done at earlier stages of the process or that was in progress when the community of Deep River opted out of the process.

- Negotiations and Agreements for Implementation
  - Finalize Community Agreement-in-Principle: The community-based conditions under which a new facility would be developed, operated, monitored and closed including:
    - ◇ Economic benefits to community
    - ◇ Equity compensation
    - ◇ Mitigation
    - ◇ Remediation
    - ◇ Management committee
  - Finalize impact management guidelines

The measures that would be undertaken in the volunteer community:

- ◇ Mitigation measures;
- ◇ Compensation measures;
- ◇ Contingency measures; and
- ◇ Community relations measures

- Endorsement and agreement from various levels of government
  - Town Council Endorsement of Agreements
  - Cabinet Decision
- Board of Directors Established
- Design and Construction
- Operation
  - Monitoring plan creation

Case Study in Voluntary Siting of a Waste Facility

Adams Mine

1 Background

The Adams Mine case study stretches over more than fifteen years, and is particularly relevant to the National Nuclear Waste Management Office because it is a demonstration of one of the only "voluntary" siting processes in the province of Ontario. As explored in this case study, the Adams Mine has encountered the challenges of working with and between multiple levels of government, defining and maintaining a willing host, and transitioning legal requirements between public and private sector proposals.

Overview of the Adams Mine Project

The Location

Adams Mine is an abandoned open pit iron ore mine located in the Boston Township of the District of Timiskaming, 11 km south of Kirkland Lake, Ontario. It is situated on the Canadian Shield. The mine was developed in 1963 and closed in 1990, with the resultant job losses leaving the region in economic hardship. Perched at one of the highest elevation points in the region, the mine stretched over 4,000 acres and had six pits, the largest measuring over 1.6 km in length and the deepest being 183 m, placing it below the water table; it is currently half filled with water.

The Opportunity

Before the mine had shut production in the early 1990s, waste management planners from the Municipality of Metropolitan Toronto were examining its potential for a massive landfill, with waste from Greater Toronto Area (GTA) to be shipped north in sealed intermodal shipping containers by CN and Ontario Northland on a 700 km route. The proposed 20-year life span of the landfill would see approximately eleven 50-car trains freighted each week.

The Advantages

Proponents of the landfill plan pointed to its potential for spurring development in Kirkland Lake's struggling economy, which suffered economic hardship and job loss after the iron-ore mine shut down after 27 years of operation. Advantages to selecting this site included that the Adams Mine is remote (7 km away from the nearest residence), and would minimize nuisance impacts such as noise and dust from landfill operations. Additionally, the proposal to ship waste by rail would also reduce impacts on truck noise and potential accidents. Proponents of the project also claimed that the natural inward flow of groundwater to the pit would provide favourable conditions for a solid waste landfill.

The Concerns

Opponents to the proposal pointed mainly to environmental concerns with the selected location and proposed design. The landfill design was based on the assumption that water would flow only into the pit. Hydraulic containment was recommended as the means to ensure environmental security at the disposal site, because groundwater flows into the pit where the waste would be landfilled, rather than flowing outward from the pit. However, opponents argued that after a quarter of a century of blasting, and given the inherent nature of the rock, the site is extremely fractured and is at risk of water leaking out through cracks or fissures in the fractured pit walls or under the base of the pit. Further, the proposed gravel blanket, drainage pipes and other hydraulic containment systems such as pumps would have to last 1,000 years to ensure that removal of incoming water could be properly managed. Even with maximum investment in control technologies, opponents lacked confidence in the recommended technical solutions because there was no case history for the technology.

The concern was further heightened by the elevated location of the Adams Mine, placing it at the headwaters for Temiskaming District. Should the proposed hydraulic containment system fail, the spread of contaminants would be to the water source for 4,000 residents below the Adams Mine, including a thriving farm community that depends on plentiful clean water.

Current Status

Over the past fifteen years, the proponents of the Adams Mine landfill proposal have changed from the public sector to private sector. The provincial government has had three different parties in power, and a variety of changes to legislation have been made (refer to sections 3 and 8 for detailed summaries of the events that occurred over the past fifteen-plus years).

Ultimately, the books were closed on the Adams Mine Project when the *Adams Mine Lake Act, 2004*, took effect June 17, 2004. The provincial government passed legislation that ended all possibilities for the Adams Mine project to proceed while this government is in power. The Act prohibits the use of the Adams Mine as a landfill site, and revokes all existing approvals related to the project. All applications under consideration by the Ontario Ministry of Environment were also voided, and any agreement to sell Crown land adjacent to the site to the Adams Mine owner was also terminated. The Act also prevents any legal action against the Ontario government as a result of the legislation. The owner of the Adams Mine property is to be compensated for the purchase of the property, surveys, studies, testing, engineering services, legal services, marketing, promotion, property taxes, and costs associated with seeking government approvals and acquisition of Crown land.

The provincial legislation amended the *Environmental Protection Act* to prevent the use of any other lake more than one hectare in size from being used as a landfill.

2 Site Selection Process

Since 1986, the Greater Toronto Area of Ontario has undertaken several approaches to site a landfill to handle the city's waste. Between 1986 and 1998, the basic steps included: the Solid Waste Environmental Assessment Plan; the Solid Waste Interim Steering Committee; the Interim Waste Authority; and the Metro Willing Host Site Search. These processes have been outlined below, because they demonstrate a variety of approaches to siting a waste management facility, including explanation of the phases and sequencing of key stages; evaluation criteria; boundaries; and public engagement.

Since 1998, other less formal processes and incidents have occurred (see Section 8 - Chronology), and are not discussed in detail in this section, as they do not shed much insight into site selection processes.

Solid Waste Environmental Assessment Plan (SWEAP)

Metro Toronto initiated the Solid Waste Environmental Assessment Plan (SWEAP) in 1986. Its purpose was to develop a long-term waste management master plan for the Greater Toronto Area. This included a landfill site search, which involved three phases. The first phase involved a systematic search for sites within Metro Toronto. In the second phase, the rest of Ontario was subjected to a willing host site search. The third phase, although never required, was to be a systematic site search (i.e. traditional, not voluntary) conducted in the rest of Ontario. The SWEAP approach taken by Metro Toronto was that each subsequent phase was to be initiated if the preceding phase was unsuccessful in finding an acceptable site.

Phase one of the SWEAP only yielded three suitable sites in Metro Toronto. Suitability was judged using hydrogeology, natural environment, surface waste, agriculture, land use and social factors. Since an insufficient number of sites were found, phase two was initiated.

For the second phase, willing hosts were recruited by placing advertisements in forty-four daily newspapers and sending letters to 830 municipalities across Ontario. Thirty-seven responses were received for a total of forty-nine candidate sites. These sites were evaluated using the same criteria as in phase one. The defining criteria, however, was capacity. Only those sites offering at least a 12 M tonnes capacity were included in the long-list. A total of thirteen candidate sites comprised the long-list.

The SWEAP process was suspended in 1990 when the responsibility for locating landfill sites within the Greater Toronto Area became the responsibility of the provincial government.

Solid Waste Interim Steering Committee (SWISC)

This short-lived Committee was established in March 1989 with representatives from the Province and the Greater Toronto Area. The Committee's purpose was to define a long-term waste management plan for the Greater Toronto Area. However, the New Democratic Party (NDP) provincial government in 1990 terminated the landfill site searches under SWISC.

Interim Waste Authority (IWA)

The provincial government created the Interim Waste Authority (IWA) in 1991 to find a landfill site for the waste remaining after an enhanced diversion program. Metro Toronto was requested to cease its landfill search and hand over all documents to the province. Following the traditional siting process, the preferred sites for handling the Greater Toronto Area 's waste (located close to the point of generation, as per provincial government policy) were announced in 1993 at the end of the environmental assessment process. The environmental assessment was then referred to the Environmental Assessment Board (EAB). However, before the hearing could be completed the new Progressive Conservative provincial government disbanded the IWA in 1995.

Metro Willing Host Site Search

This approach was initiated by Metro Toronto to complement the IWA process. Metro defined a willing host as:

1. a willing jurisdiction responsible for solid waste (i.e. county, region) if different from the local municipal council. It was noted that if the nominated site is located on provincial crown land or in areas without municipal organisation, a resolution is required from neighbouring municipalities as may be deemed appropriate by the provincial government; and
2. a willing local municipal council; and
3. a willing land owner, which may be either a municipality or private landowner (in conjunction with municipalities), prepared to sell his or her own land (Senes Consultations, 1995; McLennon, 1999).

The Metro Toronto Willing Host Site Search expanded the range of sites to be examined, and added to the IWA's systematic (or traditional) site search the issue of social equity (i.e. seeking a volunteer). The IWA concentrated on the Greater Toronto Area, while the willing host site search extended to the rest of Ontario.

The one site that made it through the willing host process was the Adams Mine site. In fact, the Adams Mine was the only site that complied with the willing host criterion.

Metro Toronto approached Notre Development Corporation (the mine pit owner) and signed an option to buy the site from them. Metro commenced the Adams Mine Site Assessment Project, and conducted technical studies and consultation on the Adams Mine's environmental acceptability as a possible landfill. However, in December of 1995

Metro Council voted to abandon work on the site because of economic and environmental concerns.

It was at this time (1996), that Notre took over as the proponent and commenced an environmental assessment process to seek approval to operate the site as a private landfill.

3 Public Engagement / Consultation Processes

Public Participation

Information that clearly documents the involvement of local communities, particularly early in the process, is limited. However, what can be gleaned from existing reference material is summarized below:

It is important to note that the Adams Mine site is located within the unorganized Township of Boston. This means that there is no municipal government and therefore, it has been argued, no host community (Griffin, 1996; McLennon, 1999). The host communities of Kirkland Lake, Larder Lake and Englehart are the communities that possess a municipal government that are closest to the site. Some form of public involvement took place as resolutions were passed in all three communities identifying them as host communities[1].

Metro Toronto Public Consultation Activities

There is also evidence that public meetings were held in the host region during the period of March – December 1995, as Metro Toronto began its public consultation activities. For instance, the first meeting was held in April 1995 and over 500 people attended[2]. Concerns were raised at this meeting including: the willing host process; the need for public representation and the opportunity for input; and the landfill's impact on the environment and property values. The public consultation zone included the host communities and residents in other areas surrounding the site. The consultation zone was expanded to 60 km in all directions from the site (surpassing Metro's normal consultation zone of 0.5 – 1.5 km) (McLennon, 1999).

Metro Toronto also created other public participation mechanisms including:

- a public liaison committee (PLC) in the host region (all meetings were advertised and open to the public);
- a regional consultation forum (RCF) made up of groups from outside the initial consultation zone; and
- a steering committee that served as the formal linkage between the northern and southern components of the project.

[1] [Note – No additional details on what public involvement occurred]

[2] [Note – Unable to confirm exact location of this meeting]

Notre Development Public Consultation Activities

The public consultation initiatives taken by Metro Toronto (discussed above) were stopped when Notre Development Corporation (Notre) took over as the proponent in 1996. Notre had to incorporate public consultation into its process, as part of the requirements under the *Environmental Assessment Act*. As a result, Notre identified four main consultation partners:

- Site neighbours;
- Interested parties such as the general public and First Nations;
- Local municipal governments; and
- Government agencies and ministries.

The public consultation methods that Notre used included:

- Open houses at the site;
- Establishment of the Adams Mine Advisory Working Group (composed of residents from around the site);
- Establishment of a Peer Review Process Committee; and
- Consultation with local municipal governments.

Information was made available to the public through mail outs, presentations at council meetings and schools, and through responses to letters and newspaper articles. Notre also retained one of the peer reviewers that Metro had hired to provide feedback on technical issues. Notre committed to establishing a site advisory committee to keep the public involved in the operation of the facility only if necessary, if approval to proceed with the project were granted.

Criticisms of the public consultation process used by Notre included:

- Members of the Adams Mine Advisory Group came from a very small area surrounding the site
- Meetings of the Advisory Group and of the Peer Review Process Committee were closed to both the public and the press
- Municipalities outside the host region expressed concern that they were not presented the opportunity to be part of the Regional Municipalities Working Group, despite requests
- Open houses were held at the facility, an inconvenient location for many potential participants
- Open houses had only one technical expert available to answer questions
- By disbanding Metro Toronto's consultation mechanisms (i.e. the PLC and the peer reviewers), there was no follow-up to any of the concerns raised by the community earlier in the process.

4 Involvement of Local Communities / Communities of Interest

There were several communities of interest involved in the Adams Mine case over the years, including:

- Residents and Town Councils of Kirkland Lake, Larder Lake and Englehart
- Residents from other surrounding communities
- First Nations (discussed in Section 5) of Matachewan, Wahgoshig, and Beaverhouse
- Metro Toronto
- Provincial ministries – Ministry of Natural Resources and Ministry of Environment
- Proponent – Notre Development Corporation
- Rail Cycle North (consortium of Notre Development Corporation (owner of Adams Mine), CN Rail, Ontario Northland Railway, and Browning Ferris Industries (BFI))
- Temiskaming Federation of Agriculture
- Adams Mine Intervention Coalition (AMIC) – coalition of farmers organizations, environmental groups and residents associations
- Responsible Environmental and Economic Prosperity Association (REEPA)

The three host communities (Kirkland Lake, Larder Lake and Englehart) initially signed economic agreements with Metro Toronto, the original proponent. When Notre took over, the communities reaffirmed their interest in hosting the facility[3].

Compensation Package

The details of the compensation package offered by Notre include:

- Host communities were offered free waste disposal for the twenty-year life span of the site (annual savings of $159,700, $35,000 and $18,600 respectively for the three host communities)
- $40,000,000 site development expenditure for capital infrastructure
- Eighty-two direct jobs created to operate the landfill, plus jobs created during the construction period (labour expenditure of $3,153,500)
- Annual payments of over $9 million over the twenty-year operating period to the host communities and immediate neighbours in the form of royalties, grants in lieu of taxes and contributing to a recycling / environmental fund
- Research and development fund ($250,000 a year) to be used to create sustainable employment in the North Timiskaming area; stimulate industry related to the project through training, environmental and business incentives; and conduct market research for both potential recycling opportunities and backhaul opportunities for the railroad.

[3] [Note –Details on the nature of this reaffirmation are not clear]

Intervenor Funding

In 1997, intervenor funding was eliminated, as the *Intervenor Funding Project Act* expired. As a result, opponents to the Adams Mine proposed facility had limited access to funds to support their involvement in the case, and in particular the environmental assessment hearing in 1998. In fact, "citizens had to raise thousands of dollars to have the borehole drilling results examined by a scientist" (McSherry, 2004)[4]. It should be noted that Notre did offer $15,000 of funding to the opponents of its plan. The money was set-aside for the Adams Mine Intervention Coalition to hire technical expertise. The Coalition, however, had estimated legal and technical costs for the sharing to reach $50,000 (Johnston, 1998).

Environmental Assessment Process

Notre commenced the environmental assessment process in 1996, after announcing it would pursue the Adams Mine as a "private sector proposal". By late 1996, Notre had filed all necessary technical studies with the provincial government.

In 1997, the Progressive Conservative provincial government made changes to the *Environmental Assessment Act* that allowed for "scoped" environmental assessment hearings (i.e. focused environmental assessment hearings on outstanding, environmentally significant issues rather than requiring the entire environmental assessment to go to a hearing).

As a result of these changes, the Adams Mine's entire environmental assessment was to be completed within three months. The hearing was held in February 1998, and the Environmental Assessment Board panel conditionally approved the project in June 1998. The 3 person panel's decision was split; one member concluded that the project was not safe, while the other two members concluded that they did not have enough information to determine whether it was safe or not. More test drills were ordered, and the results supported earlier information that indicated the engineered design could not be relied upon to contain the leachate. Regardless, an approval was issued.

The Adams Mine Intervention Coalition appealed the panel's decision to Cabinet in July 1998, but the Cabinet rejected the appeal and approved the decision of the Environmental Assessment Board panel (Cabinet released their decision to approve the Adams Mine as a landfill on August 13, 1998.)

5 Involvement of Aboriginal People / Incorporation of Traditional Knowledge

Involvement of aboriginal people in the Adams Mine case was very limited. The Timiskaming First Nations submitted a formal application for a federal environmental assessment in September 2000. Later in September, the Department of Indian Affairs

[4] [Note – No information readily available about participant funding available prior to the EAB hearing]

recommended a federal environmental assessment of the Adams Mine landfill proposal, based on sections 46 and 48 of the *Canadian Environmental Assessment Act*.

In 2003, the Ontario Ministry of Natural Resources (MNR) reviewed a proposal to sell approximately 2,100 acres of land abutting the Adams Mine pits to a numbered company that owns the Adams Mine pits. In this case, the Matachewan, Wahgoshig and Beaverhouse First Nations stated that their "constitutionality protected aboriginal and treat rights must be respected" in the matter of the sale of this land around the pits. Further, the First Nations also indicated that they had not been consulted on the proposed sale of the land.

6 Roles and Responsibilities

Due to the lengthy time span of this case study, many players were involved and their roles and responsibilities sometimes evolved and changed, depending on a variety of factors (such as provincial policy on waste management, political leadership, etc.). However, some of the roles and responsibilities are outlined below for a few of the key players involved.

Party	Key Roles / Responsibilities
Proponent – Metro Toronto	• Responsible for managing the waste generated in the GTA • At points, was responsible for locating a landfill site to handle the GTA waste
Proponent – Notre	• Owner of abandoned Adams Mine • Responsible for submitting applications (indication of interest, environmental assessments, etc.)
Provincial government	• Setting waste management policy for the province • Enacting (or amending) legislation regarding environmental assessment • At points, taking over responsibility from Metro to manage GTA waste
Regulatory body – MNR	• Approving environmental assessments • Issuing certificates of approval for operation
Host municipalities / councils	• Demonstrating willingness to volunteer as a host community
• Responsible Environmental and Economic Prosperity Association (REEPA) • Adams Mine Intervention Coalition (AMIC)	• Representing views of citizens in host and surrounding communities

7 Reflection and Comment

While the Adams Mine scenario spanned more than fifteen years and eventually resulted in the failure to site a landfill site for Greater Toronto Area waste, it still provides some useful lessons about siting a long-term facility. More specifically:

- **Willing host** – A definition of host community was not uniform, nor was there a widely used and accepted definition at the time of the Adams Mine case study. This became a problem because the potential negative effects of a facility can extend beyond the boundaries of the host community, especially if there is a watershed involved (which was the case for Adams Mine). Those outside the host community did not "volunteer" to host the facility, yet they could suffer the ill effects of it (i.e. potential for contaminated groundwater moving downstream throughout watershed) while not being able to share in any benefits.

