A REVIEW OF SELECTED

ENVIRONMENTAL MANAGEMENT ISSUES

FOR THE

PROPOSED MACKENZIE GAS PROJECT

prepared by

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for

ALTERNATIVES NORTH

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Special thanks to my wife and children who put up with me agonizing over this submission for many months.

DISCLAIMER

The views and opinions expressed here do not necessarily reflect those of Alternatives North or any other organization, and are not made on behalf of any intervenor in the Joint Review Panel, or any other individual or organization. The author bears sole responsibility for any errors or omissions.

EXECUTIVE SUMMARY

This paper discusses key issues relating to the environmental management of the proposed Mackenzie Gas Project (MGP). Given time and resource constraints, it was not possible to address environmental management of the MGP and governments in a comprehensive fashion. Instead, this submission focuses on three matters considered to be of the highest significance:

1) the state of the Northwest Territories (NWT) environmental management regime;
2) liability, closure and reclamation, and financial security for the MGP; and
3) environmental agreements including independent oversight.

State of the NWT Environmental Management Regime

There are critical gaps in the land and resource, and environmental management regime that will govern the proposed MGP. Components of the existing regime in the NWT were reviewed—land use planning, environmental assessment, land water regulation, cumulative impact monitoring and audit, as well as matters such as the capacity and resources of management bodies in this jurisdiction. The submission calls upon the Joint Review Panel to make a number of recommendations to ensure that there is a proper and adequate environmental management system for the MGP. Highlights include the need for the Panel to recommend:

- to the Department of Indian Affairs and Northern Development (DIAND) and the GNWT to support the completion of legally-binding land use plans for the Sahtu and Dehcho as soon as possible but well before construction of the MGP.

- to the NEB, Environment Canada and the GNWT that an agreement be negotiated on the regulation, monitoring and enforcement of air emissions from all MGP facilities and activities. In the absence of any clear legislation or regulation, appropriate air emission standards need to be incorporated into NEB approvals for all MGP facilities and activities.

- to the GNWT, Environment Canada, DIAND and applicable Renewable Resource Management Boards that an agreement be negotiated (possibly through an environmental agreement or as terms to NEB approvals) on the monitoring and management of wildlife in relation to all MGP facilities and activities.

- to the MVEIRB and the ISR's environmental assessment regime that guidance documents be developed for proponents and the public on the issues of climate change and follow-up to ensure proper assessment and use of best practices for additions to and expansions of the MGP.

- to the Steering Committee of the Cumulative Impact Monitoring Program (CIMP) that it develop a detailed operational plan, design a responsible authority, and draft regulations to give effect to the Program before December 31, 2007, and to DIAND that it provide stable, long-term funding for the CIMP as soon as possible.

- to the National Energy Board that it open an office in the NWT in regard to its regulatory authority and responsibilities with regard to the MGP, and that that it prepare a communications strategy for the NWT to improve the pubic awareness and understanding of its roles and responsibilities.

Liability, Closure and Reclamation, and Financial Security

This submission proposes that the principles and objectives of an ideal regime be applied in order to assess the adequacy of the liability, closure and reclamation, and financial security requirements for the MGP under the existing regulatory regime. This regime is based on a similar concept already developed for use in the context of mining and mineral exploration in the NWT.

Several clear conclusions are drawn from the review and assessment. There is no coordinated approach to liability, closure and reclamation, or financial security for hydrocarbon development in the NWT, including the MGP. Closure and reclamation are handled on an ad hoc basis by a myriad of agencies and governments. There is very little regulatory guidance for closure and reclamation of oil and gas facilities in the NWT, and detailed expectations or closure standards do not exist. Existing provisions for closure and reclamation do not require that ecological diversity and productivity be restored or even an agreed upon end use that does not compromise future generations. Further, there are no clear, mandatory requirements for closure plans before operations begin, or financial security to cover approved closure plans to ensure that the public purse is adequately protected.

The liability, closure and reclamation, and financial regime in place for the MGP do not come close to meeting the criteria for the ideal regime outlined in this submission.

To address these deficiencies, the submission calls upon the Joint Review Panel to make several recommendations to both the proponents and the regulators for the proposed MGP. Among other things, the Panel is urged to recommend:

- to all Responsible Authorities that these guiding principles for closure and reclamation of the MGP be incorporated into all project approvals:

    - ✓ Sustainability as the cornerstone and goal of all reclamation activities to ensure that the decisions made today do not take away or threaten the productivity and diversity of ecological systems, or diminish the economic and social opportunities for future generations.
    - ✓ There should be full financial security for all MGP components and related activities to ensure that there is full cost accounting, no hidden subsidies, zero public liability, and no double-counting of liabilities. Security should be in an easily accessible form with as few conditions as possible. Release of security should be based on achievement of agreed upon and measurable closure criteria.

- ✓ Transparency and accountability of decision-making through meaningful and fair public participation in all stage of reclamation planning.
- ✓ Conceptual reclamation plans should be submitted and approved before any construction or operation of any MGP component commences, with requirements for more detailed plans on a regular basis, building on and linked to research, with clear objectives and measurable criteria to determine success.
- ✓ Recognition of the special role of Traditional Knowledge and communities in setting a baseline, understanding trends and monitoring of reclamation.

