

REPORT OF THE NWMO TRADITIONAL KNOWLEDGE WORKSHOP - 2009

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NUCLEAR WASTE
MANAGEMENT
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REPORT OF THE NWMO TRADITIONAL KNOWLEDGE WORKSHOP (DECEMBER 10, 2009) NWMO OFFICE TORONTO, ON

1. PURPOSE OF THE WORKSHOP

... a workshop which brought together participants who have diverse and specialized expertise and proven track records in working with aboriginal people and communities to share their insights and knowledge with the engagement, engineering and technical staff of NWMO to deepen their understanding on how best to respect and align both Traditional Knowledge and western science into the design, construction, and commissioning into operation of any nuclear waste disposal facility.

An important aspect of the NWMO's work has been building outreach and involvement structures with respect to aboriginal interests that may be touched by the work and undertakings of NWMO in the siting and development of a long-term management facility for Canada's used nuclear fuel. These efforts began during the Study Phase from 2002-2005, and have been ongoing since. They have also included the establishment of an NWMO Elders Forum of First Nation, Métis and Inuit Elders and youth.

This workshop was intended to advance this work into an operational context. The specific goal was to explore different dimensions of the interface between what is often referred to as "Western Science" and "Traditional Knowledge" including:

- The methodologies on which each relies – i.e. a focus on the way in which the 'knowledge' within each is developed and shared
- How the nature of this "knowledge" differs, if at all – i.e. focus on the substantive quality of the knowledge
- How to engage with the holders of Traditional Knowledge effectively and respectfully
- Understanding the application of such knowledge, and when and how it should be employed – both in terms of the possibilities and the limitations
- Consider practical steps that are involved in incorporating Traditional Knowledge into planning and decision making processes, both from a technical and social impact perspective
- Identify potential elements of a process to review, evaluate, and adjust the involvement of such knowledge over the life of the undertaking as it may evolve.

The Workshop was designed as a facilitated discussion building off presentations made by four knowledge experts each of whom brought distinct and extensive experience with respect to indigenous (aboriginal) communities and the role of Traditional Knowledge (i.e. indigenous' in respect of land and place). This widened into a broad interactive discussion amongst the

participants with NWMO participants similarly sharing their background experience, personally and organizationally. This is a summary report of the presentations and discussions over the workshop.

2. OPENING DISCUSSIONS

Glenn Sigurdson has a proven track record in dealing with interactions among diverse interests - within, between, and among organizations - building relationships, achieving consensus, developing partnerships, and resolving disputes. He is particularly known for his work with respect to large-scale issues involving multiple parties relating to resources and the environment, often involving First Nations. He is Associated with Simon Fraser University in Vancouver BC, where he is an adjunct Professor in the Faculty of Business, and Senior Dialogue Associate, Morris J. Wosk Center for Dialogue. He is a former President (1996) of the Society of Professionals in Dispute Resolution (SPIDR), now known as the Association for Conflict Resolution, the pre-eminent international organization in the ADR field, headquartered in Washington, D.C. He co-authored Building Consensus for a Sustainable Future: Putting Principles into Practice and is profiled in the publication of the Program on Negotiation at Harvard Law School (2000): Public Dispute Mediators: Profiles of 15 Distinguished Careers.

Glenn Sigurdson, who was responsible for the organization and facilitation of the session, offered some perspectives to open the workshop reflecting some of the ideas that had emerged from his preliminary discussions with the participants:

- Distinction: “the holders of Traditional Knowledge and the knowledge they hold’
- Definitions: ‘Western science’? Traditional Knowledge? What do we really mean by these terms? How are they different? “Truths” - How can we incorporate different kinds of knowledge expressed in a different way, illuminating different kinds of truths within organizational structures and operations like NWMO? What implications will this have in terms of traditional ways of doing

business internally within an organization like NWMO and the way it conventionally organizes and the practices and processes it follows?