  Further, it is unclear whether or not in the Adams Mine case there was a true willing host. This is due in part to the fact that the site was located in an "unorganized" area which meant there was not a municipal government. Using Metro Toronto's definition of willing host, this means that if a nominated site is located in an area without municipal organization, a resolution is required from neighbouring municipalities as may be deemed appropriate by the provincial government. Notre signed agreements with the three neighbouring communities of Kirkland Lake, Larder Lake and Englehart and resolutions were subsequently passed in those communities[5]. However, it has been debated that perhaps these three communities were not appropriately defined as the "hosts". According to Notre, these communities constituted the catchment areas for the miners previously employed at the Adams Mine, and it was hoped that the proposed landfill would offset some of the economic losses that occurred when the mine closed. However, other surrounding communities felt that the "host communities" should actually have been defined by those that would be affected by the facility (Griffin, 1996; McLennon, 1999).

- **Community Acceptance** – Related to definition of willing host, is the issue of community acceptance. In most volunteer siting cases, a referendum is used to gauge public acceptance. Such an approach brings forth two concerns – the question posed on the referendum and the acceptable level of approval. In the Adams Mine case, the referendum question asked if the citizens wanted an environmental assessment of the proposed facility. The positive response was then used as the basis for the resolutions that the host communities signed entering into an agreement with Notre. The residents,

[5] [Note – details on the resolution passed are not readily accessible]

however, did not say they wanted the facility in their community. Further, unofficial surveys conducted in the host and neighbouring communities indicated an overwhelming opposition to hosting the facility (Griffin, 1996; McLennon, 1999; Wroe, 1998).

- **Public Participation** – the Adams Mine case study illustrates the importance of transparency and continuity to maximize public support. When Notre Development took over from Metro Toronto as the proponent, the public consultation process changed and as a result drew criticism from the public. Citizens in the surrounding communities expressed frustration around the lack of public accessibility (both citizens and the media) to meetings of the Advisory Group and the Peer Review Process Committee. Further, the public criticized Notre for hosting inconveniently located open houses, which were staffed by minimal technical support (McLennon, 1999).

- **Changing politics / policies** – The Adams Mine case was dramatically affected by changing provincial politics and changing policies on waste management. Over the fifteen years of this case, three different provincial political parties were in power at one time or the other. For instance, when the New Democratic Party (NDP) came into power in 1990, it took over from the process started by Metro Toronto, only to be later completed disbanded by the Progressive Conservative government when they came to power in 1995. As well, the original approach taken by Metro Toronto included consideration of both local and broader siting options, but this approach had to be abandoned when the NDP provincial government made it policy that all municipalities in the province were to handle their wastes locally.

  The environmental assessment hearing process was dramatically changed by Progressive Conservative legislative amendment to the Act that allowed for scoped hearings. As a result, the environmental assessment hearing for the Adams Mine was reduced to the single issue of hydraulic containment design, and took only 15 days to complete (rather than the typical 1 –2 years that would be expected for an environmental assessment hearing for a similar case).

  It is interesting to note that it was also by a legislative enactment of the Liberal government that the Adams Mine project was abandoned completely as an option in 2004. It should be noted that a new government could repeal this legislation and reopen the case.

  The lesson learned here is that regardless of the best laid plans, politics can dramatically influence the process and outcome of a siting search.

- **Compensation** – Compensation packages, such as that offered by Notre (discussed in Section 4) did not convince those within and outside the host communities to support the proposed facility.

8 Adams Mine Chronology

1986	Metro Toronto initiates Solid Waste Environmental Assessment Plan (SWEAP), with purpose of developing long-term waste management master plan for the Greater Toronto Area .
1989	Adams Mine listed as possible landfill for Metro Toronto in response to request for proposals from the Solid Waste Interim Steering Committee.
1990	Metro Toronto selects Adams Mine as a preferred site (result of IWA an Metro Toronto Willing Host Search processes). Metro Toronto approached Notre (the corporation that purchased the abandoned mine) and signed an option to buy the site.
1992	Province introduces legislation requiring Metro Toronto to deal with solid waste within Greater Toronto Area (GTA).
1995	Metro Toronto conducts technical studies and consultation on the Adams Mine's environmental acceptability as a possible landfill.
	Metro Toronto rejects the Adams Mine project on financial and environmental grounds.
1996	Notre Development announces they will pursue the Adams Mine as a "private sector proposal" and begins preparing for the environmental assessment. By late 1996, Notre had filed all necessary technical studies with the provincial government.
1998	Provincial government announces fast-tracked environmental assessment hearing. The Environmental Assessment Board hearing is restricted to only outstanding environmentally significant issues. Entire EA must be completed within three months.
	Opposition to the landfill project by the Adams Mine Intervention Coalition (AMIC) is heard at hearings.
	Environmental Assessment Board hearing panel conditionally approves the project (majority 2-1 vote). More test drilling is ordered and completed to the satisfaction of the ministry and approval is issued.
	Adams Mine Intervention Coalition appeals the panel's decision to Cabinet, who in turn rejects the appeal and approves the decision of the EAB panel.

1999-2000	Metro Toronto issues request for proposals from private sector waste management companies. Five respondents qualified, including Rail Cycle North (consortium of Notre Development, Canadian Waste Services, Ontario Northland Transportation Commission, Miller Waste and the Canadian National Railway). Toronto City Council meets in August and considers recommendations made by city committees to proceed to final contract negotiations with Rail Cycle North.
2000	Temiskaming First Nations submits formal application requesting a federal review of the project under the Canadian Environmental Assessment Act.
September 2000	Federal Standing Committee on the Environment and Sustainable Development pass resolution calling for federal environmental assessment on the Adams Mine.
	Department of Indian Affairs recommends a federal environmental assessment of the Adams Mine proposal (under CEAA).
October 2000	Toronto City Council approves final contract with proponents of the Adams Mine landfill unless a federal environmental assessment is announced by February 15, 2001.
	Contract negotiations break down over issues of liability. Canadian Waste Services announces break off of negotiations on October 20; Adams Mine proposal is subsequently rejected by Toronto Council
2001-2003	Ongoing appeals and applications, lawsuits, public meetings, etc. held related to Adams Mine.
April 2004	The *Adams Mine Lake Act, 2004*, which protects the Adams Lake mine site and other lakes in Ontario from becoming landfill sites, comes into effect.

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Case Study in Partnership Arrangements

Canadian Model Forest Network

1. Background

The Canadian Model Forest Network (CMFN) is a unique initiative based in establishing and maintaining effective partnerships. In effect, stakeholder engagement is not so much a part of the program as it is the "glue" that holds the program together. As such, the Canadian Model Forest Network can offer many positive examples to others seeking ways to integrate effective stakeholder engagement into their own programs.

History of the Canadian Model Forest Network

The Canadian Model Forest concept began to take shape in the early 1990s amid a wave of national and international commitments to sustainable forest management. The Earth Summit, held in Rio de Janeiro in 1992, produced "Forest Principles", a document with a plan to guide sustainable development in forest management around the world. At the same time, Canada's *National Forest Strategy* and the *Canada Forest Accord* were also launched with the concept of sustainable forest management as the backbone.

In 1991, after a call for proposals, more than 50 applications were submitted to the National Advisory Committee on Model Forests. Ten sites were chosen and in 1992, Canada's Model Forest Program was established.

Created by the Government of Canada through the Canadian Forest Service and funded under Canada's Model Forest Program, the CMFN is the network that links together Canadian Model Forests. The network allows Model Forests across the country to share ideas and communicate methods of sustainable forest management. The CMFN also provides direction for activities that occur at a national level or between Canadian Model Forests and Model Forests located elsewhere in the world.

Current Status of the Canadian Model Forest Network

A Model Forest is a partnership of public and private landowners, government, industry, universities, Aboriginal communities and other organizations that have a common interest in achieving sustainable forestry management within a local, defined forest area. Each Model Forest is run by a not-for-profit organization and, except for a small administrative staff, all those involved in the Model Forest not only donate their time and expertise, but also often bring additional financial support. At the heart of each Model Forest are the partners who work together to promote forest management that takes into account ecosystem health, cultural values and economics. Model Forests range in size from 113,000 hectares to 7.7 million hectares, covering typical scales at which district-level forest management decisions are made.

The CMFN currently includes Canada's eleven Model Forests and three Special Project Areas. In April of 2006, a signing ceremony was held for all eleven Canadian Model

Forests that sets in motion the formal incorporation of the Canadian Model Forest Network (CMFN) as a not-for-profit partnership organization under Canadian law. Formal incorporation as a Network will help to broaden national partnerships with industry, NGOs and governments, and to effectively coordinate efforts on sustainability issues of local, national and international concern.

Canada's model forests have been excellent tools for promoting innovative approaches to sustainable forest management through partnerships. Canada's model forest program is also well regarded internationally – for example, Sweden and Russia have established similar programs. However, the results of the model forests have generally been locally based (NRTEE, 2005).

The Canadian Model Forest Network's Partnerships

At the heart of each Model Forest is a group of partners having different perspectives on the social, economic and environmental dynamics within their forest - perspectives that are necessary to make more informed and fair decisions about how to manage the forest. The real "model" in these forests is the way the different partners - Logging companies; Aboriginal communities; Maple syrup producers; Woodlot owners; Parks; Environmentalists; Universities; Government; Agencies; Recreational groups; Community Associations; and Hunters and Trappers have integrated their own interests into their common goal of developing approaches to sustainable forest management that do not sacrifice one interest for another.

A model forest brings together individuals and organizations with a variety of forest values. Together they form a partnership[1] with the common goal of sustainable forest practices that provide benefit today, while ensuring a healthy forest for future generations. The multi-interest membership of each Model Forest is committed to demonstrating how different social, environmental, cultural, and economic interests can work together.

A model forest provides a unique forum where partners can;

- gain a greater understanding of conflicting opinions
- share their knowledge
- combine their expertise and resources to develop innovative, region-specific approaches to sustainable forest management.

A model forest acts as a giant, hands-on laboratory where innovative ideas are researched, developed, applied in practice, and monitored for their long-term effect on forest ecosystems. It encompasses a land base large enough to reflect the diverse needs of a living, working natural forest. Model forests research, design and implement distinct working-scale projects that strive to develop sustainable forest management practices.

[1] [Note – Details on "how" to become a partner or partnership criteria in a Model Forest are not readily available]

A Board of Directors, typically made up of a representative selection of the partners, directs the activities of a Model Forest.

For more details on CMFN partnerships, refer to Section 3.

2. Site Selection Process

In 1991, Model Forest sites were chosen based upon a competitive bid process. Important factors in choosing Model Forest locations included the number of partners and supporters, the level of support from the local forest industry, First Nations representation and the type of forest ownership (i.e., private or public land) that characterized the proposed sites. To arrive at the final list of Model Forests, the strengths of the various proposals were balanced with the need to select sites that represented the different forest types across the country.

The current Model Forests are located in the following areas:

- Western Newfoundland Model Forest: Southwestern coast, Newfoundland
- Nova Forest Alliance: Central mainland, Nova Scotia
- Fundy Model Forest: Bay of Fundy region, southeastern New Brunswick
- Bas Saint-Laurent Model Forest: Bas-Saint-Laurent region, southeastern Québec
- Waswanipi Cree Model Forest: James Bay region, west-central Québec
- Eastern Ontario Model Forest: Southeastern Ontario
- Lake Abitibi Model Forest: Northeastern Ontario
- Manitoba Model Forest: Southeastern Manitoba
- Prince Albert Model Forest: Central Saskatchewan
- Foothills Model Forest: Rocky Mountains/Foothills region, western Alberta
- McGregor Model Forest: Central interior, British Columbia

Special project areas include:

- Forest District 19, Labrador/Nitassinan
- Prince Edward Island
- Vancouver Island

3. Partnerships

Many Canadians live in forested areas and are directly affected by forestry practices. By forming partnerships that bring various environmental, cultural and economic organizations and values together, the diverse needs of the people who live in the Model Forest can be more effectively addressed and ultimately satisfied. Partnerships bring people together to sort out conflicting ideas and, in many cases, also bring most of the funding to the Model Forests, which supports project work[2]. Ultimately, partners work together to achieve sustainable forest management using innovative, region-specific

[2] Details about the amount of funding partners bring and how it is allocated are not readily accessible.

approaches[3]. Evidence indicates that the number of partners a Model Forest has from year to year will vary[4].

A description of partnership arrangements in selected Model Forests follows:

Eastern Ontario Model Forest

In the Eastern Ontario Model Forest, more than 50 groups and organizations (representing schools, First Nations, industry, conservation authorities, government and agriculture) have entered into partnership. The partnerships can take many forms in the Eastern Ontario Model Forest, such as:

- Collaboration in and implementation of projects
- Participation in special interest groups
- Membership
- Active support of the goals and objectives of the Model Forest

Lake Abitibi Model Forest

In the Lake Abitibi Model Forest, the number of partner organizations varies from year to year. However, there are generally between 15 – 20 partner organizations actively involved in directing the activities of the Model Forest. The Lake Abitibi Model Forest remains strongly committed to the partnership model and has maintained a Board that seeks to be locally responsive yet nationally relevant. The Lake Abitibi Model Forest is registered as a non-profit organization, which is volunteer-driven with a small staff compliment.

Foothills Model Forest

The Foothills Model Forest has joined forces with a wide range of partners to learn, understand, apply and share new ways to use and take care of Alberta's forest Land. For this Model Forest, Partnership Categories have been defined according to the nature of their relationship, including:

Sponsoring partners

A sponsoring partner is a sponsor of and shareholder in the Foothills Model Forest.

Management Partners

A management partner is a land-management agency or resource-management agency that either participates in or funds Foothills Model Forest projects. It plans to implement some or all of the information acquired from this and other model forest research.

Program and Project Partners

[3] The material accessible during the research phase did not provide insight as to how partners join a Model Forest, what the roles and responsibilities are associated with becoming a partner, etc.

[4] Details on why the number of partnerships will vary are not readily accessible.

A program partner is a person or organization that contributes either funding or in-kind support to the Foothills Model Forest but not to any specific project.

A project partner is a person or organization that provides funding or in-kind support to the Foothills Model Forest for a specific purpose.

Other Partners
There are other Foothills Model Forest partners as well. These are people and agencies that do not participate in the Foothills Model Forest but that voice full support of its objectives and programs.

4. Involvement of Local Communities

Community engagement (including all partners) is a fundamental principle upon which the CMFN is based. Several examples of how the local community and other partners have been engaged in selected Model Forests are described in the following paragraphs:

Foothills Stream Crossing Program
In 2003, the Foothills Model Forest started working with Hinton Wood Products (West Fraser Mills Ltd.) and the Alberta Chamber of Resources on the Foothills Stream Crossing Program. The goal of the initiative is to develop a common approach to assess and fix stream crossings across the Foothills Model Forest's 2.75 million hectare land base. By working together, and using Foothills Model Forest science, tools and infrastructure, all crossing owners will adopt consistent standards to assess the quality of stream crossings to determine which ones will get fixed – the underpinnings of good watershed management.

Agroforestry Best Management Practices (BMP) manual
In 2004-05 the Eastern Ontario Model Forest expanded its outreach and connection with the agricultural community. In partnership with the Ontario Ministry of Agriculture and Food, the Ontario Soil and Crop Institute, the Ontario Federation of Agriculture, the University of Guelph, Agriculture Canada (Prairie Farm Rehabilitation Association) as well as others, the Model Forest put together a team of seven contributing authors to develop the Agroforestry Best Management Practices manual (the sixteenth title in the series of Best Management Practices manuals). This manual focuses on agroforestry opportunities for rural Ontario and seeks to help landowners develop better ways of managing trees on the agricultural landscape.

Manitoba Model Forest Inc.
The Manitoba Model Forest tests its new and innovative techniques on over one million hectares of boreal and mixed wood forests, but it does not supersede the rights of the landowner. Most landowners and industries within this region voluntarily participate in many of the projects, research and activities of the Model Forest. The activities of this non-profit organization are directed by a Board representing over 25 diverse forest

interests. It brings together environmentalists, industry, all levels of government, local communities, economic development groups, unions, universities, Aboriginal organizations and First Nations communities. Together they share knowledge and resources in their mutual quest for a sustainable future for Manitoba's boreal forest.

5. Involvement of Aboriginal People / Incorporation of Traditional Knowledge

Since the beginning of the Canadian Model Forest Network, many successful collaborations have developed between Aboriginal and non-Aboriginal partners. Aboriginal partners bring a unique understanding of forest ecosystems – one developed over centuries of close contact with the land and through systems for transferring knowledge between generations. With knowledge of both traditional and contemporary forest experiences, Aboriginal peoples offer valuable contributions to modern sustainable forest management practices.

In October 1996, the Canada's Minister of Natural Resources, announced that her department would create the first Aboriginal Model Forest. Natural Resources Canada, which had supported the initial ten Model Forests in 1992, now wanted to create an opportunity to demonstrate Aboriginal "traditional use" approaches to forests. The idea was to give Aboriginal people a lead role in partnership with other interest groups in the development of sustainable forest management.

The ideal candidate was an Aboriginal community with demonstrated experience in forestry management. After an open proposal process, Waswanipi was selected. The community was in the unique position of having its own forestry corporation, the Waswanipi Mishtuk Corp., and the newly constructed Nabakatuk sawmill.

Wasanipi Model Forest

The creation of the Wasanipi Aboriginal Model Forest in 1997 allowed First Nations to take a lead role in a Model Forest partnership. The community of Waswanipi has long occupied a strategic place at the crossroads of Aboriginal and non-Aboriginal societies. Located 600 kilometres north of Montreal, Waswanipi is the southern-most of the nine Cree communities in Quebec. Its geographical location along key river trading routes has put it on the frontlines of intercultural contact and change.

The area was home to the country's longest-used Hudson's Bay Company trading post, which opened in 1819. The post hired Crees for canoe brigades in the summer and ushered in an era of commercial fur trading. The Waswanipi Crees, who call themselves Eenouch ("The People"), acted as fur-trading middlemen for the Innu, Atikamekw and Algonquin Nations and had contacts with the Iroquois far to the south.

Waswanipi's strategic location has left its people with a long tradition of brokering between First Nations and non-Natives.

The contacts with other cultures also brought change. At the turn of the century, the Waswanipi people survived in their homeland, which they call Eenou Istchee ("People's Land"), mainly by trapping beaver and otter, hunting moose and fishing. But their way of life was disrupted by fluctuating fur prices, vast forest fires, poor economic conditions in the south and an imbalance in animal populations.