- these priority initiatives related to closure and reclamation for the MGP be implemented:

  - ✓ Negotiation of a Memorandum of Understanding between DIAND and Northern Development and the Mackenzie Valley Land and Water Board regarding their roles and responsibilities related to overall closure and reclamation as it relates to water, land and security.
  - ✓ Development of closure and reclamation guidelines and financial security calculation guidelines by the Mackenzie Valley Land and Water Board to be used by all regional land and water boards and in setting water license and land use permit terms and conditions.
  - ✓ That the NEB include requirements for reclamation plans, periodic revisions to such plans, and financial security in all *Canada Oil and Gas Operations Act* approvals related to the MGP and in the certificate(s) for the natural gas and liquids pipelines.
  - ✓ That all Responsible Authorities for the MGP require appropriate financial security in all the MGP approvals to fully implement the wildlife harvesting compensation provisions of the IFA.

Environmental Agreements as Management Tools

This submission urges the Joint Review Panel to consider the use of Environmental Agreements as crucial management tools to coordinate and integrate the numerous regulatory requirements (including mitigation and monitoring) that apply to the proposed MGP. The submission suggests such Agreements can potentially serve several valuable functions:

1. Provide a mechanism to confirm and implement agreed upon proponent commitments made during the Joint Review Panel process;
2. Ensure coordination of review and approval of the design of environmental management plans and environmental monitoring programs, and the results of such plans and programs;
3. Allow for a coordinated approach to follow-up programs including evaluating effectiveness of mitigation measures, assessment of actual project effects against predicted effects, and identification of long-term trends and potential problems from monitoring program results that feed back into project management;
4. Build public confidence in environmental performance though independent oversight and public reporting; and

5. Provide a means for coordination of financial security for closure and reclamation.

The submission calls upon the Joint Review Panel to make a number of recommendations relating to the need for Environmental Agreements to assist in managing the proposed MGP. These should include:

- Two separate Agreements, one for the anchor fields, gathering systems and related facilities, and another for the pipelines.
- Parties to the Agreement(s) should include the MGP proponents, regional Aboriginal governments and public governments (federal and territorial). There should be a public review period for each draft agreement, with reasons provided at its conclusion.
- The Agreements should be in place prior to any commencement of construction and staging activities, and last for the entire life-cycle of the MGP through to the completion of post-closure monitoring and reclamation.
- Funding for the implementation of the Agreement should come from the proponents, with some consideration of a contribution from public governments for start-up costs.
- Funding for the environmental agreements should be secured in advance, in relation to the expected levels of activity related to the MGP, with annual increases tied to cost of living increases.
- Periodic cumulative impacts reports should be prepared that review the results of compliance monitoring, predicted effects vs. monitored effects, success of mitigation measures, adaptive management performance, and trends in environmental effects monitoring results in comparison to pre-project baseline conditions with management responses, where appropriate.
- Independent oversight bodies should be created to undertake regular technical reviews of the results from environmental management plans and environmental monitoring programs, including assessment of the performance of regulators and inclusion of Traditional Knowledge in environmental management.

Overall Conclusions

The NWT environmental management regime was found to have very serious gaps, problems and uncertainties. Closure and reclamation planning, financial security and the review and approval of management plans and monitoring programs for the MGP are not articulated by either the proponents or the regulators in a coherent fashion.

Environmental agreements offer one potential solution in solidifying commitments, laying out a clear process and timelines for the review and approval of environmental management and monitoring programs, and building public confidence through independent oversight. In the absence of environmental agreements covering the MGP, it is difficult to imagine a properly functioning internal environmental management system.

Without the adoption of the recommendations presented in this submission, proper environmental management of the MGP will not be possible, and the MGP should not be allowed to proceed in its current form.

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1.0 INTRODUCTION

This submission focuses on several key issues for environmental management for the proposed Mackenzie Gas Project (MGP). The Guidance Document for Hearings (Joint Review Panel 2007) was used to narrow down the matters to be considered in this submission and ensure each squarely falls within the matters for discussion at the upcoming hearings in May 2007.

Rather than a systematic survey and assessment of the entire environmental management system, those matters judged by the author to be of the highest significance were selected for review in this submission:

- State of the NWT environmental management regime;
- Liability, closure and reclamation and financial security; and
- Environmental agreements including independent oversight.

Overall conclusions are set out at the end of the submission.

2.0 STATE OF THE NWT ENVIRONMENTAL MANAGEMENT REGIME

The *Mackenzie Valley Resource Management Act (MVRMA)*, for all its failings, was a laudable effort to establish an integrated system of environmental management in the southern portion of the Northwest Territories (NWT) as a result of constitutionally entrenched land claims agreements. The agreements themselves and the *MVRMA* were meant to give a greater say to all northerners and particularly Aboriginal peoples, over resource decision-making. The agreements and the *MVRMA* are reflections of Aboriginal culture and the growing recognition of the concept of sustainability.

While land use planning, impact assessment, land and water regulation, cumulative impact monitoring and audit are incorporated into the *MVRMA*, the implementation has left much to be desired as pointed out in the recent NWT Environmental Audit (DIAND 2006). There are particularly troubling gaps when it comes to land use planning, the failure to implement a cumulative impact monitoring program, inspections, and public participation.