“Holders of Traditional Knowledge” includes a range of people in different proximity to the “Traditional Knowledge” they hold- with significant differences in different settings, geographies, cultural backgrounds. Some “holders” will still be pursuing traditional lifestyles (i.e. active trappers and hunters on the land base). Others may now have become summer visitors with stories of ‘I remember when my grandfather took me out when I was a youngster to show me how to live on the land’. And between these two ends of the spectrum a wide diversity with different connections in time and space to this knowledge. Wherever an indigenous person or community is along this spectrum, there will be an expectation of respect and responsiveness to those who connect with this knowledge base in one way or another both in its own right, and as a defining aspect of indigenous identity in relation to land and to the environment.

How the organization engages with the “holders”, wherever they are on this spectrum, will translate into a measure of respect for ‘the Traditional Knowledge they hold’. For some it may be ensuring that the way the inquiry that western science is being asked to consider is framed in a way that is respectful of those who hold Traditional Knowledge. Or it may point directly to the question as to how Traditional Knowledge is to be validated and incorporated alongside

western science with its well established processes of inquiry, and validation required to credential its findings.

The workshop was opened by the participants introducing each other after an opportunity to share backgrounds, as well as identifying a key perspective or desired outcome that the other person had indicated as being important for them to learn or achieve in the workshop.

Some of the themes/questions that emerged from these opening conversations included:

- What will it take to understand the space between these two ways of approaching knowledge – between these two different ‘realities’?
- In building effective relationship between the proponent and a community how will an indigenous community define and express itself (Vote, consensus, Chief and council, hereditary leaders, etc.)?
- How do we deal with the fear that may arise in indigenous communities, that Traditional Knowledge that is volunteered will be used inappropriately (e.g. privacy of sacred sites)?
- Acknowledge the importance of knowing and declaring “what we do not know” - not just what we do know?
- Using language to communicate technical, legal, and risk concepts in ways that are clear and understandable?

3. PRESENTATIONS

The presenters learned from the NWMO and the discussion evolved over the course of the Workshop. The presenters candidly described their experiences while helping to understand that some of the past experiences of aboriginal peoples with development projects have been very negative. As a result some of the descriptions in this section can sound quite negative.

Setting the Context and Challenging Assumptions

Mark Duiven Presentation

Mark Duiven- A community development consultant in northern Canada as well as Asia, the Caribbean and Mexico with 23 years of broad and multi-faceted experience centered on working directly with indigenous people. It includes community economic development, resource management, policy development, and government relations. He has special interest and considerable experience in the development of fisheries including the development of enforcement and interdiction services, marketing, and branding and the development of partnerships with mainstream seafood distributors. He also brings experience and interest in environmental assessment and review in the Canadian context – and has served on a federal review panel. His education includes an undergraduate degree from the University of Victoria, and a PhD and a Master Degree earned in Ottawa.

Mark brings a deep background involving aboriginal communities within BC, and specifically the Skeena River on the Pacific coast where he has been the Deputy Commissioner of the aboriginal based Skeena Fisheries Commission for over twenty years.

Organizations of aboriginal nations have evolved and been maintained since the last glaciations, bound by commonality of traditional legal systems across these nations (“incipient states”) and common commitments to the protection and

management of natural resources, especially salmon (i.e. the Nations have much more sophistication and capacity to manage complex issues than people think).

The Skeena Fisheries Commission “translates” TEK into “science”; “we go out and measure what people tell us to measure.” “We formulate a question and undertake science to determine if the reportage is helpful to improving scientific understandings. The science that is produced is peer reviewed, and published” (i.e. (Proceedings of the Royal Society, Geophysical Research Letters) Through the development of the knowledge base in this way, the issue of “anecdotal” or “non-rigorous” approaches has been dissipated. This evolving knowledge is applied in managing the resource within a co-management context where the reality that is taking shape is increasingly “indigenous management” with indigenous staff and officers.