Waswanipi later became the first Cree community to be impacted by forestry and mining in the late 1930s and 1940s. Resource development has mainly been controlled by non-Crees, but it is the Crees who have had to live with the permanent legacy of these activities. Today, the opportunities do exist for some Cree workers to become involved in forestry, but much more work remains to be done to ensure that Crees have an actual say in what happens in their traditional lands.

The Model Forest is one of the first opportunities the people of Waswanipi have had to provide leardership and decision-making authority related to land-management questions. Combining scientific research and Cree traditional knowledge, the Model Forest looks for innovative ways to give Crees more involvement in the decision-making process. Core funding and support for this project are made available through the Canadian Forest Service Branch's Model Forest Program within Natural Resources Canada.

By using local resources and encouraging community participation, the Model Forest hopes to inspire future generations to pursue careers in forest management and for the youth to believe there is a future in sustainable forest management. At the same time, the Waswanipi Cree Model Forest is an applied research organization, not an advocacy group or government agency. It strives toward real-world solutions in a partnership with science. It has developed strong linkages with other entities like the Waswanipi Cree First Nation, Cree Trappers' Association, academic researchers and the forest industry.

Manitoba Model Forest

To increase the development and adoption of innovative Forest Stewardship Practices that incorporates the local and traditional ecological knowledge of communities, the Manitoba Model Forest is working with First Nations communities to develop Community Land Use plans. This project expands upon the work conducted in Phase II of the Manitoba Model Forest's mandate. In Phase II, a Community Land Use plan was prepared that dealt with short term and long term forest stewardship planning for First Nations community of Hollow Water First Nation. Initiated as a pilot project in 2002, the community of Hollow Water First Nation is the first to participate in the development of a community-based plan for a First Nation community in the region. As a first step, the project developed a community-based joint planning protocol and implementation system for forest stewardship planning. This involved developing a system that integrated social and environmental values important to the community.

The Community Based Joint Planning project has now established two joint planning Community Based Joint Planning committees, one in Hollow Water First Nation and the second in Black River First Nation. They are called the traditional area advisory committee, or TAAC. These committees bring the community together creating awareness of issues, and assists to build partnerships within the community. It is anticipated that the same kind of committees will be formed in both the Sagkeeng and Brokenhead First Nations in the near future.

Community based planning leads to a better understanding of the community needs and values. This in turn leads to a stronger and more comprehensive forest stewardship plan which incorporates the needs of the community. By involving elders, women, youth, Forest operators, and representatives from Industry and all levels of government, a comprehensive plan that endeavours to encompass all the values can be developed.

6. Building Public Awareness and Understanding

Most Model Forests are committed to increasing public awareness and understanding around sustainable forestry management. In line with the Model Forest principles, most of these public education initiatives are a result of partnership efforts.

Polar Bear Habitat Educational Display

The Polar Bear Habitat & Heritage Village (a polar bear rehabilitation facility in Cochrane, Ontario) and the Lake Abitibi Model Forest created a Climate Change Display which tell the story of the earth's interconnections, including information about Polar Bears and how climate change is a detriment to their survival. This project was possible because of a joint effort of a number of organizations from the town of Cochrane. The concept and design was a joint effort by the Lake Abitibi Model Forest and The Polar Bear Habitat. Volunteers from the Model Forest researched the content and created the display. The wood for the panels were provided by Norbord Inc. Cochrane. The display was also produced in town by a local company. The display is trilingual, with literal translations in French and English, and conceptual depiction in Cree.

Eastern Ontario Model Forest

An annual event, the Eastern Ontario Model Forest hosted the Kemptville Winter Woodlot Conference, in 2005. The theme focused on caring for eastern white cedar. More than 250 participants were on hand to learn about topics ranging from establishment and maintenance of cedar to wildlife and non-timber values.

7. Reflection and Comment

While the Canadian Model Forest Network is not directly applicable to the work and processes of the Nuclear Waste Management Office, it still provides some useful lessons about creating multi-disciplinary partnerships with individuals and organizations that

represent divergent and often competing interests in one resource, namely forests. More could be learned about these partnerships by speaking directly with partners and Board members from some sample Model Forests. However, drawing on the information that was accessible it is clear that:

- **Multi-interest Partners can work cooperatively together** – The model forests bring together individuals and organizations with a variety of forest values. Model forests provide these partners a unique forum to gain a greater understanding of conflicting opinions; share their knowledge; and combine their expertise and resources to develop innovative, region-specific approaches to sustainable forest management.
- **Results are locally based** – One of the limitations of the Model Forests is that the results of initiatives undertaken by the partners are limited to local/regional successes. To expand the breadth of impact and success, the model forests would have to extend across provincial or provincial–territorial borders and address multiple uses. Partner jurisdictions could work together to promote a landscape-level approach to comprehensive land use planning and management (NRTEE, 2005).
- **Partnerships are Fluid** – Evidence indicates a turnover of partnerships in model forests from one year to the next. Although an explanation for this turnover is not readily available, it is important to note that the format of the model forest network does not provide a consistent partnership base year after year.

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Case Study

Ekati and Diavik Diamond Mines – Traditional Ecological Knowledge in Planning and Operations

1. Purpose

This is one in a series of case studies prepared for the Nuclear Waste Management Organization (NWMO) as background information on processes and approaches to engage the public and to integrate traditional ecological knowledge (TEK) into decision-making. The purpose of this case study on the Ekati and Diavik diamond mine developments[1] in the Slave Geological Province of the Northwest Territories (NWT) is to understand the key milestones in the process to establish these mines, the sequencing of these milestones, the approaches taken to engage various communities of interest, including Aboriginal peoples, and issues that arose during the process.

2. Background

Figure 1: Background Information about the Ekati and Diavik mines

Ekati Mine development	Diavik Mine development
– Located 300 km Northeast of Yellowknife – Canada's first diamond mine – Joint venture between BHP Billiton Diamonds Inc., Charles Fipke and Stewart Blusson geologists (who first discovered the potential diamond producing site) – Began operations in 1998 and has an estimated mine life of 17 years. – Produces approximately 4 to 5 million carats of rough diamonds per year. – Approximately 1600 full time employees, 600 of aboriginal descent. – Employment target of 62% northerners including 31% for northern Aboriginals. – Capital cost appr. C$700m and annual mine purchasing C$420m (85% purchased from northern businesses)	– Very close neighbour of Ekati mine – Owned by Diavik Diamond Mines Inc. (a subsidiary of Rio Tinto) and Aber Diamond Ltd. – Began operations in 2003 and has an estimated mine life of 16-22 years. – Produces approximately 7.5 to 8 million carats of rough diamonds per year – By the end of 2004, Diavik had an average workforce of 720 with 38% of aboriginal descent. – Employment target of 40% northerners and 40% northern Aboriginals. – Project capital cost appr. C$1.3 billion and annual mine purchasing greater than C$225 million (70% purchased from northern businesses)

[1] Not included in this case study is a third mine in the region that is managed by De Beers Canada which began construction and operation of an underground diamond mine at Snap Lake in May, 2004.

Aboriginal relations and environmental performance are an important part of the Canadian diamond industries marketing position. Globally, the diamond mining industry has gained a poor reputation from social and environmental problems including “conflict” diamonds, poor labour practices, and poor environmental performance. In this context, the Canadian diamond industry has marketed its diamonds to global customers as “clean” and environmentally friendly. To support this claim, the industry has made a conscious effort to operate in an environmentally and socially conscious way. In particular, it has made an effort to reach out to Aboriginal communities to engage them to mitigate the environmental and social impacts of the mine on their communities.

These projects have raised the standard for incorporating TK into the management of industrial developments and may have created expectations with Aboriginal communities throughout Canada about future projects.

3. The approval process

The environmental assessment of the two mines was done during a period of transition when the Government of Canada changed its environmental assessment laws. This meant that the Ekati mine was subject to the old federal Environmental Assessment and Review Process (EARP) while Diavik was reviewed under the new Canadian Environmental Assessment Act (CEAA).

Aboriginal Traditional Knowledge (TK) was integrated in both environmental assessments. However each mine used a different approach, largely defined by the applicable EA process.

In the case of Ekati, a four-person panel, appointed by the Government of Canada, managed the public review and submitted recommendations to the government. The panel issued Environmental Impact Statement Guidelines with the unprecedented provision that the proponent make all reasonable efforts to give Aboriginal Traditional Knowledge (TK) “full and equal” consideration with Western Scientific Knowledge in the Environmental Impact Statement. This requirement obliged the proponent (BHP Diamonds (BHPB)) to incorporate TK into the gathering of baseline information, impact prediction, and mitigation and monitoring plans. With tight internal deadlines, and little or no prior collection of TK in the region, the aboriginal knowledge in the proponent’s EIS was limited to an overview of the traditional knowledge literature, interviews with some of BHPB's own aboriginal employees, and a summary of the preliminary issues identified by aboriginal organizations.

In the public hearings held in January and February 1996 in 9 NWT communities over 18 days, many aboriginal communities commented that the EA did not incorporate TK and that the time between the release of the draft EA and the public meetings (5 months) had been too short.

The federal cabinet nevertheless approved the panel's recommendation to proceed with the project, adding the provision that the government would negotiate a binding environmental agreement with BHPB that would cover a number of issues including the incorporation of TK into mitigation and monitoring measures.

In contrast, the EA Guidelines released in August 1998 for the Diavik mine, included a provision to "consider where appropriate" traditional knowledge in assessing the impacts of the project. The proponent, based on the guidance and advice from the Government of Canada, managed the public engagement process as part of completing the Environmental Assessment report. Aboriginal groups were involved in the steering committee created during the Comprehensive Study Process, and were also involved as members of the Mackenzie Valley Environmental Impact Review Board[2].

In response to concerns raised through public consultation over the period of the comprehensive study, the government decision approving Diavik included a number of commitments, two of which are relevant here:

- Create a regional cumulative effects management framework which must consider both scientific and TK; and
- Establish a joint monitoring mechanism (aboriginal and federal government) to ensure that monitoring of the Diavik operation occurs, with the involvement of Aboriginal peoples and in conjunction with the regional cumulative effects management framework.

4. Operations/Monitoring

This section presents:

- the management tools and structures that were created to manage the environmental and socio-economic impacts of the mines; and
- what TK initiatives and activities have occurred that are related to the management of the environmental and socio-economic of the mines.

Management tools

For the Ekati mine there were 4 main management tools including the Environmental Agreement, the Independent Environmental Monitoring Agency (the Agency), the Socio-Economic Agreement and the Impact and Benefits Agreements. Likewise, the Diavik mine has four similar provisions including the Environmental Agreement, the Environmental Advisory Review Board (the Board), the Socio-Economic Agreement and Participation

[2] Evidence about the degree of TK considered in assessing the impacts of the project is limited. Rather, details about opportunities for aboriginal involvement in the process are more readily available

Agreements. The board and the Agency have administrative differences while performing the same oversight function of the environmental management of the mines. The Impact and Benefits Agreements, and Participation Agreements seem to be quite similar although in both cases they are confidential with no specific details shared with the public.

Ekati

Environmental agreement

In its final decision on the Ekati mine, the government added a provision on the negotiation of an environmental agreement between itself, GNWT and BHPB. The environmental agreement was a legal means to ensure that the EA Panel's 29 recommendations were followed.

In the agreement, four sections set the terms and activities for incorporating TK in the management of the mine. These are:

1. Establishment of the Independent Environmental Monitoring Agency;
2. Provision that available TK must be incorporated into the Operating Environmental Management Plan (more on this in "TK initiatives and activities" section below).
3. Provision that available TK must be incorporated into archaeological efforts; and
4. A specific TK section that ordered BHPB to support Aboriginal communities to complete the completion of their TK studies (more on these TK Studies in "TK initiatives and activities" section below).

The Independent Environmental Monitoring Agency

As part of the commitments made in the Environmental Agreement, the agency was given a mandate in six main areas:

- reviewing and commenting on the design of monitoring and management plans and the results of these activities;
- monitoring and encouraging the integration of traditional knowledge of the nearby Aboriginal Peoples into the mine's environmental plans;
- acting as an intervenor in regulatory processes directly related to environmental matters involving the Ekati Diamond mine™ and its cumulative effects;

Background Information on the Agency

- funded by BHPB with an annual budget of appr. $600,000 in 2005
- 7 board members selected by each of the following to represent them:
  - Kitikmeot Inuit Association
  - North Slave Metis Alliance
  - Dogrib Treaty 11 Council
  - Akaitcho Treaty 8
  - BHPB Diamonds
  - Government of Canada
  - Government of the Northwest Territories
- 2 staff members

- bringing concerns of the Aboriginal Peoples and the general public to BHP Billiton and government;
- keeping Aboriginal Peoples and the public informed about Agency activities and findings; and
- writing an Annual Report with recommendations that require the response of BHP Billiton and/or government.

The Agency consists of seven members who are the five aboriginal peoples in the region, the GNWT and the federal government. The board which consists of appointments from each of seven members "who do not represent any particular group, but work together in the best interests of the people affected by the Ekati Diamond Mine."[3] The board represents and reports to the people of the region and any other interested parties through its annual reports, letters and other tools on the activities of the mine pertaining to the environmental agreement. The board makes advisory recommendations to BHPB and/or the government that they are obligated to respond to, but not necessarily to take action on.

The agency has been very active in supporting, monitoring and encouraging the integration of traditional knowledge into BHPB's operations and management. In its annual reports and communication with BHPB, it has continually outlined potential areas and means to improve the incorporation of TK based on its own observations and feedback from aboriginal communities. The Agency has been very critical of BHP's documentation of what concerns, suggestions and TK results it had received from aboriginal peoples, and how this information is being incorporated into management activities.

The tone of the Agency's communication with Ekati and the disputes over budget approval between Ekati and the Agency signal that the relationship between the two may be strained. The Agency's language in its Annual reports shows signs of frustration and one can surmise that this may be due the perceived lack of action by Ekati on recommendations the Agency has been making in its annual reports.

Socio-Economic Agreement

In 1996, the GNWT negotiated a socio-economic agreement with BHP Billiton that outlined the monitoring of socio-economic effects using 14 indicators for health and well-being[4] in order to assess the project's impact on the region. These include such things as crime levels, numbers of injuries, suicides, complaints of family violence, housing indicators, income levels, educational outcomes, employment levels and social assistance cases. The GNWT is responsible for the creation and operation of this industrial monitoring program including the publication of an annual report.

[3] This is directly quoted from the agency's website, but we can not verify how the board works in practice.

[4] The GNWT now meets the socio-economic reporting requirements for all diamond mines in the NWT through one annual report that includes the BHP Billiton, Diavik and De Beers mines using 13 indicators: *individual well-being, family and community well being, housing, crime, income, employment, income support, education, Business, traditional activities, languages, net effects on governments, and sustainable development*.

Impact and Benefits Agreements

Between 1996 and 1998, as a precondition to federal approval for the mine, a series of voluntary and confidential agreements were negotiated between BHP Billiton, the Government of the Northwest Territories, and each of the aboriginal communities in the area (the Dogrib Nations of Treaty 11, Métis, Inuit and Akaitcho Treaty 8 Nations.) These agreements established the terms under which BHP Billiton could operate with respect to aboriginal communities including the employment and training of Aboriginal people, profit-sharing, compensation, environmental regulation and planning, and consultation with Aboriginal communities on any activities which risk disturbance to land used for burial grounds or other traditional purposes. In addition, BHP Billiton must also submit an annual report to the signing nations including information regarding the company's environmental monitoring programs. There is little publicly available information on the agreements, as they remain confidential.

Diavik

Environmental agreement

The Diavik environmental agreement was signed between Diavik, the federal government, GNWT and the five First Nations in the region (the Dogrib Treaty 11 Council, the Lutsel K'e Dene First Nation, the Yellowknives Dene First Nation, the North Slave Métis Alliance and the Kitikmeot Inuit Association.) This is significant as there were no First Nation signatories in the Ekati process.

Again like the Ekati agreement, this agreement included four provisions that set the terms and activities for including TK in the management of the mine:

- Diavik to fund or undertake traditional knowledge studies that, where applicable, will be considered fully along with scientific knowledge in developing, reviewing and amending the Environmental Management Plans.
- Environmental monitoring programs shall consider TK;
- Creation of regional cumulative effects assessment and management framework that is to consider both scientific and traditional knowledge.
- Any archaeological work conducted should incorporate TK.

Environmental Advisory Review Board

The environmental agreement stipulated the formation of an environmental advisory review board to:

- Assist in achieving an integrated and co-operative approach to environmental management of the Diavik Diamonds Mine;
- Serve as a public watchdog of the regulatory process and the implementation of the Environmental Agreement;
- Review plans, programs and reports bearing on environmental issues related to the Project and make recommendations to Diavik, the Minister of DIAND, or other regulatory agencies;
- Make recommendations on matters related to wildlife harvesting, participation of Aboriginal peoples and affected communities in training and monitoring programs, traditional knowledge and other studies;
- Maintain a public library of environmental data, studies and reports relevant to the project; and
- Participate as an intervener, when appropriate, in the regulatory or dispute resolution processes.

Background Information on the Board

- funded by Diavik with an annual budget of appr. $745,000 in 2005
- 7 board members with one appointment for:
  - Kitikmeot Inuit Association
  - North Slave Metis Alliance
  - Yellowknives Dene First Nation
  - Tlicho Government
  - Lutsel K'e Dene First Nation
  - Government of Canada
  - Government of Nunavit
  - Government of the Northwest Territories
- 2 staff members

The Board appears to have a less confrontational relationship with Diavik than Ekati has with the Independent Environmental Monitoring Agency. For TK initiatives, it is noticeable that the Board and Diavik have been much more active in supporting activities in this area (see Section 4.2 below)[5].

Socio-economic agreement

This agreement was signed in October 1999 between the Diavik, GNWT and the five First Nations in the region (the Dogrib Treaty 11 Council, the Lutsel K'e Dene First Nation, the Yellowknives Dene First Nation, the North Slave Métis Alliance and the Kitikmeot Inuit Association.) The Agreement set the requirements for training, employment and business opportunities of local residents, and created a Communities Advisory Board representing the Neighbouring Aboriginal Communities, the Government of Northwest Territories and Diavik.