The NWT Environmental Audit included coverage of the Inuvialuit Settlement Region (ISR) and its co-management regime at the request of the Inuvialuit leadership. The Audit is a requirement of Part 6 of the *MVRMA* and serves two main purposes. Firstly "to determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends" based on a functioning cumulative impact monitoring program. Secondly to conduct "a review of the effectiveness of the regulation of uses of land and water and deposits of waste on the protection of the key components of the environment from significant adverse impact" and "a review of the response to any recommendations of previous environmental audits" (s. 148 (3)).

Rather than repeat the findings of the NWT Environmental Audit as part of this submission, it would be more appropriate to focus on those matters that form critical gaps in the environmental management of the proposed MGP. The critical gaps are discussed below in terms of the integrated environmental management system that the *MVRMA* is supposed to establish, namely land use planning, environmental assessment, land water regulation, cumulative impact monitoring, and audit. Some cross-cutting themes such as capacity and resources, coordination and public participation are also presented below.

2.1 Land Use Planning

Land use plans are the foundation of any rational resource management system. Plans provide the context for individual decisions on human activities. Plans are where trade-offs, limits of acceptable change, ecological thresholds and sustainability are discussed and compromises made. Without plans, incremental decisions are made without the benefit of an understanding of the larger context of carrying capacity and community desires. Completed and implemented land use plans are absolutely essential for the MGP given its scale and the direct and induced human activities it will encourage. The significance of land use plans in the *MVRMA* cannot be

underestimated, as once a plan is approved, no activities inconsistent with the plan, can legally proceed unless an agreed exception is made to the plan, or a plan amendment is approved.

The NWT Environmental Audit found that land use planning in the ISR was working well in spite of the fact that the community conservation plans are not legally binding. Land use planning in the Gwich'in Settlement Area is well established, with the exception that the interim arrangements for the conservation areas will expire in January 2008 (DIAND 2006, pg. 3-5). DIAND had committed to change the *Canada Mining Regulations* to ensure that the spirit and intent, not to mention the legal wording, of the *MVRMA* is met. Although the required changes are minor and require Cabinet approval only, these changes have not been made.

A Sahtu Land Use Plan has not been completed even though work has been on-going for more than ten years. The NWT Environmental Audit recommended that this plan be completed and approved as soon as possible (DIAND 2006, pg. 3-6). A Dehcho Land Use Plan was approved by the Dehcho First Nations in 2006. The federal and territorial governments appear to be stalling in their review and approval and want to make the plan less protective of the environment, and/or tie its approval to the MGP or other progress at the negotiating table. The NWT Environmental Audit also recommended that land use plans in other parts of the Mackenzie Valley be completed as soon as possible, and went as far as to suggest that a Dehcho Land Use Plan could be made binding upon the Mackenzie Valley Land and Water Board as legally binding policy direction pursuant to s. 13 of the *NWT Waters Act*.

The following recommendations are offered regarding land use planning in the context of a proper and adequate environmental management system for the MGP:

RECOMMENDATION

1. The Joint Review Panel should recommend to DIAND and GNWT that the following measures be taken as soon as possible, and in any event, before construction begins on the potential MGP:

- **DIAND should amend the *Canada Mining Regulations* to ensure Mackenzie Valley land use plans are legally binding on all land uses. In the interim, the land withdrawals for the Gwich'in Land Use Plan conservation areas should be renewed indefinitely by DIAND;**
- **DIAND should provide the Sahtu Land Use Planning Board with the resources and assistance necessary to expedite the review of the Draft Plan, required revisions, and final approval as quickly as possible. Once a Plan has been approved by the Sahtu, the federal and territorial governments should review and approve the Plan as quickly as possible, and in any event, before December 31, 2007.**
- **DIAND and GNWT should approve the Dehcho Land Use Plan as quickly as possible and DIAND should provide written policy direction to the Mackenzie Valley Land and Water Board to follow the plan pursuant to s. 13 of the *NWT Waters Act*.**

2. The Joint Review Panel should recommend to the Gwich'in Land Use Planning Board and the Inuvialuit Game Council that as exploration and development activities related to the MGP increase in scope and intensity in the Mackenzie Delta and Beaufort Sea area, regular and periodic reviews of the appropriate land use plan and community conservation plans will become necessary with a special emphasis on ensuring that development remains within ecological thresholds and agreed upon limits of acceptable change, and measurable and enforceable ecological thresholds.

2.2 Land and Water Regulation

Land and water regulation is important in the context of the MGP as this is where terms and conditions can and should be incorporated into individual licences and permits consistent with the mitigation commitments made by the proponents and recommendations from the Joint Review Panel. The recommendations from the Joint Review Panel, if accepted by the federal and territorial governments, become legally binding upon DIAND (for land use permits) and the NWT Water Board (for water licences) in the case of the ISR. They will be binding on the Mackenzie Valley Land and Water Board in the case of the Mackenzie Valley (for land use permits and water licences), and on the NEB in issuing approvals for exploration and production activities and facilities in connection with the MGP.