He explained the aboriginal point of reference in the areas where he works in these terms. TK/ATK/TEK¹ (whatever acronym one prefers) are elements in codified traditional law (“Ayooks Nia’i” the “laws of our grandfathers”), which is highly specialized and relied upon by practitioners within the Indigenous community. Based on his experience he had this guidance to offer:

- Don’t assume linear causation, or that time has meaning (reincarnations are normative, so today’s “ticking clocks” are meaningless).
- Do assume parallel universes and other conceptions of ‘reality’ than what your own wisdom has taught you.

The legacies of past resource decisions never die; they resurrect themselves and must be addressed in every new decision-making process or else it will fail. ENGOS (Environmental Non-Government Organizations) and BINGOs (Big International NGOs) tend to be supportive of the Indigenous ‘agenda’ espousing incorporation of TEK in the resolution of persisting issues.

The critical importance of what, and why, an indigenous community might consider a place, or a resource, to be “sacred” is rarely addressed; Traditional Use Studies are often too constrained (by the proponents). What is ‘sacred’ is what aboriginals say it is. If everything is declared to be ‘sacred’, then the community is likely saying implicitly that it is “unwilling”.

Relationships that flatten the initial power imbalance between groups or communities (e.g. training and placement of fully competent Fisheries Conservation Officers among and alongside DFO enforcement officers) within the Skeena Watershed are the only way to maintain enduring positive collaboration; unequal relationships inevitably become unstable, and prior investment in trust building or due process is placed at risk.

Governmental anxieties about “aboriginal Veto” is deeply pervasive in all public regulatory processes i.e. in part, this arises because a convergence of aboriginal interests around the Crown’s duty to consult and the federal fiduciary obligation, the practical combined effect of which is essentially a de facto “veto.”

¹ Traditional Knowledge (TK)/Aboriginal Traditional Knowledge (ATK)/Traditional Ecological Knowledge (TEK)

Building Relationships and Effective Communications

STEPHEN ELLIS PRESENTATION

Stephen brings extensive experience over the past ten years in land use and development within the North West Territories.

He spoke first of what he referred to as “process attributes” – which he highlighted as patience, respect and open minds- which is no different than any other community or sociopolitical reality

The importance of ‘first impressions’ cannot be underestimated. Face –to – face interactions are critical - avoid reliance on digital communications, even the telephone; employ translators; understand the limitations of language, including the likelihood of profound and unseen misunderstandings [e.g. sometimes small variations in a sound can have very, very different implications e.g. “pneumonia” mistaken for “ammonia”].

Stephen Ellis has advised and facilitated engagements among First Nations, governments, and industry pertaining to land and resource challenges for ten years. He has focused on building First Nation capacity to deal with industrial activity, particularly through the development and implementation of practical measures for consultation and accommodation. He has a Masters degree in Environmental Studies from the University; his thesis was:” Which way to Denendeh? Past failures and future opportunities for traditional knowledge and environmental decision making in the Northwest Territories”. He has a very active professional practice, and speaks and writes widely in his field.

Establishing who is the ‘accountable authority’ is a significant first step – is it Chief and Council (artifact of Indian Act), or Clan Leader? Or the community matriarch, or the Grand Chief in a Tribal Council? Elders Council? Women’s Council? Executives of Land Corporations or Economic Development Corporations?

Initiatives a proponent must engage in early is the identification of local (embedded) resources to help define relationships and power systems within the community that will influence the processes of dialogue and the character of any potential bilateral relationship. He had this guidance to offer:

1. Critical to engage with everyone, and on their terms, including in the bush and including making yourself ‘uncomfortable’
2. Remember that in aboriginal communities, the “individual is sovereign” because ‘leaders’ are constantly being replaced, and because current power relationships will constantly evolve.

Importance of encouraging all discussions that people raise with you in relation to the proposed project - no matter how irrelevant the proponent might think these subjects are.

Clearly fostering self-education and self-determination (“nation building”) is key.