[5] Unfortunately, there is no solid evidence or discussion as to why the Board and Diavik seem to have been more successful

The role of the 13 members (2 from GNWT, 2 from Diavik and 9 from the First Nations) of the Communities advisory board is to provide monitor, review, and make recommendations on Diavik's fulfilment of commitments under this agreement, and provide comments, recommendations and advice for achieving the purposes and commitments of the Agreement.

The results from the monitoring of this agreement are to be included in the GNWT annual report on the socio-economic impacts of the diamond mines in the NWT (the Ekati, Diavik and now De Beers mines are all reported on in one annual report published by GNWT).

Participation Agreements

In separately signed agreements between each of the aboriginal groups in the region, Diavik commits to provide employment and business opportunities for each First Nation including the creation of a joint implementation committee to outline responsibilities, tasks and timelines for reaching project-related employment and business development targets for each aboriginal group. Each aboriginal group also commits to maintaining and making available up to date human resource directories and business registries for their membership.

TK initiatives and activities

This section focuses on the TK initiatives and activities that are related to the management of the environmental and socio-economic impacts for both mines.

Ekati

The Ekati mine's first efforts to incorporate TK into its planning and management occurred as part of the work done for the project's Environmental Impact Statement (EIS) in June, 1995. BHPB's approach in the tight timeframe of the EA process, was to use a questionnaire designed by an anthropologist working for BHPB to survey BHPB's aboriginal employees, and First Nation communities to identify issues of concern, so that they could address them, and by including aboriginal people in the collection of data for the EIS. Based on criticism of phase 1 by aboriginal people that their input was very limited and rushed, the limited TK that was included in the EIS, and the challenges BHPB's acknowledged facing in its EIS, it is clear that there were issues with the approach and the information gathered.

In response to these challenges and the need to find meaningful ways to incorporate TK, during the final approval stages of the environmental assessment Ekati, the federal government and GNWT, and First Nations communities negotiated an approach for incorporating TK that would be implemented after the mine was approved. This approach would focus on establishing and designing TK studies in conjunction with each First Nation in the region with the results from those studies being incorporated into the mine development plans and environmental monitoring programs. To formalize this process, included in the environmental agreement was the commitment to support additional TK studies done by each of the aboriginal groups; to incorporate TK into mine development plans and

environmental monitoring programs; and to create the Independent Environmental Monitoring Agency to review progress on the environmental agreement commitments through.

Ultimately, the additional TK studies had mixed success as not all aboriginal groups ended up submitting TK studies. The Dogrib, and Yellowknives First Nations submitted TK studies, while BHPB supported at one time or another TK GIS mapping work with the the Lutsel k'e Dene First Nation, North Slave Metis, and Kitikmeot Inuit. The Agency's 1998 Progress report on Aboriginal and Community Issues highlighted some of the challenges that affected the studies as:

- Regulatory and company imposed deadlines restricted the design or conduct of TK studies (specific reason cited by Lutsel K'e for not completing phase 2 report);
- The lack of written guidelines from BHP for developing a TK proposal that meets BHP's requirements; and
- Limited participation of Aboriginal groups in the collection of aquatic or wildlife baseline information since the EARP hearings.

Besides this work, BHPB has been a part of other TK initiatives in the region. BHPB along with Diavik and various governments have supported regional TK projects like the West Kitikmeot Slave Study Society, the Naonaiyaotit traditional knowledge study and the TK regional workshop held in 2003.

There seems to be some challenges for BHPB and its TK activities:

- Most of the aboriginal groups have not agreed to participate in the construction and operations phase environmental management plan meetings;
- Independent Environmental Monitoring Agency annual reports have documented aboriginal groups' increasing frustration with the lack of action and feedback on the comments they provided to BHPB; and
- The Agency has commented that there was no documentation or evidence of how the information that was gathered in completed TK studies, was actually incorporated into the environmental management of the mine[6].

The West Kitikmeot Slave Study Society

http://www.wkss.nt.ca/index.htm

- A partnership of aboriginal and environmental organizations, government and industry that wish to make sure the effects of development on the environment, wildlife and people of the WKSS area are minimal and that northern people get the maximum benefits.
- in 1996 (just as the EA panel began reviewing the Ekati proposal), developed an initial five-year research program called the West Kitikmeot / Slave Study (WKSS) to provide an information base necessary to examine the long and short term effects of development in the WKSS area.

[6] It is unclear whether the First Nations and the Agency's issues with TK and management lies in BHPB's lack of transparency or in an actual lack of incorporation of TK into its environmental management

Diavik

Incorporation of TK started during the environmental assessment of the project. There was more TK available for EA as work was being completed as part of the West Kitikmeot Slave Study Society and some studies that had been funded by Diavik prior to official start of the EA process. Diavik used information from those studies plus comments made during meetings and visits to the proposed mine site with First Nation representatives and with First Nation elders. While there was some criticism by the Lutsel K'e Dene that comments made by their elders in meetings and site visits hosted by Diavik should not be considered TK, the final comprehensive review found that TK had been effectively incorporated into the EA.

During the operation phase, there is evidence of aboriginal groups involvement in the design of studies and monitoring activities, participation in the collection of data and that TK input is being incorporated into decision-making. The aboriginal involvement was in the various TK initiatives that the Environmental Advisory Review Board supported including TK camps (fish palatability studies and water quality monitoring workshops), the TK panel (Caribou migration monitoring and mine site fence studies), and capacity funding for First Nation communities.

The Board established the terms of reference (ToR) for a Traditional Knowledge Panel in July 2003 based on a recommendation made at the 2003 Traditional Knowledge Monitoring Workshop. The ToR describe the purpose of the TK panel as providing the Board assistance in the application and consideration of traditional knowledge, and through a coordination role, ensure that TK is appropriately and meaningfully incorporated into the planning and management of the Diavik Diamond Mine. The TK panel first met in 2004 and has since provided advice on how to implement Fisheries and Oceans' No Net Loss policy for the management of fish habitat, and advice on implementing and monitoring the fencing requirements at the Diavik mine. In the case of monitoring caribou migration, Diavik changed its environmental management plan and adopted the recommendation of the panel to increase the monitoring regime during the caribou migration[7].

The Board organized three TK camps on the shores of Lac de Gras to conduct studies on fish palatability, water quality and monitor caribou migration. For the fish palatability studies, aboriginal representatives were part of the team that designed the study and participated in the sampling and recording of the results. For the water monitoring studies, sites were selected that were not part of the existing Diavik aquatic effects monitoring program, and sample collection was conducted by aboriginal representatives. The results from this study as well as future studies conducted by aboriginal representatives will be added to aquatic effects monitoring program results.

[7] The main workshop recommendation was for a TK panel to advise both the Agency and the Board on activities at both mines to bring a regional and cumulative impact focus to work in the area. There is no explanation as to why the recommended regional TK panel or a TK panel for the Agency never materialized.

The capacity funding program provides up to $30,000/year to each aboriginal group to support aboriginal involvement and input to Diavik and the Board. Some of the activities that the capacity funding has supported include:

- the Yellowknives Dene First Nation's efforts to obtain input on community values and concerns that should be brought forward to the Board and also retain assistance to review Diavik plans and monitoring information within their community;
- the Kitikmeot Inuit Association Water Quality Monitoring Program including developing a work plan for the project, and purchasing of required equipment for basic water quality monitoring; and
- the Lutsel K'e Dene First Nations efforts to bring the youth and elders of Lutsel K'e together at traditional activities like summer fish camps to share traditional knowledge, culture and language.

The Board has been active in engaging aboriginal communities in the design of its five-year strategic plan. It has so far visited the Dettah and N'dilo, Kugluktuk and Lutsel K'e communities and is planning visits to the Tlicho and North Slave Metis communities.

The board has largely focused its public engagement work on aboriginal communities near the mine. Any broader public outreach has come through its AGMs and the library it maintains in its Yellowknife office that has all the reports from Diavik, from EARB, and all other relevant information in either hard copy or digital format.

5. Reflections and Comment

What is most striking about this case study is that two neighbouring mines, developing the same mineral, built one right after the other, and involving the same stakeholders appear to have had quite different experiences in establishing relationships with the community and incorporating TK in decision-making. Indeed, Diavik raises greater environmental problems than Ekati yet appears to have invited fewer criticisms from stakeholders. It is difficult to explain what accounts for this difference on the basis of a literature review alone.

For both of these mines there was no prior existing baseline of traditional knowledge nor accepted standards or methods for traditional knowledge research; little TK was collected and used as part of the EAs (because there was insufficient time to conduct significant TK research) and the proponents were not obligated to conduct large-scale TK studies before submitting their EAs.

Part of the explanation for this difference may include Diavik benefiting from being the second mine in the region. This meant that more information was available from TK studies already started; and that organizations and aboriginal communities were more familiar with processes for engagement and brought more value to the table when they participated. Secondly, Diavik was very proactive in its communication with aboriginal communities. It started public meetings with potentially affected communities in 1993, four years before EA processes formally began. While there is little published information on these public

meetings[8], they may have helped create a greater climate of trust between the company and its main stakeholders than Ekati managed to do.

6. Key Learnings

There are several learnings about how to create an effective process for including TK in environmental management systems that are relevant to the implementation of several of the NWMO's commitments related integrating Aboriginal Traditional Knowledge into the collaborative design of a siting process, as well as acknowledging the organization's special responsibility owed to potentially affected Aboriginal peoples through future engagement activities:

Creation of the appropriate support, design and implementation of TK studies before the EA approval phase

As these mines illustrate, effectively incorporating TK into the EA phase is difficult due to time restrictions and the lack of TK in a form that is readily accessible. The processes for supporting, designing and implementing TK studies needs to be put in place before the EA phase, so the knowledge is accessible for the approval process.

Adaptation of communication/research methods to aboriginal culture and activities

Diavik and the EARB used traditional hunting camps as a model for the TK camp. This cultural sensitivity supported trust and communication between the parties, stronger research and information gathering, and ultimately knowledge that could be implemented into action.

Create effective means to report on incorporation of TK into decision-making process and actions

The TK process needs to be an information sharing process that involves active communication between all parties. These two mines have contrasting styles that is reflected in the Aboriginal people's expressed satisfaction in the TK processes – BHPB's lack of communication became a constant source of criticism, frustration and ultimately, cynicism; and conversely, Diavik's action based on TK was lauded.

[8] No information was found on the number of meetings, locations or participants, just a reference to the meetings starting in 1993 in an Environment Canada backgrounder on public consultation for the EA.

7. Timeline and major milestones

Ekati	
1990	• Summer: A joint venture is formed between BHP Minerals and Dia Met Minerals Ltd. for the NWT Diamonds Project (renamed the EKATI Diamond Mine in 1997).
1991	• Fall/Autumn: The first diamonds in the NWT are discovered by BHP and Dia Met at Point Lake. This discovery sparks the NWT "diamond rush" - the largest staking rush in North American history.
1995	• Summer: BHP submits its Environmental Impact Statement (EIS) on the EKATI Diamond Mine to the federally appointed Environmental Assessment Review Panel (EARP). • March & April: The EARP holds scoping meetings in 10 NWT communities to identify issues of concern.
1996	• January & February: The EARP holds public hearings over 18 days in 9 NWT communities. • June: The EARP submits its report to the federal government. The report concludes the "environmental effects of the project are largely predictable and mitigable". The Panel recommends that the "Government of Canada approve the Diamonds Project", subject to 29 recommendations. • October: A voluntary and confidential Impact and Benefits Agreement (IBA) is signed with the Dogrib Treaty 11 Council. A Socio-Economic Agreement is signed with the Government of the NWT (GNWT). • November: Minister of the Department of Indian Affairs and Northern Development (DIAND), and the Premier of the NWT announce final Cabinet approval and full support from government. • Implementation protocol signed between BHP, DIAND, the GNWT and by four Aboriginal groups (Dogrib Treaty 11 Council, Akaitcho Treaty 8, North Slave Metis Alliance and the Inuit of Kugluktuk and the Kitikmeot Inuit Association). • A voluntary and confidential IBA is signed with Akaitcho Treaty 8.
1997	• January: Environmental agreement signed between BHP, DIAND and GNWT including the formation of the Independent Environmental Monitoring Agency to monitor implementation of the EARP's 29 recommendations.
1998	• July: A voluntary and confidential IBA is signed with the North Slave Metis Alliance • September: Diamond production begins • December: A voluntary and confidential IBA is signed with the Inuit of Kugluktuk and the Kitikmeot Inuit Association.

2001	• May: BHP Limited merges with Billiton Plc to become BHP Billiton. • June: BHP Billiton purchases Dia Met bringing BHP Billiton's ownership of the EKATI Diamond Mine to 80 per cent.
2015	• Projected end of diamond production (17 years of production)
Diavik	
1992	• March: Exploration begins on Aber mineral claims
1992	• June: Aber Resources forms joint venture with Rio Tinto company, Kennecott Canada Exploration • **1994 -1995** Potential diamond sites found
1996	• December: Diavik Diamond Mines Inc. is created, with head office in Yellowknife
1997	• June : Environmental baseline studies are completed • September: Pre-feasibility study is completed
1998	• March: Project Description is submitted to Federal Government triggering formal environmental assessment review under the Canadian Environmental Assessment Act • September: Environmental Assessment Report is submitted and Comprehensive Public Involvement Plan initiated
1999	• January-March: Public Consultation on Diavik's EA • June: Government Departments release draft Comprehensive Study Report for discussion • July-September: Public Consultation on Comprehensive Study Report • October: Final Comprehensive Study Report submitted • November: Federal Government approves project for permitting and licensing
2000	• December: Regulatory and investor approvals to build the mine
2003	• January: Start of diamond production
2019-25	• Projected end of diamond production (16-22 years of production)

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Appendix A: Diavik Environmental Agreement and Socio-Economic Agreement

(For copy please use enclosed CD)

Appendix B: Terms of Reference for Diavik TK panel

Case Study

Private Fuel Storage, LLC at Skull Valley Goshute Reservation, Utah

1. Background

Private Fuel Storage, LLC (PFS), a consortium of eight nuclear utilities filed a license application in June 1997 with the US Nuclear Regulatory Commission (NRC) to build and operate a commercial, centralized, away-from-reactor, high-level nuclear waste storage facility on the Skull Valley Band of Goshute Indian Reservation, Utah. The proposed facility would temporarily store 40,000 metric tons of spent nuclear fuel on aboveground, uncovered concrete pads.

In February 2006[1] the US Nuclear Regulatory Commission issued Private Fuel Storage, LLC a license for the "receipt, possession, storage, and transfer of spent fuel at the PFS facility, to be located on the Reservation of the Skull Valley Band of Goshute Indians, in Tooele County, Utah"[2]. "The license will not authorize PFS to begin immediate construction of the facility. Rather, it conditions construction authorization on the company first arranging for adequate funding. In addition, PFS must obtain necessary approvals from other agencies, including Bureau of Land Management (BLM), the Bureau of Indian Affairs (BIA), and the Surface Transportation Board"[3].

2. The Site Selection Process

Site selection

Very little information is readily available about the site selection process followed by PFS in choosing the Skull Valley Band of Goshutes Reservation. Mescalero Apache reservation in New Mexico was one of two American Native American nations working with private consortium of utilities to build a storage facility[4]. However, when the opportunity with this reservation failed in 1996[5], PFS immediately began negotiations with the Skull Valley Goshutes[6].

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[1] Note: Refer to Appendix A for a chronological overview of events
[2] U.S. Environmental Protection Agency. "Notice of Issuance of Materials License SNM-2513 to the Private Fuel Storage Facility." Federal Register Environmental Documents February 28, 2006. Vol 71, No. 39.
[3] U.S. Nuclear Regulatory Commission. "NRC Terminates ACHP Consultation". NRC News. No 06-024. February 13, 2006. http://www.nrc.gov/reading-rm/doc-collections/news/2006/06-024.html
[4] Note that some evidence indicates the negotiations with Mescalero and Skull Valley Goshutes were with a private consortium of utilities headed by Northern States Power Company (not listed as one of the eight in PFS). Gowding and Easterling, 1998. p 236
[5] It appears that the failure was due to financial terms that could not be resolved between the utility consortium and the Mescalero Apache reservation. Gowding and Easterling, 1998. p 236
[6] "Skull Valley Goshutes/PFS Timeline." Public Citizen Date unknown. http://www.citizen.org/documents/goshutetimeline.pdf

In terms of selection criteria, the PFS website states that a suitable site for a temporary storage facility must have a willing host and must meet requirements of the federal regulations to ensure safety for the public and the environment[7]. Skull Valley Goshute Reservation was selected for this temporary storage site.

Skull Valley's "willingness" to be a host of this spent nuclear fuel cannot be properly substantiated. On the one hand, the PFS website indicates that "by signing resolutions, two thirds of the voting members of the Tribe authorized Tribal executives to sign a lease with PFS and begin the project". However, other evidence indicates that while a lease may have been signed by three members of the Tribe's Executive Committee, the PFS lease has never been seen, voted on or approved by the Tribe's General Council[8] (refer to later sections of this case study and related citations for further information).

Transportation

Unlike federally regulated shipments of spent nuclear fuel, private shippers such as PFS are not obligated to meet the same Department of Transportation regulatory requirements (around emergency response, dedicated service trains, etc.). Originally, PFS planned to transport up to four casks of high-level nuclear waste per week by rail from across the country to Rowley Junction, Tooele County. From there, PFS would have to transport the waste to the Skull Valley location. PFS is now looking at hauling the waste by truck from the railroad to the storage site.

While the State does not have jurisdictional power over the Skull Valley reservation land, it has used jurisdictional legal tactics to impede the transportation of the spent nuclear fuel to the proposed facility. For instance, the 1998 Utah state legislature passed a nuclear waste storage opposition resolution and transferred jurisdiction of the only road leading to the Skull Valley Reservation, from Tooele County to the State of Utah. The State also has jurisdiction over other dirt roads in Skull Valley. Construction of a railspur across these roads requires State approval.

3. Public Engagement / Consultation Process

Stakeholders, experts and other communities of interest engaged in the process and the range of their involvement are illustrated below[9].

[7] http://www.privatefuelstorage.com/project/whyutah.html
[8] "Skull Valley Goshutes/PFS Timeline." Public Citizen Date unknown. http://www.citizen.org/documents/goshutetimeline.pdf
[9] Note: No specific details were available on methods used to identify stakeholders. This list was created by compiling key stakeholders that were identified during research.