The significant findings of the NWT Environmental Audit related to land and water regulation were reviewed in the context of the MGP and an adequately functioning environmental management system. The Audit found that land and water regulation was generally functioning well but there is a critical gap when it comes to regulation of air quality. The NEB can regulate exploration, development and production activities and facilities, and has recently included the GNWT ambient air quality guidelines as a condition of approval of NWT activities (DIAND 2006, pg. 4-5). The Audit recommended that there be an agreement amongst federal authorities (including the NEB and Environment Canada) and the GNWT on jurisdiction over air quality to ensure that appropriate conditions are incorporated into regulatory approvals.

The Audit noted that there is a framework for wildlife management in the NWT but there are gaps with regard to enforcement and follow-up for wildlife and more generally, for land use permits (DIAND 2006, pg. 4-7 and 4-15). Other problems noted included coordination of enforcement, the need for clearly enforceable terms and conditions, inability to obtain land leases, and relatively low fines compared to other jurisdictions.

The following recommendations are offered regarding resource use regulation in the context of a proper and adequate environmental management system for the MGP:

RECOMMENDATION

3. The Joint Review Panel should recommend to the NEB, Environment Canada and the GNWT that an agreement be negotiated on the regulation, monitoring and enforcement of air emissions from all MGP facilities and activities based on the

maintenance of ecological integrity and human health. In the absence of any clear legislation or regulation, appropriate air emission standards need to be incorporated into NEB approvals for all MGP facilities and activities.

4. The Joint Review Panel should recommend to the GNWT, Environment Canada, DIAND and applicable Renewable Resource Management Boards that an agreement be negotiated (possibly through an environmental agreement or as terms to NEB approvals) on the monitoring and management of wildlife in relation to all MGP facilities and activities.

2.3 Environmental Assessment

Environmental assessment will become increasingly important should the MGP proceed as the project will undoubtedly result in induced development to keep the pipelines filled beyond the expected life of the three anchor fields. Major new additions or expansions of the gathering systems may trigger new environmental assessments that will allow for more careful planning and assessment for the use of best practices, improved technology, and to establish appropriate case-by-case conditions consistent with current land use plans and other regulatory guidance. Rigorous environmental assessment will be essential for effective cumulative effect assessment and management as the MGP expands and grows.

The NWT Environmental Audit noted that the Mackenzie Valley Environmental Impact Review Board (MVEIRB) has generally done a good job in fulfilling its mandate by showing leadership in developing better guidance for developers and the public and improving its processes over time (DIAND 2006, pgs. 5-1 and 5-3). The one area of weakness identified was the need for more detailed follow-up plans to measure actual versus predicted effects and the effectiveness of mitigation measures to ensure that there is feedback or lessons learned for subsequent developments and assessments (DIAND 2006, pg. 5-8). This is especially the case for recommendations related to socio-economic matters. Insufficient consideration of climate change and the need for better cumulative effects information also resulted in Audit recommendations.

The Audit found that the environmental assessment regime in the ISR was functioning well (DIAND 2006, pg. 5-14).

The following recommendation regarding environmental assessment is offered in the context of a proper and adequate environmental management system for the MGP:

RECOMMENDATION

5. The Joint Review Panel should recommend to the MVEIRB and the ISR environmental assessment regime that guidance documents be developed for proponents and the public on the issues of climate change and follow-up to ensure proper assessment and use of best practices for additions to and expansions of the MGP.

2.4 Cumulative Impact Monitoring

Perhaps the greatest failure in the planned integrated resource management regime contemplated under the *MVRMA*, is the absence of a functioning cumulative impact monitoring program (CIMP) required pursuant to Part 6. This is the proverbial 'tragedy of the commons' for the Mackenzie Valley.

The CIMP is supposed to "analyze data collected by it, scientific data, traditional knowledge and other pertinent information for the purpose of monitoring the cumulative impact on the environment of concurrent and sequential uses of land and water and deposits of waste in the Mackenzie Valley" (*MVRMA* s. 146). By agreement of the Inuvialuit through a November 2003 memorandum of understanding, the CIMP is to cover the ISR as well. Without adequate information and the ability to monitor overall changes and trends, resource managers cannot account for or anticipate what the combined effects of projects may be, properly assess individual projects, establish limits of acceptable change, or meaningfully make 'go or no-go' decisions. The CIMP was meant to be the feedback mechanism or the 'glue' to hold the regime together. Without a properly functioning CIMP, proper environmental management of the MGP is simply not possible.

The NWT Environmental Audit levied its most critical comments of the environmental management regime for the failure to implement a CIMP, devoting a significant part of the report to this story. The CIMP was a provision of the 1992 Gwich'in Land Claim Agreement meant to protect their rights and interests being downstream of Canada's largest watershed. The *MVRMA* was passed almost nine years ago and there are still no regulations to implement the CIMP, no ongoing funding, and no agreement on a responsible authority to carry it out. The Audit noted that the level of resource development activity has significantly increased during this period, as evidenced by the MGP applications.

The Audit identified the need for a more detailed operational plan for the CIMP, and that stable, long-term funding is required (DIAND 2006, pg. 8-7 and 8-9). It is also notable that federal government secured the funds required for the *Mackenzie Gas Project Impacts Act* in relatively short order but does not seem able to do the same for legally binding commitments made pursuant to constitutionally entrenched land claims agreements.