- There is a growing expectation that activities on the traditional territory are subject to “free, prior and informed consent” applying at every stage of the processes, including prior approval of fieldwork by outsiders.
- Negotiating an ‘Agreement on a Process to Negotiate an Agreement’- so that expectations are clear at the front end is an important early step.
- Flexibility –Inevitably, as awareness builds and work unfolds there will be requests to expand siting criteria, and accepting those requests will be key to maintaining forward progress.
- Indigenous experience with ‘deep-rock uses ‘is unlikely to have any TEK paradigms so local people must participate in, (and might record for his/her community), all fieldwork needed to get a handle on the ‘deep rock’ issues and build awareness
- Importance of understanding the information content embedded in oral histories, stories, myths, etc.
- “Chief Carries Moose” and “Chief Carries Moose II” are textbooks representing the current state of ‘best practice’ of obtaining and recording TEK.

Addressing Social and Ecological Values in Reclamation

JUSTIN STRAKER PRESENTATION

Justin’s experience in his work with the Ft. McKay First Nation was the particular focus

Justin Straker is a Senior Associate with the consulting engineering firm Stantec, working in the fields of mine reclamation, ecological biomonitoring, and technical representation of First Nations communities. He has been a practicing consultant in these fields for over 14 years, working for mining industry, government, and aboriginal clients, including almost 10 years of extensive work as a technical reviewer and representative for the First Nation community of Ft. McKay in northeastern Alberta. Mr. Straker was a partner in a small reclamation-consulting firm. He has a Bachelor of Arts degree (Hon.) in Anthropology from McGill, and a Master of Science degree in Soil Science/Forestry from

in his presentation. This work has focused on mitigation (reclamation) of impacts from mining development, and on assessment and land-use planning associated with cumulative effects of industrial development in the community’s traditional territory.

An industry-funded “liaison corporation” is the consistent point of interface between ‘the project’ (oil sands development) and ‘the community’ (i.e. Ft. Mackay band)

A ‘Cultural Keystone Species Study’ had been completed earlier by his colleague, Ann Garibaldi. This was an ethno

botanical effort to understand the community’s desired vision of a final landform after reclamation that involved the direct development and application of TEK (plants and animals of medicinal, spiritual and dietary significance) in closure planning. This helped in the translation of key elements of the socio-cultural landscape into knowledge that ‘western scientists’ could apply in reclamation planning. It also taught the value of ‘walking the land’ and learning the species living in the habitats on the landform.

Ft. McMurray Specific Assessment is a trilateral process, industry-funded, whereby the proponent's Environmental Impact Assessment (EIA) team generates all the data needed for an EIA, and the community manages the EIA process, and writes the Environmental Impact Statement (EIS), using these data, after completion of a community-wide and community-based Cumulative Effects Assessment.

"Compensation" can be thought of as a 'payment to the land' for taking back and storing wastes, for losses of function, for returning fuel residues to their source. Another way of thinking of this is an offering" to the land, as a demonstration of respect for the types and extent of "injury" the land is being asked to sustain.

Developing a Work plan – Perspectives on the Way Forward and the Elements

MIKE MCKERNAN PRESENTATION

An environmental consultant for over 35 years, Mike McKernan has worked in a wide diversity of assignments, in diverse settings.

Different communities will have many different reactions to a nuclear presence in their environs, and could trigger complicated dynamics both internal to the community and with proximate communities. Communities in which reactors have been located over a long period of time and developed a comfort level and confidence with adjacent facilities are very different than aboriginal communities with no such experience. They will almost certainly start from a place of uneasiness and fear. Where the potential for this nuclear presence arriving on their traditional territories originates with a non-aboriginal community, tensions may arise. Conversely, the

Mike McKernan has been an environmental consultant for over 35 years. A co-founder of TetrES Consultants Inc. in 1990, he is a prominent figure in the Manitoba environmental consulting industry and has worked on projects across western Canada. Mike has earned Masters Degrees in Botany from the University of Manitoba in 1984 and in Environmental Studies from York University in 1973. He is an experienced multidisciplinary environmental Project Manager and Study Director. His experience covers all issues of impact related to air, water, soil, vegetation, fish, wildlife and human populations that could be affected by proposed developments and includes:

- *Design and management of multi disciplinary -Environmental Impact assessments for regulatory and public review processes; complex site remediation; and environmental baseline studies;*
- *Strategic management of regulatory compliance and licensing processes;*
- *Expert testimony;*
- *Development of public consultation processes;*
- *Development of site specific and risk based water quality studies;*
- *Guidance on corporate environmental due diligence, and mergers and acquisitions;*
- *Development of corporate sustainability reporting tools)*

“willingness” of aboriginal communities in a region may alienate adjoining ‘white’ communities who are uneasy with such facilities or that some native driven solution is taking shape.

Step 3 and Step 4 in the NWMO siting process must be and be seen to be closely interlinked for success in Step 5– ‘willingness’ - can’t succeed without great prior investment in information-sharing, and “being and being seen as real”. Building real understanding in skeptical people takes a long time – and building acceptance, if not trust, will be measured in years. The greatest asset now owned by the NWMO is time, and the time to do it right by building the necessary relationships, something that is often not the case in most projects.

Be watchful for assumptions – e.g. that data on aboriginal lands or in traditional territories is the same as on any other land base; that no permission is needed to investigate and do measurement; that data collected is ‘owned’ to be used in any way someone chooses; that stories, myths and anecdotes aren’t real data; that storage and management of data from traditional territories is ‘up to us’; that permission is not needed to decide what is mapped & shared with others; that this has to be done quickly within a fixed budget.

Every step in siting-feasibility assessment process is data-dependent. Gathering ‘data’ and ‘information in aboriginal lands & traditional territories, in many cases, requires: permission; commitment to protection of indigenous knowledge; sensitivity to different concepts of ‘information’; sensitivity about what is mapped & shared with others; desire to control/influence data dissemination; sensitivity to concept that some TK is seen as intellectual property.

In truth, ALL knowledge is special; TK isn’t inherently better or more magical than “Western Science”. It is just a different way of obtaining knowledge.

Whatever may be the siting criteria, ecologically sensitive areas (how do we know, what thresholds we need to identify, what information do we need to/have to know, and who decides are not small challenges) should be avoided.

A key step in site-selection process is understanding land-tenure history; developing certainty about whose lands you’re interested in... understanding tenure practices and their maintenance... with access contingent on appreciation earned through respect and patience.

Knowing how to talk with each other is fundamental ...we need to *ask* how to talk together, *ask* who we most need to learn from and should be talking to, *ask* for guidance and translation...conversations start *slowly*, with the appropriate people. Conversations occur in homes, in the bush. Oral histories and stories are respected as ‘data’ or ‘information’.

Power imbalances and inequities are always in play in one way or another, in the sunshine or in the shadows, and everything said and done will be seen through those filters, and sensitivities to them, and what is said and done will be measured through those lenses. “(All actions including meetings and fieldwork for information-gathering will be judged in terms of their *attention* to, *mindlessness* about, or *remedy* for such imbalances or inequities”).

The Bedrock is – RESPECT- and that is the bedrock of Traditional Knowledge.

Don't assume Governments are going to 'solve your problems'. Usually they are under resourced and you need to help them build the capacity to enable them to help you, most particularly in respect to their ability and wherewithal to discharge the duty to consult obligations under section 35 (including seeking your own professional advice).

4. QUESTIONS IDENTIFIED AND DISCUSSED

This discussion was focused on identifying key questions, and sharing perspectives around them, recognizing that there was insufficient time to fully engage in developing responses to them.

- a) From your experience, how should we prepare for an initial meeting with a First Nation Community? With whom should the conversations begin? How much of the culture do we need to understand first before we converse/engage? How do we learn about issues of localized importance so that we bring a respectful sense into our conversations with the community?
- b) How can the challenges of players changing over time and circumstance be managed in efforts to support capacity building in the community in an open and transparent way?
- c) How will what is “negotiated” in one community be compared to another and play out? With what implications? Have you had experience with the implications of the “internet” on these dynamics and what advice would you have?
- d) In our discussions with aboriginal people they often raise the concern that individuals and groups within the community will need to be engaged and that everyone should be involved. What does your experience tell you in terms of how to deal with a community if there is a lot of tension between different groups within it? (i.e. especially when one group wants private sidebar discussions, and/or when leadership groups may limit participation by other community groups?) And how do we deal with that in the context of negotiating an MOU which is a critical pivot point in

starting, building, and managing the relationship between NWMO and the community.