Stakeholder / Expert	Extent of Involvement
PROPONENTS	
Private Fuel Storage, LLC	PFS members include: Xcel Energy; Genoa Fuel Tech; American Electric Power; Southern California Edison; Southern Nuclear Company; First Energy; Entergy; Florida Power and Light. Each of these companies owns nuclear power plants. Each is exploring various options, including the PFS centralized facility, for storing spent fuel until the federal government has a permanent repository ready. Utilities that send spent fuel to the PFS facility, including those that are equity members of the consortium, will retain ownership of their own spent fuel while it is stored at the facility. Each fuel owner will be liable for fees to cover the costs of normal operations, any problems that could occur, and eventual decommissioning of the facility.
Skull Valley Tribe – proponents	The Tribe's Executive Committee (led by the disputed Tribal Chairman) conducted the negotiations with PFS and signed the lease.
Scientists for Secure Waste Storage (SSWS)	Scientists for Secure Waste Storage ("SSWS") was formed in January 1998 to support the Skull Valley Band of Goshute Indians in their desire to allow their reservation to be used for the temporary storage of high level nuclear waste in the form of spent fuel rods. SSWS is represented by the Atlantic Legal Foundation, Inc., a non-profit law firm that brings scientific clarity to important national cases. The SSWS was involved in submitting contentions into the license hearing processes.
OPPONENTS	
Skull Valley Tribe opponents of the PFS facility (Ohngo Gaudadeh Devia)	Ohngo Gaudadeh Devia Awareness, a grassroots group of Skull Valley Goshute tribal members opposes the proposed PFS facility in an effort to protect tradition and the health and safety of the reservation's inhabitants. Throughout the process, OGDA has filed contentions with the Nuclear Regulatory Commission, continues to engage allied organizations in opposition, and participates in lawsuits to oppose the proposed PFS facility. Also, Sammy Blackbear a tribal member, with the support of Environmental Justice Foundation, is engaged in legal actions, which impact the validity of the PFS deal.
State of Utah	The Governor and the Legislature of the State of Utah have opposed storing high-level nuclear waste in Utah,

Stakeholder / Expert	Extent of Involvement
	and in particular the PFS proposal. The State has filed numerous contentions regarding the license application, and has filed administrative and judicial challenges regarding the PFS-Skull Valley Lease. The Utah Legislature also enacted a statute imposing State siting and permitting requirements on high-level nuclear waste transfer, storage and disposal facilities. Other legislative and jurisdiction transfers have been passed by the Legislature in an effort to prevent transfer and storage of nuclear waste in Utah[10].
Confederated Tribes of Goshute Indians	This is a separate Federally-Recognized Indian Tribe with a reservation located on the Utah/Nevada border that has some family and cultural ties to the Skull Valley Band. "They have opposed the lease and PFS facility through resolution, as an admitted party in the NRC licensing proceedings, and in administrative and judicial appeals"[11].
Salt Lake City Council	By a 7-to-1 vote in April 2006, the County Council adopted a resolution - also urged by the Salt Lake Chamber of Commerce - to oppose hauling the reactor rods over federal land.
Environmental Groups / Activists	The following three groups have informed the public about the proposed project and the potential risks. Through their websites, they encourage concerned citizens to write letters of protest to the NRC. In 2005, these groups petitioned to stop the PFS license and spoke before the National Press Club. **NIRS (Nuclear Information and Resource Service)** is the information and networking center for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues **Indigenous Environmental Network** is a network of Indigenous Peoples empowering Indigenous Nations and communities towards sustainable livelihoods, demanding environmental justice and maintaining the Sacred Fire of our traditions.

[10] Coalition Opposed to High Level Nuclear Waste, November 28, 2000, p 7
[11] ibid

Stakeholder / Expert	Extent of Involvement
	Honour the Earth - their mission is to create awareness and support for Native environmental issues and to develop needed financial and political resources for the survival of sustainable Native communities. Honor the Earth develops these resources by using music, the arts, the media, and Indigenous wisdom to ask people to recognize joint dependency on the Earth and be a voice for those not heard.
OTHER PARTIES	
Tooele County	In May 2000, Tooele County Commissioner signed an agreement with PFS to provide law enforcement services and other services, including support and promotion of the PFS' facility. Although Tooele County has no official approval role in the NRC licensing process, the County's agreement to provide law enforcement services is essential in order for PFS to be licensed and operate the facility. In return, Tooele County could receive upwards of $92 million over a 40-year period. Tooele County's payments are in part dependent on the volume of HLNW stored at the PFS facility[12].
Castle Rock Land and Livestock	This group of private ranchers in Skull Valley was originally granted standing by the NRC. However it later signed an agreement with PFS and withdrew from the proceedings[13].

Engaging with Stakeholders

The PFS website indicates that PFS used several methods for engaging stakeholders associated with the licensing process, as listed below[14].

- Community meetings - PFS representatives met with Skull Valley landowners and others interested in the proposed storage facility to answer questions and address concerns.
- Public speaking - PFS offered to provide speakers for civic or school groups interested in learning more about the storage of spent nuclear fuel or about nuclear energy in general.
- Anonymous Hotline - PFS set up a toll-free "Community Comment Line" to encourage Utah residents to call in with questions or concerns about the proposed storage facility.

[12] Coalition Opposed to High Level Nuclear Waste, November 28, 2000, p 7
[13] ibid
[14] Note: The degree to which these methods were used and/or effective is unknown

Other opportunities for engaging stakeholders occurred throughout the 9-year licensing process. For instance:

- 1997 – The NRC placed a notice in the Federal Register inviting individuals or groups affected by the project to request standing to intervene

- 1998 – Pre-hearing conference at which interveners presented the issues that they wish to argue at a later hearing

- 1998 – Scoping meeting held to hear public comment on the scope of the environmental impact statement and on the PFS proposal for a rail line through Skull Valley to the proposed site

- 2000 – Draft Environmental Impact Statement released for public comment (report evaluated PFS's compliance with all environmental laws)

- 2000 – Atomic Safety and Licensing Board held two sets of hearings at which PFS and the selected interveners presented evidence supporting their positions on the issues

- 2004 – Additional hearings held on the aircraft crash issue

- 2005 / 2006 - Public comments being accepted on a lease for a railroad right-of-way that will carry spent nuclear fuel to the site

Key Issues Raised by the Public

Opposition to this project has been intense and politically charged. Key issues that have been raised by the public (see list of opponents in earlier table) include:

- No guarantee that the storage will be temporary (due to uncertainty about the future of the Yucca Mountain proposal – timing, capacity, etc.)
- No consensus on the need for "an away-from reactor" storage facility
- Unnecessary handling and transportation of spent fuel creates the risk of accidents
- PFS has not adequately addressed its financial responsibility and liability
- NRC has a poor record of evaluating a licensee's financial liability
- No funding for local emergency response training and equipment
- Seismic issues (data is questionable / facility not designed to meet NRC seismic requirements)
- Facility is incompatible with surrounding military activities - The adjacent complex of Hill Air Force Base and the Utah Test and Training Range (UTTR) represents one of the biggest and busiest bombing ranges in the country, with thousands of over-flights annually posing the risk of accidental crashes into PFS.
- Risk of sabotage

- Other considerations (e.g. future population growth, economic impact, increase in wildfires, etc.)
- Invalidity of PFS lease document due to tribal politics

4. Involvement Of Aboriginal People And Incorporation Of Traditional Knowledge[15]

The Skull Valley Band of Goshutes is a sovereign, Federally-recognized Indian Tribe with approximately 130 members; 70 are adult voting members. Members of the Band are strongly divided on the storage of high-level nuclear waste on their Reservation, and some have challenged the lease agreement and the authority of its signatories. Of the approximately 25 members living on the Skull Valley Reservation, 15 have filed a complaint opposing the PFS storage facility.

The Lease

In 1997, three members of the Executive Committee of the Skull Valley Goshute General Council signed a lease agreement allowing PFS to build and operate a high-level nuclear waste storage facility on the Reservation. However, some evidence indicates that "the PFS lease has never been voted on and approved by the Tribe's General Council, which is supposed to make all governing decisions, especially about such important matters"[16]. "The terms of the lease, including the amount of the financial compensation to the Tribe, have also never been revealed to the General Council"[17]. Evidence also indicates that many Indigenous organizations throughout the country have opposed the PFS proposed site, and six other American Indian tribes within the United States have already turned down the same offer[18].

In September 2001, a team of tribal members officially challenged the Skull Valley Goshute Tribal Council's Executive Committee for a leadership election that would impact the PFS deal. The results of that election are still in dispute, demonstrating the lack of consensus on the reservation for a high-level nuclear storage facility as a development option.

Funds and Benefits to the Tribe[19]

Financial backing from PFS has been provided to members of the Skull Valley Band of Goshutes, but details about the amount of funding are not publicly disclosed. One newspaper article suggests that "an affidavit has been filed with the BIA [Bureau of

[15] Note: there was no evidence of capacity building for the aboriginal community, or integration of traditional knowledge

[16] "Skull Valley Goshutes/PFS Timeline." Public Citizen Date unknown. http://www.citizen.org/documents/goshutetimeline.pdf

[17] Ibid

[18] Litster, Pete. "Valley Band of Goshute Indians Updated 7-20-05" Shundahai Network. May 2006. http://www.shundahai.org/skull_vlley_info.htm

[19] Separate from the PFS process, Skull Valley Goshute Reservation applied for and was awarded a $100,000 grant from the federal government in 1992 to investigate the benefits and impacts of implementing the voluntary nuclear waste storage site.

Indian Affairs], indicating that … the amount of money or other benefits paid to the Band or members of the Band are not known to the General Council or most members of the Band"[20].

There is an indication that PFS is paying most of the tribe's legal fees for promotion of this project[21]. The tribe is also anticipating a significant amount[22] of financial compensation in lease payments from the utility consortium. They plan to spend this money on a health clinic, housing, police force and infrastructure, and new businesses for the band. Additionally, it is expected that the "storage site could provide jobs to tribe members as security personnel or technicians for decades to come"[23]. It is hoped that this infusion of financial support into the community will help to draw back members of the tribe who are living off reserve[24].

The Goshute band has already benefited from the new modular homes "paid for through the exclusivity agreement the band has signed with PFS"[25]. At least one house has been built with utility-funded tribal loans[26].

5. Building Public Awareness & Understanding

The two main mechanisms for building public awareness and understanding that were apparent include:

- Documentary – Utah's PBS station KUED-TV created a documentary designed to help the average person negotiate their way through the complex issues and debate associated with the storage of nuclear waste, with particular emphasis on the Skull Valley area of Utah and the Yucca Mountain area of Nevada.
- Websites – PFS, Skull Valley, State of Utah Department of Environmental Quality, etc.

[20] ibid
[21] Bowers, F., February 23, 2006
[22] Amount is not disclosed, but estimates in the literature range between $40 - $100 million over 40 to 50 years
[23] Riley, M. June 11, 2006
[24] Roosevelt, M. April 2006
[25] Riley, M. June 11, 2006
[26] Roosevelt, M. April 2006

6. Roles / Responsibilities

Some of the key players in this process and their responsibilities are outlined below:

Players in the Process	Roles
PROPONENT	
PFS	Prepare and submit application to secure a license to construct and operation spent high level nuclear waste storage facility
Skull Valley Band	Be a willing host to the temporary nuclear waste storage facility
REGULATORY BODIES	
Nuclear Regulatory Commission (NRC)	The NRC is authorized to license spent fuel storage facilities, such as the one proposed by Private Fuel Storage, LLC. When receiving an application for a license to establish such a facility, it is reviewed by technical experts on the NRC staff, which prepares its own safety and environmental reports.
Atomic Safety and Licensing Board (ASLB)	Atomic Safety and Licensing Board is an independent judicial arm of the Nuclear Regulatory Commission. Members of the public may intervene and raise their own issues, which are resolved by the Atomic Safety and Licensing Board (ASLB), an independent three-judge panel appointed by the NRC. The ASLB's final decision is based on the scientific and expert evaluation of PFS's ability to comply with federal regulations designed to protect the public and the environment.
Bureau of Land Management (BLM)	Must provide approval to PFS before construction would begin. It administered the public comment period for granting a right of way for PFS to build a transportation link on several acres of public land

7. Reflection and Comment

The PFS/Skull Valley case is inherently different from the process the NWMO proposes. This was a private initiative, undertaken by private utility companies outside the federal process and legislated vision for nuclear waste management in the US. However, the case study does shed some light on the challenges associated with finding and maintaining relations with a community willing to host the storage of high level nuclear waste over time:

1. **It can be difficult to define "willing host community".** The Skull Valley Goshute reservation is a small group of 25-30 people residing in a desolate geographic location, surrounded by military bases and hazardous waste industries and has little hope of economic diversification. The Band's disputed elected leaders accepted to host the spent fuel storage facility. Yet even the small size of the band and the dearth of economic alternatives have not made consensus easy to achieve or to maintain: some local residents challenge the legitimacy of the decision their band representatives have made; other Goshute band members living off reserve disagree with the decision; so does the nearest city (Salt Lake) and the State (Utah). Further, the proposed development has poisoned relations within the Skull Valley community itself, and deeply divided it. These divisions could weaken the community for a long time and make it more difficult to achieve its economic potential.
2. **The concept of "community" is dynamic.** The community at first was the Skull Valley Band of Goshute Indians Reservation, recognized by the US Government as a member of the sovereign Goshute Nation. While the Skull Valley Band of Goshute Indian Reservation remains the most affected community, over time the community of interests has grown. Salt Lake City, the State of Utah and various advocacy groups are all now actively involved in the controversy, and have vested interests in the ultimate outcome.
3. **A siting process can be lengthy, and its outcome may be uncertain.** Skull Valley first signed the lease with PFS almost nine years ago, and it is clear that both parties were actively engaged in the issue of nuclear waste storage for some time prior to the sign of the lease in 1997. Although the NRC has now issued the license, PFS still must get several other approvals before the construction can begin and faces legal challenges that could delay the project further.

8. Key Learnings

The lack of details available on the site selection process used by PFS that ultimately resulted in Skull Valley as the target location, limit the instructive conclusions for the NWMO. Nevertheless, the case study provides insight relating to the implementation of the NWMO commitment to seek an informed, willing community to host the long-term management facility.

Seek an informed, willing community to host the long-term management facility. The potential host community will determine how it will demonstrate its willingness to host the facility and how it will invite its citizens to express their views. PFS's proposal to build a temporary storage site for high-level nuclear waste in Skull Valley, Utah illustrates how difficult it is to not only identify a "willing host", but how challenging it is for a potential host community to maintain that attitude of willingness. Lengthy processes, internal cleavages and participation of actors from the larger community (e.g. First Nation confederations, ENGOs, and city and state governments) can erode a community's initial impression of willingness.

Fairness is best achieved with the site-selection process focused within the provinces directly involved in the nuclear fuel cycle: Ontario, New Brunswick, Quebec and Saskatchewan. Communities in other regions which identify themselves as interested in possibly hosting the facility will also be considered. NWMO will respect Aboriginal rights, treaties and land claims. The state government cited the fact that Utah does not produce nor benefit economically from nuclear power creation as a major reason why it should not have to bear the responsibility and risk of transitioning and storing 80% of the nation's high-level nuclear waste.

9. Glossary

ASLB - Atomic Safety and Licensing Board
BIA – Bureau of Indian Affairs
BLM – Bureau of Land Management
DEQ – Department of Environmental Quality
DOE – Department of Energy
NRC – Nuclear Regulatory Commission
PFS, LLC – Private Fuel Storage, LLC
SSWS - Scientists for Secure Waste Storage
UTTR - Utah Test and Training Range

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Appendix A – PFS Licensing Timeline

PFS Licensing Timeline	
Licensing Step	**Status**
Application to the NRC	**6/97** PFS filed its application
NRC Staff review	**6/97** NRC Staff begins review of safety and environmental aspects of application. The technical evaluation by the NRC Staff involves requests to PFS for additional data, such as seismic analysis.
Notice in the Federal Register	**7/97** NRC placed a notice inviting individuals or groups affected by the project to request standing to intervene.
Atomic Safety and Licensing Board (ASLB)	**9/97** NRC named judges to the Atomic Safety and Licensing Board that will decide the PFS case.
Pre-hearing conference at which interveners support their request for standing and present the issues they wish to argue at a later hearing	**1/98** Pre-hearing conference held. About 90 issues (contentions) were presented by the State of Utah, Confederated Tribes of Goshute Indians, OGD, and Castle Rock Land and Livestock. Scientists for Secure Waste Storage and Skull Valley Band of Goshute Indians petitioned to support the PFS application.
ASLB order on standing of interveners and the issues to be heard	**4/98** Decision announced: Only 25 contentions were admitted. All interveners except the Scientists were granted standing.
Scoping Meetings	**6/98** Scoping meeting held to hear public comment on the scope of the environmental impact statement. **4/99** Another scoping meeting related to the PFS proposal for a rail line through Skull Valley to the site was held.
Safety Evaluation Report	**12/99 and 9/00** NRC issued a preliminary report (12/99) evaluating PFS compliance with most of the safety-related regulations, and a final report (9/00) evaluating the remaining safety requirements.
Pre-hearing activities	**6/98 and ongoing** Lawyers for PFS and the interveners conducted informal and formal discovery, filed motions to dismiss some issues, and resolved other issues. The number of issues to be heard in formal hearings was reduced to about 14.

PFS Licensing Timeline	
Licensing Step	**Status**
Draft Environmental Impact Statement	**6/00** The NRC staff released a draft EIS for public comment. This report evaluated PFS's compliance with all environmental laws and regulations.
Evidentiary Hearings	**6/00** The ASLB held the first of two sets of hearings at which PFS and the interveners presented evidence supporting their positions on the issues. The second set of hearings was held in summer 2002.
Public Comment	**6/00** The ASLB invited the public to make "limited appearance statements" at meetings held in Salt Lake City and Tooele.
Final Environmental Impact Statement	**1/02** The NRC issued a final EIS, a comprehensive environmental review, that also addresses issues raised by the interveners and the public.
ASLB Decisions	**2003 and continuing** The ASLB began ruling on issues considered at hearings, starting in March 2003. On the risks of military aircraft crashes, the Board ruled that the risk of such an event is greater than one in a million and offered PFS the opportunity to return with additional data. PFS received favorable rulings on the issues of seismic hazards, financial qualifications, and wilderness issues.
Evidentiary Hearings	**8/04** The ASLB held additional hearings on the aircraft crash issue to determine whether the PFS facility is designed to withstand a hypothetical crash of an F-16 military aircraft. A ruling on this issue is expected in February 2005.
Late-filed Contention	**11/04** The state of Utah filed a late contention asking the ASLB to consider whether spent fuel stored at the PFS site would be accepted at the proposed federal repository at Yucca Mountain. The ASLB ruled on Feb. 24, 2005, that there was insufficient basis for admitting the contention.
NRC Decision	**2/05** On Feb. 24, 2005, the ASLB ruled on the last remaining issue - whether or not the impact of an accidental crash of an F-16 at the sight would cause a breach in a storage cask. The ASLB found that the chance of such a breach is less than one in a million. The NRC Commissioners must now review the ALSB rulings and, if they agree, the Commission will direct the NRC Staff to issue a license.