The following recommendations are offered regarding cumulative impact monitoring in the context of a proper and adequate environmental management system for the MGP:

RECOMMENDATION

6. **The Joint Review Panel should recommend to DIAND and the CIMP Steering Committee that they develop a detailed operational plan, design a responsible authority, and draft regulations to give effect to CIMP before December 31, 2007.**

7. The Joint Review Panel should recommend to DIAND that it secure stable and long-term funding for the CIMP as soon as possible, and in any event, at least two years in advance of any construction activity for the MGP. The Joint Review Panel should consider recommending that the NEB make CIMP implementation a condition of a certificate for the MGP pipelines.

2.5 Cross-cutting Issues for Effective Environmental Management

Several of the cross-cutting issues identified in the NWT Environmental Audit are significant for an effective environmental management regime with respect to the MGP.

A review of *MVRMA* boards found that they were "hampered by delays in a complicated and protracted nomination and appointment process. Permit and licence applications have been subject to delays and uncertainty has arisen due to these shortcomings" (DIAND 2005, pg. 6-1). A number of specific recommendations were made to address this issue.

The Audit made several recommendations around Board capacity and funding and remarked that "Board funding levels appear to be adequate but lack the flexibility necessary to respond to changes in development activity" (DIAND 2005, pg. 6-16).

One of the most important impediments to public participation in co-management regimes in the NWT was found to be the lack of a participant funding mechanism for environmental assessment and other regulatory public hearing processes. Such a program "would improve the ability of the *MVRMA* regime to ensure effective participation of interested parties" (DIAND 2005, pg. 6-17). The Audit noted that successive environmental assessments have recommended a participant funding program and that other Canadians enjoy a legislative right to such funding pursuant to the *Canadian Environmental Assessment Act*.

The following recommendations are offered regarding co-management board operations, funding and public participation in the context of a proper and adequate environmental management system for the MGP:

RECOMMENDATION

8. The Joint Review Panel should recommend to DIAND that:

- **Boards and agencies responsible for the review and issuance of MGP approvals have full membership at all times, assuming timely nominations from all other parties;**
- **Funding requirements for effective operation be reviewed with boards and agencies well in advance of any applications or construction to address increased workloads should the MGP be approved; and**
- **A participant funding program be established, with adequate funding, to ensure meaningful public participation as soon as possible, and in any event before July 1, 2008.**

2.6 National Energy Board

The National Energy Board (NEB) plays a critical role in the review, approval and inspection of various aspects of frontier oil and gas exploration and development, including much of the work that may be undertaken as part of the MGP. This authority is found in the *National Energy Board Act* (regulation of pipelines) and as the agency responsible for the *Canada Oil and Gas Operations Act* in the NWT. The latter covers virtually all oil and gas exploration activities including seismic work, drilling, field development, gathering systems, and related activities. The Frontier Information Office of the NEB in Calgary provides services to the public and industry in relation to oil and gas exploration and development. Rights issuances are dealt with by the Department of Indian Affairs and Northern Development from Yellowknife and Ottawa under the *Canada Petroleum Resources Act*.

A 1985 post-project review of the Norman Wells Pipeline (Government of the Northwest Territories 1985) filed with the Joint Review Panel (J-INAC-00119), noted:

> The effectiveness of the GNWT was limited because of the inability to obtain information and influence the process. Our input was also ineffectual because of IPL's [Interprovincial Pipelines Ltd.'s] direct access to the Board and their ability to influence it. (pg. 242)
>
> Proponents, labour unions, and federal agencies, like the NEB and FEARO [Federal Environmental Assessment and Review Office, the precursor to the Canadian Environmental Assessment Agency], should establish offices in the NWT for the duration of project north of 60. (pg. 246)

In 2005 an independent evaluation was competed of the NEB's management of its regulation of exploration and production in the NWT (Gartner Lee 2005). The following areas were investigated:

- Does the function/program meet the needs of internal and external stakeholders?
- Does the function/program have clearly defined objectives and expected results?
- Does the function/program employ sound performance measurement?
- Does the function/program continue to correspond to the mandate of the Board?
- Is the function/program relevant and does it address a realistic need?
- Are there unwanted outcomes?
- Are the most effective and appropriate means being used to achieve the function/program objectives, relative to alternative design and delivery approaches?
- In what manner and to what extent does the function/program complement, duplicate, overlap or work at cross purposes with other programs?

Documents from the NEB were reviewed, results of workshops and meetings with NEB staff were conducted and a series of interviews were carried out amongst NEB staff, external "clients" (i.e. representatives of the oil and gas industry active in the North), and a limited

number of so-called stakeholders. Fifteen NEB staff were surveyed, along with 25 clients and 13 stakeholders that included government officials, co-management body staff and industry organization representatives. No Aboriginal government or community representatives were included in the survey.

The results of the evaluation were summarized as follows:

> In general, clients and internal NEB personnel viewed the Frontier Exploration and Production Function as being efficient, effective and fair in its operation. Clients held the Frontier Exploration and Production Function in high regard, and valued its expertise and professionalism in completing its regulatory role in Frontier areas. Stakeholders in northern Frontier areas were critical of the Frontier Exploration and Production Function, and the NEB in general, for not having a better northern presence or undertaking outreach and educational programs to explain the NEB responsibilities in the north. Stakeholders also suggested that the Frontier Exploration and Production Function improve its participation in northern decision-making processes. Internally, NEB personnel were generally content with their roles and responsibilities with the Frontier Exploration and Production Function, and only identified a few areas where improvements could be made. (Gartner Lee 2005, pg. v).