- e) What is an effective means through which to begin the process of developing relationships with the communities? Is it through some form of 'community visioning exercise', or through the development of a local land use and occupancy study?
- f) How do we best take into account the reality that what goes on in any one community will have implications for others which may involve more regionally based planning processes?
- g) Are there sensitive issues that we will need to understand? E.g. to a technical person what is a collection of specific properties in a rock may be sacred ground to an aboriginal person? What is 'sacred' – for some aboriginal people may imply a superimposed attribute of 'mysticism' while to many it is sensitivity and reverence for specific locations?
- h) Is the Skeena Fish Commission's definition, use and application of "TK" the "state of the art" paradigm that NWMO can/should seek to emulate?
- i) What might be the benefits in creating a community-management broad based group/agency to provide independent and credible information around measuring and managing risks, costs and benefits of NWMO project which would have the ability to support interactions between NWMO and any given community?

5. CONCLUSION

NWMO is now facing the task of building a Workplan to begin the process of translating the words of *MOVING FORWARD* into action on the ground. A synopsis of some of the points made over the course of the day that may be helpful in informing and guiding the context for the workplan process include:

- a) Multiple communities, regional aggregations, and diverse communities of interest will be engaged on a voluntary basis as self identified 'interested parties'
- b) This complex constituency of players will likely be very diverse in many different ways – geographically, socially, economically, culturally, etc.
- c) Different approaches will be required with respect to different communities, and regions, including aboriginal communities with distinct rights and interests.
- d) Unique and special challenges will come into play including:
 - the way in which a 'community' expresses itself as a prospective interested party and ultimately as a partner;

- operationalizing internally the recognition and incorporation of Traditional Knowledge within aboriginal communities;
 - Communication facilitated by the internet will flow between and among communities with respect to their interactions with NWMO;
 - Transportation through communities en route to the site presents special considerations.
- e) Every interested community that is engaged has the potential to emerge as the partner community
- f) The timeline associated with the project, its siting, construction, and commissioning are over many years, likely to exceed two decades.

This context is significantly different than conventional large project siting experience and practice. Typically a particular location is selected by reason of location or resources and is then subjected to a complex and intense scrutiny and public engagement. Time is an especially significant difference, and advantage for it provides the opportunity to build relationships over a long period, unlike many conventional projects and projects operating under very tight operational and financial timelines.

The work plan will need to be flexible and adaptive. Developing a clear, consistent, and transparent approach with the flexibility to be adapted and applied in different ways in different places will be a critical step.

There is only one opportunity to make a first impression. Getting going in a good way is critical to ending in a good place. Once you get going in a wrong way it is tough to change direction.

What happens and how it happens leading up to that partnering decision may have significant downstream implications in the way that opportunities are realized and risk is managed both in terms of securing regulatory approvals, and the timelines. The more effective relationships are built upstream, the greater the potential to create long term value in the operation of the facility downstream.

The Memorandum of Understanding required to be developed with the community(ies) outlining the scope of the feasibility work to be undertaken, establishing clear expectations as to how the community and the NWMO will work together, the approach and terms of reference in respect to a multidisciplinary peer review, citizen engagement, and funding for the community to support the exploration of its interest is a critical and common point of engagement and departure. It also provides an important pivot point to provide a focus in the development of a Work plan that will meet the exigencies driven by the context, generally, and in the specific environs of the community. A very specific focus of the conversations to develop this memorandum will need to be Traditional Knowledge, and the expectations of those who are the holders of it are understood and actions taken which reflect that knowledge base.

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