Case Study

Impact and Benefits Agreements between Athabasca Tribal Council First Nations, Industry and Government

This case study presents a series of agreements between the Athabasca Tribal Council (ATC) of northeastern Alberta, a number of companies in the oil sands industry, and three levels of government. The case study focuses on the more recent *ATC All Parties Core Agreement* (Core Agreement) and presents it in the context of other First Nation/Industry agreements in the area and recent trends in Impact Benefit Agreements (IBAs) in Canada. The Core Agreement provides principles, processes and an implementation framework for consultations for the identification of impacts and benefits. Therefore, the Core Agreement is a capacity building agreement aimed at fostering consultation processes that will lead to successful IBAs.

1. Background

Northern Alberta has all of Canada's oil sands development and is one of the world's two largest sources of bitumen. Investment in the oil sands was forecasted to reach approximately $5B a year from 2004 to 2008, creating a demand of $8.5 billion for construction materials and labour and $3.3 billion for machinery and equipment each year. The oil sands development is also creating significant local environmental impacts in the form of air pollution, water consumption and pollution, and land disturbance.
http://www.canadanorth.ca/alberta/AB.htm
http://www.pembina.org/pdf/publications/OilSands72.pdf

The Athabasca deposit, in northeastern Alberta in the Regional Municipality of Wood Buffalo, is the largest deposit and has the most concentrated oil sands development. Managing the economic, social and environmental impacts of large scale industrial development is a major challenge for the region, which includes the traditional area of the Woodland Cree and Dene Chipewyan. The area has one of Canada's highest proportions of Aboriginal people as a percentage of total population. The Athabasca Tribal Council (ATC) represents five First Nations including the Athabasca Chipewyan First Nation, Mikisew Cree First Nation, Fort McKay First Nation, Fort McMurray No.468 First Nation, and Chipewyan Prairie First Nation.

Figure 1: Athabasca Tribal Council Traditional Territory

Source: Athabasca Regional Issues Working Group

http://www.oilsands.cc/pdfs/RIWG%20Aboriginal%20Slides%20-%20June%202005.pdf

In the late nineties as new oil sands projects were being announced, ATC chiefs began to raise concerns about the cumulative effects of the growing number of projects, about whether their members would be ready to participate in the economic benefits of the projects; and they questioned the adequacy of their capacity (education and training), especially among young people, to take part in the growth. Based on these concerns, the ATC developed a Resource Development Strategy to help guide them in regional consultations. The Strategy became the basis for a Capacity Building Agreement, reached in 1999, between the ATC and a group of industry companies known as the Athabasca Regional Developers (ARD). At the time ARD included Syncrude, Suncor, Koch, Gulf, Petro-Canada, Shell, Al-Pac, and a few smaller enterprises.

The three-year Capacity Building Agreement[1] focused on five key areas:

- Environment and consultation capacity
- Employment and training;
- Human Infrastructure;

[1] "Learning from experience - Aboriginal Programs in the Resource Industry" (http://www.acr-aboriginalproject.org/)

- Physical infrastructure; and
- Long-term benefits.

In 2003, a second three-year agreement, called the ATC/All Parties Core Agreement, was signed that was more encompassing, and involved more companies (17) and the three levels of government (federal, provincial, and municipal). In 2005, the agreement was extended. These agreements cover issues such as capacity development, environmental protection, monitoring, and socio-economic issues (employment and training). In addition, each First Nation has negotiated, or is negotiating, separate long-term Benefits Agreements. These agreements do not include revenue-sharing, which may also be negotiated separately. In April 2006, Shell Canada and the Fort McKay First Nation announced that they had entered into an agreement recognizing the right and interest of Fort McKay First Nation to commercialize land received under its treaty land claim settlement by leasing it to Shell for potential incorporation into the Athabasca Oil Sands Project (AOSP), and receiving royalty payments on production.
http://www.processwest.ca/Current_Issue.htm?ID=468

Prior to the ATC agreements, there were numerous other agreements between certain companies and Aboriginal organizations in the area, such as the 1976 Syncrude Indian Opportunities Agreement between Syncrude, the Indian Association of Alberta, and the federal government, which later evolved into the Aboriginal Development Program. Other agreements included:

- Athabasca Native Development Corp. Agreement (1988 – 1993)
- Consultation Agreement with Fort McKay
    - Syncrude (1986, 1993)
    - Suncor (1988, 1996)
    - Mobil/Shell/Suncor/Syncrude (1997- 2001)
    - TrueNorth/ExxonMobil/ATCO/CNRL/Albian/Shell/Suncor/Syncrude/ Petro-Canada (2001-ongoing)
- Consultation Agreement with ACFN
    - Syncrude/Suncor (1997- 2002)
- Consultation Agreement with ACFN and MCFN
    - Syncrude/Suncor/CNRL/TrueNorth/Albian/Shell (2002-ongoing)

http://www.oilsands.cc/pdfs/ABORIGINAL%20AFFAIRS%20SLIDES%20-%20Website.pdf

The ATC agreements represent a shift towards “regionalizing” the relationship between the entire oil sands industry and affected First Nations.

Reasons for Entering into Agreements

The ATC agreements were negotiated and entered into voluntarily by the ATC First Nations and industry. There is no legislative requirement for such agreements in any

of the provinces. Only the Inuit land claims agreements (Nunavut) and the Mackenzie Valley Resources Management Act (Mackenzie Valley, Northwest Territories) contain formal triggers for IBAs or comprehensive impact agreements.

In 1999, the then CEO and Chairman of Syncrude, Eric Newell, stated that the Capacity Building Agreement "gives us the opportunity to create an even stronger base for more growth and better understanding in the future". () He also expressed the benefits to industry of a skilled local labour force resulting from education and training initiatives. At the time Syncrude was, and still is today, the largest employer of Aboriginal people in Canada (). His comments, and those of Syncrude COO Jim Carter, are consistent with recent research on impact benefit agreements (IBA) which shows that industry understands the business case for entering into IBAs including enhancing certainty (lowering risk) in the development process, as well as the benefits of a "good" corporate image as a corporate asset.
http://www.syncrude.ca/users/folder.asp?FolderID=5617
http://www.syncrude.ca/users/folder.asp?FolderID=5996
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf.

Jim Boucher, chief of the Fort MacKay First Nation and president of the ATC, described the intentions of the ATC agreements as follows: "We wanted to enhance the development of our communities socially, politically, economically. We wanted to foster growth, prosperity and development through capacity building. We wanted to maintain and protect our treaty rights; we wanted also to protect our environment and relationship with Mother Earth. We wanted to work together in harmony and unity, supporting each other politically, socially and culturally." Research indicates that most First Nations, like the ATC, view resource development and the need for IBAs in terms of three main issues: the requirement for their consent for development within their traditional territory, the need to realize maximum benefits from the project, and the need to minimize environmental (and health) impacts. Jim Boucher's public comments, as well as the ATC mission statement, are consistent with these three issues.

However, Boucher has also provided a less positive interpretation of the situation faced by First Nations: "The environmental cost has been great. There is no other economic option. Hunting, trapping, fishing is gone." Prior to the collapse of the fur-trading economy in the 1980s, the Fort McKay First Nation had been largely opposed to the industrial oil sands development. As the oil sands projects began expanding in the nineties, the First Nations felt they had to engage industry in an effort to become active participants in the development that was occurring in their territory. There is no information readily available that indicates more recent and significant opposition by First Nations to the expansion of the oil sands projects or that First Nations considered not giving consent to future expansion. While the signing of the agreements demonstrates the ATC's assertion of its jurisdiction over resource

development, it appears that the pursuit of benefits and the minimization of further impacts under the current development scenario (i.e. expansion of the oil sands) was considered to be the only option.
http://www.ammsa.com/sweetgrass/topnews-Jan-2003.html
http://www.corpwatch.org/article.php?id=13640http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf
http://www.syncrude.ca/users/folder.asp?FolderID=5996

2. The ATC All Parties Core agreement

Parties to the Agreement

The First Nation signatories to the Core Agreement are the First Nations of the Athabasca Tribal Council (ATC). The ATC was formed in 1988 and represents over 2500 Cree and Chipewyan people from five First Nations. As shown in Figure 1, the ATC First Nations' traditional territories cover a large area encompassing the Athabasca oil sands projects.

Industry signatories to the ATC/ARD All Parties Core Agreement include Encana Corporation, Syncrude Canada Ltd., Suncor Energy Inc., Albian Sands Energy Inc., Petro-Canada Ltd., Nexen Petroleum Canada, OPTI Canada Inc., Japan Canada Oil Sands Limited, ExxonMobil Canada Ltd., Enbridge Inc., Deer Creek Energy Ltd., ConocoPhillips Canada, Canadian Natural Resources Limited, Alberta-Pacific Forest Industries Inc., ATCO Group of Companies, Devon Canada Corporation, Kinder Morgan Canada Inc.

There are often competing interests between First Nations with respect to resource developments, especially where traditional territories overlap and where zones of potential impacts and benefits are different. By including the five first nations and the major industry players in the Athabasca oil sands developments, the Core Agreement provides a framework and processes for working towards common goals and interests.
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf

However, the Core Agreement co-exists with previously signed and ongoing agreements and in fact promotes the development of new agreements between individual First Nations and companies.

The government of Canada, the government of Alberta, and the Regional Municipality of Wood Buffalo are also signatories to the Core Agreement.

Agreement Content

The Core Agreement establishes a framework and processes for the signatories to work together to achieve orderly industrial development, mitigate impacts and ensure that the ATC First Nation communities share in the benefits of the oil sands development. In other words, the agreement sets up the infrastructure and standards for consultation and the negotiation of other agreements to address impacts and benefits.

The agreement contains the typical elements of a management framework including goals, intended results, governance structures, decision-making principles, funding commitments and processes (accountabilities, administration, approvals, and audits), reporting requirements, a dispute resolution mechanism, and a performance measurement strategy. An additional key element of the agreement is the *Standards of Consultation* section, which specifies the standards to be utilized by the First Nations and industry signatories in consultations towards environmental and socio-economic agreements.
http://www.acr-aboriginalproject.org/PDF%20Files/Program_Templates/Individual_Program_Templates/4.1.3.pdf

Most IBAs are confidential documents, as First Nations are concerned that funds received will be subject to federal regulation. The Core Agreement is not confidential. The funding commitments specified in the agreement are for the management and administration of a committee structure created by the agreement rather than for compensatory financial benefits.
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf

IBAs tend to include the elements that motivate First Nations to enter into IBA negotiations. Industry's primary objective, certainty in the development process, is achieved through a commitment by the First Nation that, in signing the IBA, they support the project publicly and will not raise objections in the regulatory process. These typical elements are listed in Table 1 along with an indicating of how these are addressed in the Core Agreement.
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf

Table 1: Inclusion of Typical IBA Elements in the Core Agreement

Typical Elements of an IBA	Inclusion in Core Agreement	Description
1 Recognition of Aboriginal and Treaty Rights	Yes	The vision of the agreement includes supporting the ATC's mission statement, which includes the maintenance and protection of ATC First Nation Treaty rights and freedoms.
2 Protection of culture and cultural artifacts	Yes/No	The standards of consultation section of the agreement (Schedule B) lists the required elements of the consultation mandate that is to be negotiated between the parties. The required elements include the identification and understanding of Key Areas of Concern (KCAs). One of the KCAs is *culture retention*.
3 Compensation of negative impacts	Partially	Compensation of negative impacts is only addressed specifically in terms of *trappers compensation*, as one of the KCAs. However, the Core agreement promotes the development of bilateral agreements that could include compensation.
4 Employment and training	Yes	The intended results of the agreement include "an increase in First Nation access to industrial development opportunities, including … training, education, employment, and contracting …". The KCAs also include *business development*, *training and education* and *career development*.
5 Access to business opportunities	Yes	
6 Environmental Aspects of project implementation	Yes	The vision of the agreement includes increasing opportunities for all Parties to manage the impacts of development. The ATC mission statement includes a commitment *to promote, maintain, and protect [the ATC First Nations'] relation ship with Mother Earth*. One of the KCAs is *environmental affairs*.
7 Financial consideration (equity participation or mean thereof)	Not explicitly	The provision of funding to implement the core agreement is described, but equity participation in industrial projects is not addressed explicitly. However, the Core agreement promotes the development of bilateral agreements that could include such financial consideration.

Typical Elements of an IBA	Inclusion in Core Agreement	Description
8 Implementation and monitoring of the agreement	Yes	The agreement includes detailed sections describing in detail the organizational structure, the decision making approach, and an issues management process. In terms of monitoring, reporting and performance measurement requirements (with respect to the Core Agreement) are specified for each committee created by the agreement. Furthermore the Standards of Consultation establishes the requirement for monitoring and evaluation criteria for all consultation processes.
9 Dispute resolution mechanisms	Yes	The agreement specifies that decisions will be made based on consensus and that disputes (failure of consensus) will be referred to mediation.

Negotiation Process

There was no readily available information on the details or steps of the negotiation process for the Core Agreement itself. However, the Core Agreement provides guidance on how other agreements are and will be negotiated between First Nations and oil sands industry companies.

In terms of timing, the committees established by the Core Agreement provide for a consultation infrastructure (for the duration of the agreement) where parties can enter into negotiations at the earliest stages of new oil sands projects. The Standards of Consultation state that the consultation process "must take into account how each party consults, time lines required for consultation and stages in the decision making processes for the First Nation and the corporation".
http://www.acr-aboriginalproject.org/PDF%20Files/Program_Templates/Individual_Program_Templates/4.1.3.pdf

The Core Agreement builds capacity for future consultations. The agreement provides for $230,000 to each First Nation as base funding for its Industry Relations Corporation. The IRCs are responsible for developing and maintaining relationships between the community, industry, and government. They also manage regulatory reviews, facilitate consultation processes, develop agreements and action plans, and represent the community on regional multi-stakeholder committees. Funding for the 2003 Core Agreement (effective to 2005), was provided by industry ($4 million) and by the government of Canada ($750,000). Research has shown that this type of investment in negotiating capacity by industry produces a high rate of return.
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf

It has also been shown that the quality of the negotiating teams is a key factor in the efficiency and successful outcome of negotiating processes (ref. PPF paper). The Core Agreement specifies job descriptions for the Director and Community Consultation Coordinator positions on the IRC. The description lists skill and knowledge requirements and emphasizes non-political behaviour and accountability to the community.
http://www.ppforum.ca/common/assets/publications/en/report_impact_benefits-english.pdf

While the Core Agreement specifies the need for First Nations representatives to be accountable to their communities, no information was readily available on the ratification processes followed or required for the Core Agreement itself or for agreements reached under the Core Agreement framework.

Monitoring and Enforceability

As described in Table 1, the Core Agreement has specific monitoring and reporting requirements for the agreement itself. The progress reports on the Core Agreement were not readily available.

The Core Agreement provides a general requirement for monitoring and performance criteria in the Standards for Consultation. Various organizations in the oil sands area are involved in, and share information on, environmental and socio-economic monitoring including the Athabasca Regional Issues Working Group (RIWG), the Wood Buffalo Environmental Association (WBEA), and the Cumulative Environmental Management Association (CEMA), and the Regional Aquatic Monitoring Program (RAMP).

3. Roles / Responsibilities In The core agreement

The management structure in the Core Agreement has three main levels:

- The Executive Group is responsible for the overall success of the Agreement, strategic direction, and approval of business plans. The Management Committee is responsible for the issue management process, the business management process, and for measuring and validating results. Ad Hoc Committees are created as required to carry out specific tasks assigned to them by the Management Committee.

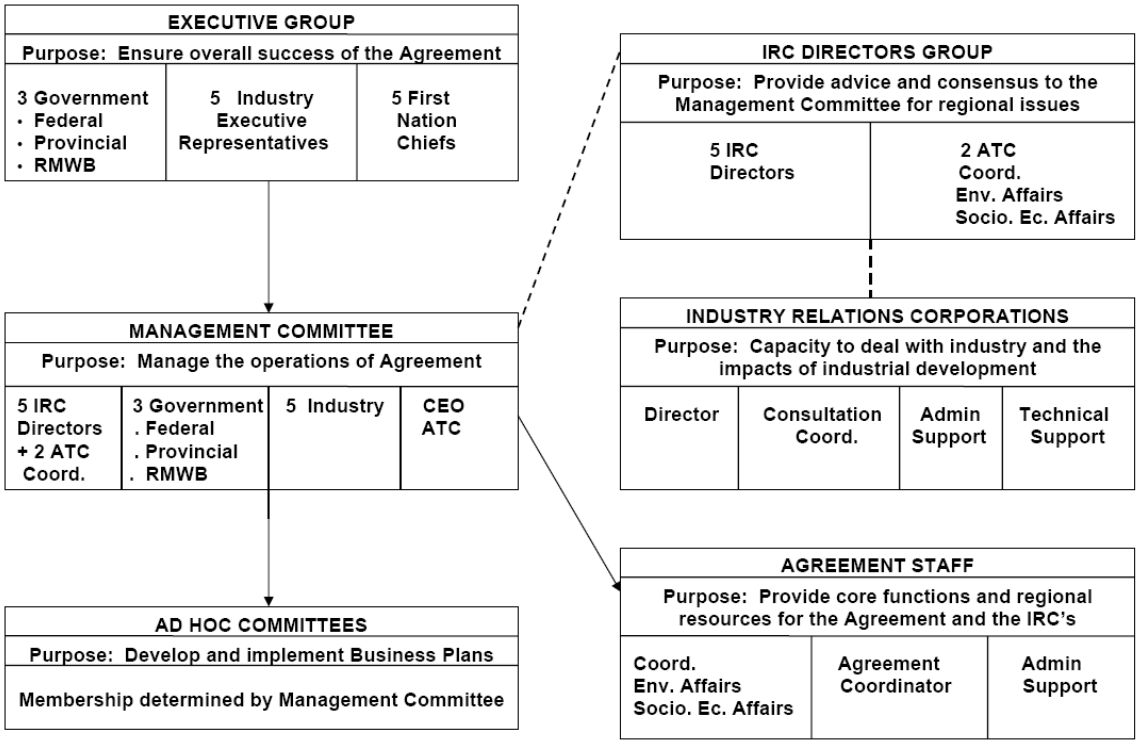
- The Industry Relations Corporations (one for each of the five First Nations) operate at the Management Committee level and are responsible for identifying community concerns and issues regarding industrial development. The IRCs report to the Chief and Council of their respective communities. The

IRC directors identify the regional concerns to the Management Committee and validate its strategies from a community perspective.