The evaluators' recommendations with priority rankings and the NEB's response (see NEB 2005 for the full response) are found in a table in Appendix 1 of this submission. The most significant points that can be drawn from the evaluation and the response is that northern stakeholders are not satisfied with the NEB's regulation of oil and gas activities in the NWT and that NEB does not intend to address this issue until after the MGP process, although other communications initiatives have been undertaken in the past and these efforts will continue. No new initiatives specific to the North are outlined in the NEB's Strategic Plan 2007-2010 (NEB 2007).

The response of the NEB on regulatory review and reform related to frontier activities appears to place a lot of emphasis on meetings with industry and the Canadian Association of Petroleum Producers. No mention of consultations with northern residents, co-management bodies or environmental organizations are mentioned, although all of these organizations have an interest and stake in managing the environmental effects of exploration and development in the NWT. Such involvement will become increasingly important in the absence of devolution of oil and gas management to the governments in the NWT and should the MGP be approved as this would dramatically increase activity levels.

In support of northern stakeholders' concerns, it is not possible to obtain or view any regulatory approvals or inspection reports for facilities or activities in the NWT other than materials related to the current public hearing on the MGP. It is not clear if inspection reports are public documents and what follow-up actions may be taken on northern residents concerns or issues. Northerners are familiar with the way co-management bodies work in the NWT and the

extensive communications efforts undertaken in connection with their roles and responsibilities. Extensive public registries are kept open to the public and most material is available on the internet.

RECOMMENDATION

9. The Joint Review Panel should recommend to the NEB that it open an office in the NWT in relation to its regulatory authority and responsibilities with regard to the MGP.

10. The Joint Review Panel should recommend to the NEB that it prepare a communications strategy for the NWT to improve the pubic awareness and understanding of its roles and responsibilities. This strategy should include a new section on its website where applications, decisions, approvals, amendments, inspection reports and other relevant information be posted in the interest of openness, transparency and accountability.

2.7 Overall Assessment of the NWT Environmental Management Regime

The NWT Environmental Audit noted very serious gaps and problems in the current environmental management regime for the NWT. Perhaps the most significant of these shortcomings are the weaknesses with land use planning (interim nature of the Gwich'in plan land withdrawals, no competed land use plans for the Sahtu or Dehcho), and the failure to organize and implement the Cumulative Impact Monitoring Program. These matters are critical for any attempt at successfully managing the MGP impacts, along with the other issues identified earlier in this section in the form of specific recommendations. Without addressing these issues prior to the construction of the MGP, there will be no clear lines of authority or accountability, and adaptive management in relation to the MGP will be difficult at best to achieve.

3.0 LIABILITY, CLOSURE AND RECLAMATION, AND FINANCIAL SECURITY

3.1 Introduction

This section will review:

- The importance and significance of proper closure and reclamation and the elements of an ideal regime to help measure the adequacy of the current regime,
- what the proponents for the MGP were asked to do in the Terms of Reference for the Environmental Impact Statement (EIS),
- what was submitted in the EIS and in the proponents' applications to the NEB,
- regulatory requirements that relate to liability, closure and reclamation, and financial security for the MGP, and
- observations and recommendation on regulatory gaps, coordination and protection of the pubic interest in relation to the MGP.

For the purposes of this submission, the following definitions are used:

Liability refers to the duties or financial responsibilities of the proponents, now and into the future, for various aspects of the MGP. In this section, the consideration of liability is generally restricted to responsibilities for environmental matters, and more specifically those related to closure and reclamation.

Closure and reclamation refer to the phase in a development project when an activity ends and efforts to repair damage to the environment and return an area to its previous ecological diversity and productivity, or an agreed upon end use. Other words are often used interchangeably to describe similar concepts including decommissioning, abandonment, and restoration.

Financial security in this submission refers to initiatives to ensure that there are the financial and human resources available at the end of an activity or the completion of a physical undertaking to ensure that agreed upon closure and reclamation activities are satisfactorily completed and an area is returned to an agreed upon end use.

The significance of proper pipeline closure is shown by Alberta's experience where there are about 17,000 km of abandoned pipelines as of 1994, of which 3,600 km or over 20% is orphaned without an identified owner or solvent operator. Alberta currently has $10-billion worth of unreclaimed wells, pipelines and gas plants, and $20-million set aside for the cleanup (Nikiforuk 2006). An overview paper on pipeline abandonment prepared by a the Pipeline Abandonment Committee (1996) initiated by the National Energy Board, Alberta Energy and Utilities Board, Canadian Association of Petroleum Producers, and the Canadian Energy Pipeline Association stated that "regulatory requirements for pipeline abandonment vary across jurisdictions in Canada, and in many cases do not completely address associated long-term issues".

One of the main issues for pipeline closure and reclamation is whether to leave a pipeline in place or to remove it. Site specific factors need to be carefully considered before a decision is taken on removal or not. The desired end land use is the most important factor in determining whether to remove a pipeline after its use is no longer needed. Other important issues include ground subsidence, pipeline corrosion, soil and groundwater contamination, pipe cleanliness, water crossings, erosion, infrastructure crossings, creation of water conduits, surface facilities, and post-closure monitoring and information management.

There are some outstanding legal issues related to pipeline abandonment as identified by the Pipeline Abandonment Legal Working Group (1997) including:

- jurisdiction over abandoned pipelines;
- transfer of liability to the Crown or private landowners once a pipeline is abandoned;
- liability for a pipeline once it is abandoned;
- no clear process or procedures for reclamation or post-closure remediation of problems with abandoned pipelines;
- how to handle reclamation for orphaned pipelines; and
- ability of the pipeline regulator to 'order' an abandonment before an operator becomes insolvent.

3.2 Overview of an Ideal Regime

An ideal regime is suggested as a basis for assessing the adequacy of the current regulatory regime governing liability, closure and reclamation, and financial security for the MGP. These principles and goals were initially developed in the context of mining and mineral exploration in the NWT, but are also applicable to the MGP, in the view of the author (Wenig and O'Reilly 2005).

3.2.1. The scope of lands and oil and gas development subject to the reclamation regime

The regime should apply to all types of lands within a jurisdiction (e.g. private, municipal, regional, federal). Besides applying to new, major producing projects (using all types of materials and production methods), the regime should apply—with modifications or phased implementation, as appropriate—to clearly defined sub-categories of: hydrocarbon exploration (offshore and onshore), small projects, and existing active and inactive projects.

3.2.2. Reclamation planning

The regime's core component is a requirement that oil and gas companies prepare and adhere to reclamation plans as conditions for obtaining and maintaining approvals to operate. Reclamation planning should be phased, to correspond to various stages in the life cycle of a development, with the initial plan required as part of the application for approval to operate. Periodic reviews and plan updates should also be required.

There should be clear reclamation objectives for use in designing and reviewing reclamation plans. These objectives should be tied to rationally derived land use objectives (related to ecological thresholds and limits of acceptable change) and comprehensive environmental quality standards and should not be subject to development-specific feasibility or cost considerations.

Reclamation plans should include clear, enforceable deadlines for reclamation work that reflect a progressive reclamation approach. Plans should include several other required elements, starting with a description of all facilities and activities, an identification of all areas to be reclaimed (within and beyond the project site), a description of all reclamation work, and baseline data and risk assessments.

Government approval of reclamation plans should occur in a regulatory, rather than a contractual, context, in conjunction with other relevant approvals and environmental assessments. Government decisions approving reclamation plans should also provide for periodic plan review and update and include other provisions to protect the public from liability for reclamation costs.

3.2.3. Security requirements

Oil and gas companies should be required to provide security, in addition to reclamation plans, as a condition for obtaining approval to operate. The regime should list acceptable forms of security to ensure liquidity and availability of secured funds.

Security amounts should reflect: (1) the full cost of all required categories of reclamation work (including closure and post-closure activities) if completed by a third party in the event of default; and (2) the estimated economic value of natural resource damages and other economic costs. Costing methodologies should be rigorous and comprehensive. Security should be provided before regulatory approvals are issued and the adequacy of posted security should be reviewed and updated periodically.

There should be clear criteria for governments' release, and companies' forfeiture, of security. These criteria should be tied, not only to companies' fulfillment of their plan and other regulatory requirements, but also to current assessments of companies' success in achieving prescribed reclamation objectives and criteria.

3.2.4. Integration of the reclamation regime with other legal regimes related directly and indirectly to hydrocarbon development

Decisions on whether to grant longer term hydrocarbon tenures should reflect rough determinations of reclamation feasibility and costs and tenure instruments should make it clear that tenure rights are subject to reclamation requirements. Those requirements should be complemented by appropriate financial incentives and should not preclude common law and other legislative liabilities for environmental harm and other damages caused by operations.

3.2.5. The process for developing a jurisdiction-specific reclamation regime

The reclamation regime should be developed in a transparent process that includes public consultation. The process should be vested in a broader sustainability strategy for oil and gas production, processing, and consumption and should reflect consideration of the appropriateness of uniform, multi-jurisdictional reclamation regimes.

3.2.6. The format of a written text of a reclamation/security regime

The generic legal and policy instruments should be readable, understandable, and publicly accessible. The texts of multiple generic instruments should use clearly defined terms that are consistent among all regime instruments and with other generic legal and policy instruments related to oil and gas development.

3.2.7. Principles and approaches to government decision-making

Government decision-making should be transparent, consistent with broader sustainability principles, and adaptive. There should be a single decision-making agency or at least a plan for coordinating decisions of multiple agencies to ensure consistency, clear divisions of labour, and efficiency, and that there are no regulatory gaps. There should also be reasonable, meaningful limits on any delegation of regulatory discretion in adopting regulations and generic policies and in making project-specific regulatory decisions.

3.2.8. Public participation and government accountability

Public participation should be available through a wide range of mechanisms (e.g. written comments, hearings, administrative appeals) and for every key decision-making stage (e.g. reclamation plan approval, review, and amendments). There should also be broad and timely public access to information regarding reclamation plans, security, monitoring, and related government decisions.

To further ensure accountability, there should be rigorous and flexible government enforcement tools and reasonable judicial oversight of regulatory decisions.