- Dedicated Agreement Staff provide administrative support and technical resources to the IRCs and facilitate communications and logistics between the signatories.

The management structure, compo is illustrated in Figure 2.

Figure 2: Management Structure of the All Parties Core Agreement



Source: ATC All Parties Core Agreement (October 2, 2002) – Schedule C

4. Involvement Of Aboriginal People And Incorporation Of Traditional Knowledge

The Core Agreement and preceding ATC agreements were initiated by the ATC. The implementation committees established by the agreement have ATC representation at all levels.

Traditional Knowledge (TK)

The Core Agreement does not explicitly refer to TK, but funding provided under the agreement has been used for traditional knowledge studies. Mechanisms for engaging the community have included open houses, community meetings, and meetings with Elders. Corporations such as Canadian Natural have worked with the IRCs to conduct Traditional Environmental Knowledge (TEK) studies on issues such as the location and value of historic trails, and the collection of traditional and medicinal plants.
http://www.environment2006.com/PDFs/session10b.pdf

5. Building Public Awareness & Understanding

The IRCs are the communication vehicles between industry and each first Nation in the ATC. The IRC have primary responsibility for implementing the Standards of Consultation and reporting to the Chief and Council. Within the IRC structure, the Core Agreement provides a job description for a Community Consultation Coordinator who is responsible for coordinating meetings between the community, government, and industry. Consultation is carried out by various methods including public meetings, open houses, and meetings with Elders. The ATC and the individual First Nations have websites to communicate information to those with internet access.
http://www.environment2006.com/PDFs/session10b.pdf

Specific information on communication with the community during the negotiation of the Core Agreement was not available.

6. Benefits

Public comments made by ATC, industry, and government representatives regarding the ATC agreements have all been positive.

The Core Agreement has been successful in facilitating the negotiation of various bilateral agreements between industry and individual First Nations to address a wide range of economic, community, cultural, and environmental issues. Examples include steps to reduce sulphur dioxide emissions, land reclamation programs, initiatives to bring back bison populations, and fly-in (4 days on/ 4 days off) rotational job programs that offer employment to communities further away from the sites while preserving family stability and traditional lifestyle activities.
http://www.cbsr.bc.ca/files/CaseStudie2.pdf

The Agreement has had a significant impact on Aboriginal employment. Aboriginal employment had been at 450 jobs in 1998 and increased to 1300 jobs in 2001. The

success of Aboriginal businesses has also been important in terms of employment increases. Aboriginal businesses were very competitive and successful, with Aboriginal contracts increasing 250% to $250 million in four years.
http://www.iog.ca/abor_csps_series/summary_abor_21feb05.pdf

Public comments from industry often emphasize the "good corporate citizen" aspects of entering into the ATC agreements but are not explicit about how exactly the company is benefiting, beyond having access to a skilled and trained local Aboriginal workforce. Given the economic significance of the oil sands, one can assume that the major benefit to industry of the Core Agreement and the IBAs that it facilitates is timely access to the resource and enhanced certainty in their project development plans. Theses perspective are captured in the following quote by Mike Ashar, executive vice-president of Suncor Energy, Inc.: "If this agreement says anything about industry, … it says that we have come to know that co-operation is the key to successful, responsible and sustainable development. And it says that we cannot proceed with development in the absence of a clear and well-defined commitment of inclusion of the Aboriginal peoples of the Athabasca region."
http://www.ammsa.com/sweetgrass/topnews-Jan-2003.html

Despite the successes of the Core Agreement and associated bilateral agreements, the ATC still sees a need for improvement in areas such as:

- continuous improvement in the value of contracts awarded;
- addressing social and physical infrastructure needs and economic development;
- development of long-term “benefits-sharing”solutions.
- addressing the skilled labour shortage and apprenticeship training problem; and
- addressing education priorities.

http://www.nadc.gov.ab.ca/Publications/reports/CN-Proceedings03.pdf)

7. Reflection and Comment

The ATC Oil Sands agreement case is inherently different from the process the NWMO proposes. The siting of the oil sands project was a “fait accompli” when the ATC began initiating the Core Agreements and the capacity agreements that preceded it. The enormous economic and strategic importance of the oil sands for Canada and North America has left local First Nations little choice but to be accommodating while maximizing their benefits and minimizing impacts to the extent possible.

The Athabasca oil sands development is not a single project. It involves many large and sometimes similar projects led by several corporations within a large area inhabited by several First Nations. It has offered, and will continue to offer, many

opportunities for learning, capacity building, and economic development. The success of the Core Agreement has undoubtedly benefited from the experience of individuals involved with similar successful and unsuccessful projects in the area.

It is also important to recognize that the Core Agreement and its management structures coexist with a variety of other organizations that contribute to the capacity building, environmental monitoring, socio-economic monitoring, and consultation activities of the Athabasca Oil Sands region. These organizations include the Regional Issues Working Group and the Wood Buffalo Environmental Organization. For this reason, the apparent success of the Core Agreement can not be viewed in isolation.

Despite these differences, the case study provides insight relating to the implementation of the NWMO commitment to seek an informed, willing community to host the long-term management facility:

- The core agreement provides an example of a "state of the art" capacity building agreement for a large project involving several First Nations, industry stakeholders, and levels of government. Recent IBAs have evolved to include a standard set of elements. As was shown in Table 1, the Core Agreement addresses almost all of these considerations, within its own management structure and within the *Standards of Consultation* it prescribes for other agreements. The concept of an "umbrella" agreement involving many parties that establishes the terms of references and governance structures for negotiating other agreements appears to be a successful approach for defining and achieving common goals.
- The Industry Relations Corporations (IRC) created by the Core Agreement provides a successful model for a First Nation-managed and industry-funded consultation body. Research has shown that proponent-funded capacity building for negotiation teams and a comprehensive treatment of impacts and benefits are desirable. The range of issues addressed through the IRCs, such as sustainable employment, TEK, and prescription drug abuse, appear to demonstrate an evolution towards a more holistic view of community benefits and impacts that goes beyond the provision of jobs and training for individuals.
- Long-term and high-level commitment and leadership from industry and the First Nations were major factors in the success of the ATC agreements. There is a strong commitment to Aboriginal development at the corporate executive level among many of the industry stakeholders, as exemplified by Syncrude. Leadership and business acumen among the First Nation leadership, as exemplified by Chief Boucher of the ATC and McKay First Nation, was also key.

8. Sources

[to be added]

Appendix A – ATC/ARD Agreements Timeline

Time	Agreement/Event
1998	ATC and Athabasca Regional Developers (ARD) agree to work together to implement ATC Resource Development Strategy[2]
1999 (expired in 2002)	ATC/ARD Capacity Building Agreement
2003	ATC/ARD Core Agreement
2005	ATC/ARD Core Agreement extended

[2] "Learning from experience - Aboriginal Programs in the Resource Industry" (http://www.acr-aboriginalproject.org/)

Case Study

Northern Boreal Initiative – Community-based Land Use Planning and The Whitefeather Forest Initiative

[General Note: The degree to which the Whitefeather Forest Initiative – Land Use Strategy has been implemented is unclear. Therefore, this case study focuses largely on the planning process used to create the Strategy, rather than summarizing results or outcomes of its implementation.]

1. Background

Context

In 1999 an Ontario land use planning exercise for the boreal region north of 51° resulted in a Forest Accord, signed by environmental organizations, industry, and the provincial government. One of its stipulations states that development north of 51° will only be undertaken if First Nations communities are in full agreement, if the terms of an environmental assessment are respected, and if Parks and Protected Areas are recognized and regulated. Because this area is located north of the Area of the Undertaking (AOU) for the Timber Class Environmental Assessment on Crown Lands in Ontario and north of the Ontario Living Legacy planning area, commercial logging has not been allowed in the Northern Boreal to date.

In 2001, the Ontario government released a concept document for a new 'Northern Boreal Initiative', which had the goal of allowing First Nations in far-Northern Ontario to develop a commercial forestry in previously unharvested areas. Ultimately, the goal of NBI is to provide these First Nations with opportunities to take a leading role in land use planning and forest management, with an important objective of fostering sustainable economic opportunities in forestry and conservation. Although the catalyst for NBI was forestry, the capability of lands and resources to support all types of sustainable development opportunities will be considered in the process.

Focus on the Pikangikum First Nation

Pikangikum First Nation is a remote-access Ojibway community located on Pikangikum Lake, approximately 100 km northwest of Red Lake. Pikangikum is one of the largest First Nation communities in Northern Ontario with the highest on-reserve population in Northern Ontario, approximately 2,300. An estimated seventy-five percent of the population is under twenty-five years of age.

In response to the Northern Boreal Initiative, the Pikangikum First Nation has established the Whitefeather Forest Initiative. The Whitefeather Forest Initiative is a community economic renewal and resource stewardship initiative of the Pikangikum First Nation.

Through the Whitefeather Forest Initiative, Pikangikum First Nation is leading the development of new resource uses to provide urgently needed livelihood tribal enterprise opportunities for their youth within their Traditional Territories.

The Whitefeather Forest Initiative is centered on Community-based Land Use Planning, an approach that has now been adopted as policy under Ontario's Northern Boreal Initiative. The culmination of the Whitefeather Forest Initiative has been the preparation of a draft Land Use Strategy for the Whitefeather Forest and adjacent areas (a total area encompassing 1.3 million hectares). This comprehensive plan focuses on three components: stewardship, customary activities and economic development. The draft strategy includes land use intents for: customary land uses, commercial forestry, non-timber forest products, mineral development, recreation, strategic access/infrastructure and environmentally protected areas. All direction in the draft Land Use strategy is premised upon respect for Aboriginal and treaty rights including their spirit and intent.

Beneficiaries of the Planning Process

Parties that are identified as beneficiaries of the Whitefeather Forest Initiative community-based planning process include:

- **Pikangikum First Nation**
  The primary beneficiary will be the people of Pikangikum First Nation who will be able to incorporate customary values and decision-making processes, as well as current needs, into the planning process and, thereby, lead to decisions that benefit the First Nation.

- **The Province of Ontario**
  The process will provide Ontario with the necessary information and tools to fulfill responsibilities it has to the broader public.

- **Parties with an Interest in the Planning Area**
  Parties with an interest in, or concern with, the Whitefeather Forest Planning Area (e.g. neighbouring First Nations, the environmental community, the forestry industry, other resource-based industries including the tourism industry and the mining industry, and other agencies) will have an opportunity to express their interests and concerns related to existing and new land use in the planning area.

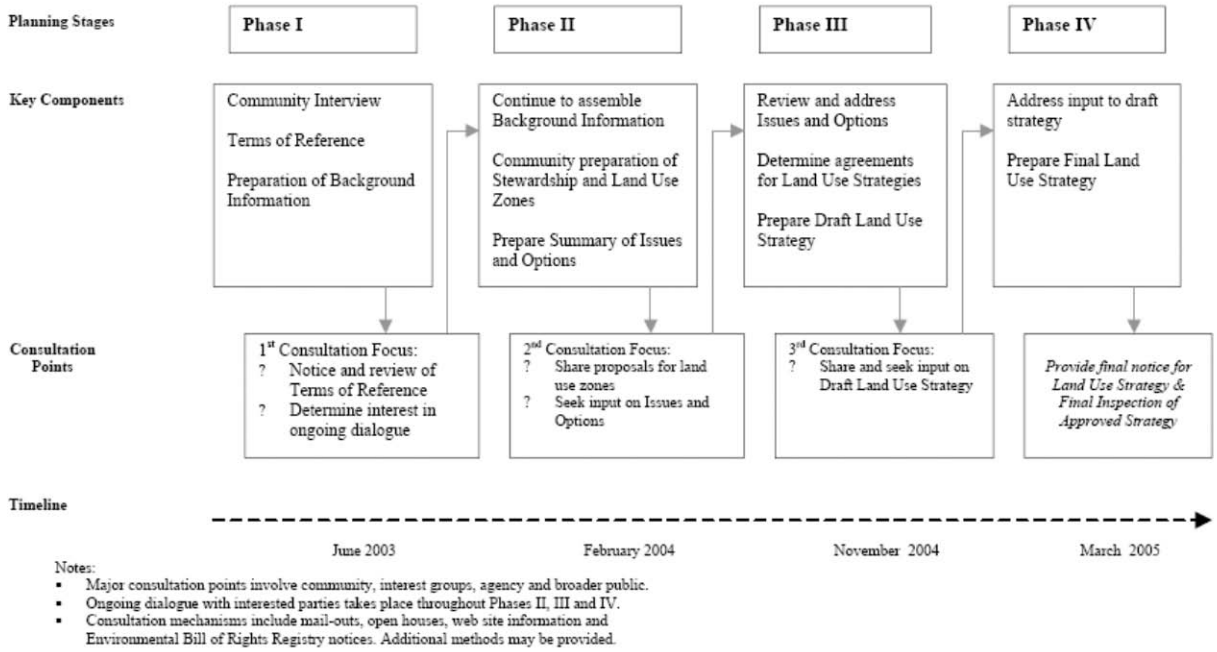
- **Broader Public**
  The broader public will have access to a clear statement of the community's strategic planning needs and priorities, outlined in a strategic plan which has been harmonized with the broader interests of the region and province.

2. The Planning Process

The Draft Land Use Strategy was prepared and produced by the Pikangikum First Nation, in collaboration with the Ontario Ministry of Natural Resources, Pikangikum First Nation's planning partner in the Whitefeather Forest Planning Area. The four phases of planning are described in the Terms of Reference, and are illustrated in Figure 1. Note that the final Land Use Strategy is expected to be completed by March 2006 *[Note: Comments on the draft were to be submitted by January 2006. Research to date has not successfully located the Final Land Use Strategy]*.

Documentation supporting this planning process has been made publicly available through the Whitefeather Forest Initiative website and the Environmental Bill of Rights electronic registry.

Figure 1: Planning Stages and Key Consultation Points of the Whitefeather Forest Community-based Land Use Planning



Goals, Objectives, and Principles

The draft Land Use Strategy is guided by the Pikangikum First Nation's responsibility to "keep the land", ensuring continuity of customary stewardship responsibilities on ancestral lands. The Land Use Strategy addresses the following goals:

- Ensure Pikangikum First Nation customary stewardship responsibilities for keeping the land guide the protection and orderly development of lands and resources.
- Ensure resource-based economic development and employment opportunities for the members of Pikangikum First Nation.

- Harmonize proposed new land uses with existing and customary land use practices of the Pikangikum First Nation.

A series of ten objectives that can be achieved through implementation of the strategy are also identified as follows:

- To maintain our relationship to the land as a cultural landscape
- To sustain the biological diversity and abundance of the Whitefeather Forest Planning Area
- To maintain remoteness as a defining feature of this land
- To sustain free-flowing waterways and healthy intact watersheds
- To support existing and identify new livelihood opportunities in commercial forestry and other sectors identified in the Strategy
- To identify land use areas for economic development opportunities that provide primary benefits for Pikangikum First Nation members
- To secure the best-end and highest value use of resources
- To enhance recreation opportunities
- To establish dedicated protected areas for the conservation of special natural heritage and cultural landscape features
- To contribute to larger scale objectives such as protected areas systems, adjacent First Nation interests, and needs of species at risk.

Guiding principles by which the goals and objectives are to be met are also identified in the draft Land Use Strategy.

Setting Boundaries

The Community has selected the trapline areas of the Pikangikum First Nation to define the boundaries of the Whitefeather Forest Planning Area. These traplines were established by the provincial government in 1946 as designated trapping areas for the First Nations. While the Community was not bound by these traplines long ago, in the current context they "provide a useful basis for Community-based Land Use Planning". A signed Accord with three neighbouring Manitoba First Nations (Polar River, Paungassi, and Little Grand Rapids), May 2002, on the western side of the Whitefeather Forest Protected Area has affirmed the use of trapline boundaries as the planning tool to identify respective First Nation planning areas.

Area Dedications are specific tracts of the Whitefeather Forest Planning Area that have been designed to best accommodate a recommended land use intent, or set of intents. Pikangikum First Nation has designed the Area Dedications using their detailed knowledge of the land at a stand and eco-site level, planning for future opportunities on the basis of ecological principles.

3. Roles, Responsibilities and Relationships in the Planning Process

The Community-based Land Use Planning process is a new process for both planning partners, and it is described as a unique process that cannot be compared to initiatives elsewhere. Both partners (Pikangikum First Nation and Ontario MNR) have committed to working in a cross-cultural context within the new policy environment.

Central to the Whitefeather Forest Initiative is the insistence by Pikangikum First Nation that they be "in the driver's seat" for economic activities that take place on their land. They are leading the development of environmentally sound economic opportunities in the form of tribal enterprises that are operated by the community as a whole.

Figure 2 illustrates the basic structure for the Whitefeather Forest Initiative Community-based Land Use Planning process. Pikangikum First Nation proposed and continues to lead the planning process. As such, both the Technical Resource Team and the Steering Group undertake community-mandated planning tasks. The Steering Group is made up of approximately forty representative community members, such as the head trappers and other Pikangikum Elders, and youth. This Group meets regularly and provides the core direction for the planning process. The Steering Group makes all preliminary decisions made on behalf of the community throughout the Strategic Action Planning process. In other words, it is those that are the most intimate with the land that are guiding the Community-based Land Use Planning process. The Steering Group also works closely with the Whitefeather Forest Management Corporation staff and the Pikangikum First Nation Chief and Council.

The Technical Resource Team is responsible for "in-community work". It provides information and manages projects. The Technical Resource Team is comprised of members of the Pikangikum, Timberline and the Taiga Institute. The biophysical data collection component of the planning process will be carried out by the Pikangikum First Nation through its co-venture partnership with Timberline Forest Inventory Consultants. The Taiga Institute has been providing technical support for the Whitefeather Forest Initiative since its inception in 1996. Members from the institute have worked with the Pikangikum First Nation to build the cross-cultural bridges needed to advance their Whitefeather Forest Initiative. The Taiga Institute has helped give voice to the Pikangikum Elders and its members to outsiders about the Whitefeather Forest Initiative *[Note: Only limited information is available on the function/accomplishments of the Technical Resources Team]*

The Pikangikum First Nation Council provides day-to-day governance-based direction to the process as required. The Pikangikum Plenary Community Assembly gathers to provide plenary direction to the process (final say).

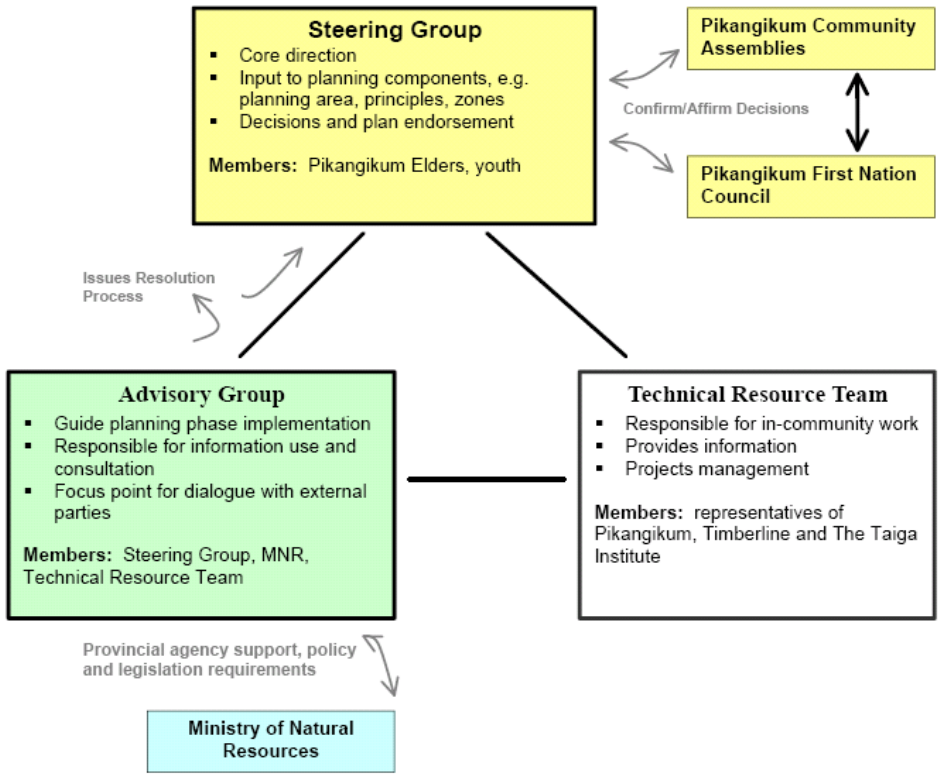
The Advisory Group is responsible for guiding the implementation of the planning phase. In particular, it is responsible for information use and consultation. The Advisory Group is the focal point for dialogue with external parties. It is comprised of members of the Steering

Group, the Ontario MNR and the Technical Resource Team. In this cooperative relationship Pikangikum and Ontario are using a joint planning Advisory Group to coordinate planning tasks in which each have respective responsibilities, especially with respect to dialogue with interested parties and consultation processes. Pikangikum is taking the lead role in the cooperative relationship. Future planning and management of the Whitefeather Forest Planning Area is to be guided by this Advisory Group. The Advisory Group will oversee communications and delegate as required, including developing and ensuring public notices are submitted as required, compiling a mailing list, initiating mailings of the TOR, issues and options document, notices of meetings, draft strategy, final strategy, and any other information deemed appropriate.

Pikangikum First Nation has formed a cooperative relationship with the Province of Ontario through the Northern Boreal Initiative. The Province provides input, assists with integration between local, landscape, and provincial context supporting Community-Based Land Use Planning.

In this cooperative relationship Pikangikum and Ontario are using a joint planning Advisory Group to coordinate planning tasks in which each have respective responsibilities, especially with respect to dialogue with interested parties and consultation processes. Pikangikum is taking the lead role in the cooperative relationship. The Land Use Planning Advisory Group is comprised of representatives from the Community (2 elders, the Community Land Use Planning Coordinator) and two representatives from the Province.

Figure 2: Structure for Whitefeather Forest Initiative Community-based Land Use Planning



4. Public Engagement / Consultation Processes

[Note: The process used to identify stakeholders, experts and other communities of interest was not explicitly discussed in the research material available]

Description of the Consultation Process

Several consultation approaches were used throughout the development of the draft Land Use Strategy (see Figure 1). The Community committed to a consultation process involving community members, interested parties outside the community, Ontario, and the public.

Ongoing Pikangikum First Nation involvement occurs through the Steering Group (~40 head trappers and Elders of the Pikangikum First Nation), the Band Council, the First Nation plenary authority (community meetings) and through specific information gathering processes (the Indigenous Knowledge Documentation project – see below). Elders carry information about the Whitefeather Forest Initiative to other community members. Communication is also regularly conducted through the community radio.

Ongoing dialogue with interested parties occurred throughout all planning phases. Both informal and formal meetings were held, in addition to presentations and open houses. In particular, dialogue with other First Nations has been ongoing with regular discussions being held in the interest of planning for traplines of mutual interest.

Formal consultation points occurred during the planning process (see Figure 1). Open houses were held in several First Nation communities at three different points in the development of the Land Use Strategy. Additionally, at each stage of planning, a notice was placed on the Environmental Bill of Rights electronic registry to formally identify opportunities for input. A decision record will be posted on the registry at the Final Strategy stage to summarize how public input was considered during planning. Other formal consultation mechanisms included mail outs and web site information. The Ministry of Natural Resources organized and facilitated two public consultation meetings with the assistance of Pikangikum First Nation through the Steering Group and involvement in the Advisory Group *[Note: I can't verify that this happened, although it was stated as an intended plan in the Terms of Reference]*.

Building Relationships and Collaborative Decision-Making

Although evidence demonstrating the full implementation of the Land Use Strategy (i.e. creation of commercial forestry tribal enterprises) is not available, there are a few examples of partnerships that have been established in line with the Whitefeather Forest Initiative:

- **The Whitefeather Forest Initiative: Economic Opportunities and Resource Stewardship – A Partnership Framework between Pikangikum FN and The Partnership for Public Lands**
  A letter of agreement was signed in 2003 between Pikangikum First Nation and the Partnership for Public Lands (comprised of CPAWS-Wildlands League, Federation of

Ontario Naturalists, World Wildlife Fund Canada). These partners share a common vision to protect and take care of the land and resources in the Traditional Territories of the Pikangikum First Nation that will form the basis for the Whitefeather Forest Initiative. The letter identifies several actions that the partners have agreed to which will help realize the Whitefeather Forest Initiative.

- **Whitefeather Forest Research Cooperative**
  A letter of agreement between Pikangikum First Nation, and four other universities/colleges was signed in 2004. The Whitefeather Forest Research Cooperative (WFRC) is an initiative of Pikangikum First Nation. The vision of the Pikangikum people for research in support of the Whitefeather Forest Initiative is to enhance their ability to take care of the land and resources in the Traditional Territories of the Pikangikum First Nation that forms the basis of the initiative. This vision honours the teachings and wisdom of Pikangikum Elders that supports the effective care and protection of the diversity of life on the land. This vision supports dialogue and working together to carry out research on the basis of respect and in a manner that will bring together the best of different knowledge traditions.

- **Protected Areas and First Nation Resource Stewardship: A Cooperative Relationship – Accord**
  In 2002, an accord was signed by four first nations (Poplar River, Pauignassi, Little Grad Rapids, and Pikangikum). They joined together so that they could "support each other and work together in [their] shared vision of protecting the ancestral lands and resources of [their] respective First Nations". In particular, they committed to cooperatively and collectively pursue the shared objective of creating an internationally recognized and designated network of linked protected areas on their ancestral lands.

[Note: Evidence was not readily available to respond to the following questions: participant funding; activities undertaken to increase public awareness; approach used to demonstrate/measure public confidence of the project; and key issues raised by the public].

5. Involvement Of Aboriginal People And Incorporation Of Traditional Knowledge

The Pikangikum First Nation has driven the creation of the Whitefeather Forest Initiative and the development of the draft Land Use Strategy. They proposed the original initiative and have continued to guide the process.

Capacity Building

Although not directly related to the Whitefeather Forest Initiative, members of three conservation groups (CPAWS Wildlands League, Wildlife Conservation Society, and Ontario Nature) launched a program to increase the capacity of First Nations to respond to land use activities within their traditional territories (covered application of GIS to land use planning in northern Ontario; building capacity to respond to land and resource management

decision-making processes; documenting traditional knowledge and concerns; etc.). This initiative was made possible by the support of the three conservation groups, the participating First Nations, and the Canadian Boreal Initiative).

Use of Indigenous Knowledge

Pikangikum First Nation has undertaken extensive data collection programs to support development of the draft Land Use Strategy, primarily through two tools - Indigenous Knowledge data collection and Vegetation Resource Inventory.

- **Indigenous Knowledge Dataset**
  Indigenous geo-referenced ecological and cultural information was collected for the Whitefeather Forest Planning Area under the guidance and with the participation of Pikangikum Elders. The dataset has almost 11,000 digital entries of geo-reference information organized into 147 categories of point, polygon and line features (e.g. caribou calving islands, fish spawning areas, migratory waterfowl staging areas, burial grounds, pictographs and residence sites). The Indigenous Knowledge dataset is a central planning dataset and has been recognized as such by the OMNR.

- **Vegetation Resource Inventory (VRI)**
  The Vegetation Resource Inventory (VRI) provides information on the forest (e.g. age class, ecology, and productivity) that was used to make land capability maps. The VRI, a state of the art biophysical inventory, is more than a timber inventory – it was developed to support environmentally sound decision-making. It consists of four components including: Standard Forest Resources Inventory (FRI); Forest Ecosystem Classification (FEC); FRI Enhancements; and Wetland Classification.

6. Reflection and Comment

The Whitefeather Forest Initiative has not yet been "tested" in terms of creating a tribal enterprise that is developed in the context of the Land Use Strategy. However, the process by which the Land Use Strategy was developed and the outcomes developed to date offers interesting lessons and observations:

- The collaborative approach taken by the Pikangikum First Nation and the Ontario MNR is a good example of a partnership in a situation of competing interests (i.e. private sector development, provincial statutory obligations, and First Nation interests). This case study may "set the bar" for future development opportunities in the northern boreal.
- The Land Use Strategy was created and is being driven by the Pikangikum First Nation. The aboriginal sense of relationship with nature, traditional land uses, and other First Nations is very prominent in the Strategy. This messaging is a valuable lens through which other communities of interest begin to understand the ways of the First Nations.
- Because the Land Use Strategy is a visionary, long-term planning tool, appropriate time has been allocated to the process. This lengthy and iterative process appears

to have worked effectively with the First Nation community's needs, priorities and culture. The degree to which this kind of approach (in terms of length and its iterative nature) will work in a project with tighter temporal and geographic boundaries remains uncertain.

7. Key Learnings

The Northern Boreal Initiative is inherently different from the process the NWMO proposes in that this is not a siting process; rather the focus is on an aboriginal community-driven initiative to promote economic enterprise, under their direction and control. Nevertheless, the Northern Boreal Initiative sheds light on some practices that are relevant in particular to the implementation of the NWMO's commitment concerning processes and mechanisms to integrate Aboriginal Traditional Knowledge into a siting process. Examples are found throughout the case study, but one of the primary examples is the Indigenous Knowledge dataset. The geo-referenced ecological and cultural information that populates the Indigenous Knowledge dataset was collected for the Whitefeather Forest Planning Area under the guidance and with the participation of Pikangikum Elders. The Indigenous Knowledge dataset is a central planning dataset and has been recognized as such by the Ontario Ministry of Natural Resources.

Whitefeather Forest Initiative – Timeline and Major Milestones

1999	Ontario Forest Accord signed
2001	Northern Boreal Initiative concept document released by MNR
2002	MNR Planning Policy Community-based Land Use Planning is prepared
	Whitefeather Forest and Adjacent Areas Community-based Land Use Strategy - Terms of Reference is prepared
	Protected Areas and First Nation Resource Stewardship: A Cooperative Relationship – An Accord between Poplar River First Nation, Pauingassi First Nation, Little Grad Rapids First Nation, and Pikangikum First Nation signed
2003	*The Whitefeather Forest Initiative: Economic Opportunities and Resource Stewardship – A Partnership Framework (Pikangikum FN and The Partnership for Public Lands* signed
2004	*Whitefeather Forest Research Cooperative (WFRC) – Letter of Agreement* signed
	Land Use Strategy for the Whitefeather Forest and Adjacent Areas is drafted and circulated for comment
2006 - expected	Final Land Use Strategy

8. Glossary

MNDM – Ministry of Northern Development & Mines
NBI – Northern Boreal Initiative
MNR – Ontario Ministry of Natural Resources

9. Sources

First Nations Forestry Program FNFP e-newsletter (A joint Natural Resources Canada and Indian and Northern Affairs Canada Program, December 2005)

Keeping the Land – A draft Land Use Strategy for the Whitefeather Forest and Adjacent Areas (Pikangikum First Nation, in cooperation with Ontario MNR, ~2004) *[Note: There's no date on this document, but other research evidence indicates it was likely produced in 2004]*

Protected Areas and First Nation Resource Stewardship: A Cooperative Relationship – An Accord between Poplar River First Nation, Pauingassi First Nation, Little Grad Rapids First Nation, and Pikangikum First Nation (2002)

Relationships between First Nations and the Forest Industry: The Legal and Policy Context (J. Wilson, Jo. Graham, Institute on Governance, March 31, 2005)

Report on the Global Source Book on Bicultural Diversity (Terralingua, June 10, 2005)

The Whitefeather Forest Initiative: Economic Opportunities and Resource Stewardship – A Partnership Framework (Pikangikum FN and The Partnership for Public Lands (CPAWS-Wildlands League, Federation of Ontario Naturalists, World Wildlife Fund Canada) (2003)

Whitefeather Forest and Adjacent Areas Community-based Land Use Strategy – Terms of Reference (Pikangikum First Nation, OMNR – June 2003)

Whitefeather Forest Research Cooperative (WFRC) – Letter of Agreement between Pikangikum First Nation with Whitefeather Forest Management Corporation; University of Manitoba, Sault College, Lakehead University and University of Winnipeg (2004)

Book Review

Review of "Voices from the Bay", the Traditional Ecological Knowledge Element of the Hudson Bay Programme

1. Purpose

This is one in a series of internal memos prepared for the Nuclear Waste Management Organization (NWMO) as background information on processes and approaches to engage the public and to integrate traditional ecological knowledge (TEK) into decision-making. The purpose of each of these notes is to help raise understanding of the key milestones in an appropriate siting process, the sequencing of these milestones, appropriate approaches for engaging various communities of interest, including Aboriginal peoples and possible issues that may arise through the process.

This internal memo reviews the book "Voices from the Bay", which contains the published findings of the Canadian Arctic Resources Committee's Hudson Bay Programme's traditional ecological knowledge study. The primary source for this memo was the book itself with some additional information about the study and Hudson Bay Programme coming from two newsletter articles published by the Canadian Arctic Resources Committee.[1]

2. Background

In 1992 the Canadian Arctic Resources Committee, the Environmental Committee of Sanikiluaq (an Inuit community on Belcher Islands in Hudson Bay), and the Rawson Academy of Aquatic Science started the Hudson Bay Programme (HBP). The HBP was a 3-year collaborative research initiative that originally planned to:

1) Assess the cumulative impacts of development on a large and complex ecosystem;
2) Utilize traditional ecological knowledge in the assessment of cumulative impacts; and
3) Develop an action plan for implementing environmentally sustainable economic development in the bioregion.

"Voices from the Bay" (VftB) was the study that emerged from the traditional ecological knowledge element of the Hudson Bay Programme. Unfortunately, the cumulative impact study and action plan elements of the Hudson Bay programme never came to pass for lack of financial support.

[1] Northern Perspectives Newsletter Published by CARC: "Towards a Sustainable Future in Hudson Bay" Volume 20, Number 2, Fall-Winter 1992 and "Voices from the Bay" Volume 25, Number 1, Summer 1997

3. Process

Research for the VftB study began in 1992 when thirty communities from the Hudson Bay and the southern shores of Baffin Island were invited to participate. Eventually 78 individuals including elders and hunters from 28 communities participated in the study. Between October, 1992 to January 1994, there were two study workshops and twelve regional workshops where participants provided the knowledge of their communities. The workshops were organized and conducted by programme co-ordinators with assistance from regional co-ordinators, language interpreters (the meetings were conducted in 4 Cree dialects, 3 Inuttitut dialects and English) and mapping technicians. In addition, an Elders' Advisor Committee was available to meet between regional sessions to discuss findings and clarify areas of inquiry that the study team had.

The workshops were divided into two parts with the first part focused on collecting the participants' knowledge on the ecology of the region, traditional management, human health and the effects of development. In the second part, the participants were asked to review and verify the information compiled and presented from the first meetings. The research part of the project was completed in 1995, and the final report, "Voices from the Bay" was published in 1997.

4. Value of Tradition Ecological Knowledge

The study partners recognized that the Inuit and Cree living in the area were a valuable source of information regarding the ecosystem of the Hudson Bay region. This knowledge came from their observations while hunting, fishing, trapping and living in the environment over several generations. Traditional ecological knowledge was seen as a source of information that could support the study of the cumulative impacts of development in the area as little scientific research had been done on the scale, pace and causes of environmental change in the Hudson Bay bioregion.

5. The Study

VftB has three main sections with the first section summarizing the great wealth of knowledge that the Inuit and Cree use to understand the seasonal cycles, weather forecasts, currents, sea ice and the complex food web of the Hudson Bay. The second section outlines the impact that environmental changes in the Hudson Bay have had on the environment and the lifestyle of the Inuit and Cree. The final section presents observations and comments from the study participants about the impacts of development and the introduction of western culture on their people. It is the last two sections that provide the most insight on the challenges the Inuit and Cree face from environmental, economic and societal changes in this region.

6. Hudson Bay Programme

As mentioned earlier, the Hudson Bay Programme was never fully completed as no cumulative impact of development in the region was ever completed. This means that VftB is a stand-alone study documenting the wealth of knowledge that the aboriginal communities of the Hudson Bay possess.

It was the expressed desire of the aboriginal participants that their considerable investment of time, energy and valuable intellectual property be used as part of a cumulative study, and in any planning, assessment and political decision making processes in the region. The uncompleted Hudson Bay Programme meant that the process did not live up to the aboriginal participants' expectations for the study.