3.3 What the MGP Proponents were asked to do regarding Liability, Closure and Reclamation and Financial Security

The Environmental Impact Statement Terms of Reference (TOR) were released in August 2004 by the Inuvialuit Game Council, Mackenzie Valley Environmental Impact Review Board and the federal Minister of the Environment. The Joint Review Panel did not have any input into the Terms of Reference. The assessment of the MGP specifically includes the “decommissioning and abandonment” of the three anchor fields, gathering systems, the natural gas and liquids

pipelines, the Inuvik area facility, and other related facilities and activities according to Appendix 1 of the TOR. There are several important requirements found in the TOR including:

3.3.1. Liability

- The worst-case scenario will be the basis for the Panel to estimate the potential liability of the Proponent with respect to harvest compensation and habitat remediation, as per paragraph 13(11)(b) of the IFA (TOR section 20.1)

- Describe mitigative or remedial measures necessary to minimize any negative impact on wildlife harvesting, as referred to in paragraph 13(11)(a) and (b) of the IFA.

- Describe plans to prevent damage to wildlife and its habitat and to avoid disruption of harvesting activities as a result of the Project, and, if damage occurs, to restore wildlife and its habitat as far as is practicable to its original state and to compensate hunters, trappers and fishermen for:
    - loss or damage to property or equipment used in wildlife harvesting or to wildlife harvested
    - present and future loss of income from wildlife harvesting
    - present and future loss of wildlife harvested for personal use or which is provided by participants to other participants for their personal use (TOR section 20.2)

- Describe any plans for compensation that would be part of proposed mitigation as informed by land claim agreements, governmental policies, legislation, corporate agreements, etc.

  Specifically, discuss compensation terms and conditions relating to mitigation measures that would be necessary to minimize any negative impact on wildlife harvesting, as referred to in the Gwich'in and Sahtu Dene-Métis Land Claim Agreements.

  Describe any plans for compensation that would be part of any proposed mitigation for impacts on wildlife harvesting in areas without land claim agreements (TOR section 21).

3.3.2. Closure and Reclamation

- Provide a description of the Project components and related undertakings and physical activities. The description shall be provided by location and Project phase, including construction, operation, modification, decommissioning and abandonment. Include both permanent and temporary facilities and activities for each phase (TOR section 9.1).

- Describe the proposed approach to, and conceptual plans for, decommissioning or abandoning Project facilities including timing, demolition, site clean-up and rehabilitation

activities. Describe regulatory frameworks applicable to decommissioning and abandonment of Project facilities (Appendix 1).

Specify ownership, transfer, and control of the different Project components and responsibility for maintaining the integrity of decommissioned or abandoned facilities.

Include information with respect to:

- wells
- field development facilities
- pipelines (gathering and transmission)
- compression and processing facilities
- valve and meter station sites
- communications systems
- access
- worker accommodation (TOR section 9.8)

- With respect to restoration of fish habitat, describe:

    - the condition(s) to which the ROW (instream and riparian) and temporary work areas would be reclaimed or restored, and maintained once construction has been completed
    - criteria for evaluating the success of mitigation or reclamation measures, and indicate when and how this evaluation would be conducted (TOR section 14.2)

3.3.3. Financial Security

- no specific references to financial security in the TOR
- Identify any regulatory requirements relevant to monitoring as well as corporate management plans, programs, policies and quality assurance/quality control measures (TOR section 23.3).

3.4 What the MGP Proponents Submitted

In the regulatory applications submitted to the NEB for the natural gas and liquids pipeline, the gathering system and the Taglu Field Development Plan, the following paragraph appears to be the only reference to closure and reclamation, liability and financial security:

> An abandonment and reclamation plan will be developed according to regulatory requirements in effect at the time of the abandonment. Development of the plan will include public consultation and consideration of alternative uses of the sites being abandoned.

Although there may be references to mitigation measures and proposed methods to minimize footprints, this is the only reference related to closure and reclamation.

There is more substantive coverage of liability, closure and reclamation, and financial security in each of the other two Development Plans submitted as summarized below:

3.4.1. Niglintgak Field (Shell)

Liability

- Some details presented on liability under the *Fisheries Act*, *Territorial Waters Act* (sic), and *Canadian Oil and Gas Operations Act*;.
- Wildlife harvesting compensation requirements of the Inuvialuit Final Agreement presented including need for a harvesters' compensation agreement based on worst case scenario that could include reclamation requirements; and
- An environmental agreement covering potential liabilities is under negotiation with the GNWT. (pgs. 15-1 to 15-3)

Closure and Reclamation

- Commitments to restore area to a "capability similar to surrounding lands", minimizing footprint, progressive reclamation;
- Regulatory guidelines mentioned generally;
- Commitment to use off-site sump;
- Some specific measures identified for wells, pads, flow-lines, and gas conditioning facility (pgs. 10-21 to 10-23).

Financial Security

- Proof of financial capability required under *Canada Oil and Gas Operations Act* and may be a condition of the agreements with the Inuvialuit and the GNWT (pg. 15-3).

3.4.2. Parsons Lake Field (Conoco Phillips)

Liability

- Some details presented on liability under the *Fisheries Act*, *Territorial Waters Act* (sic), and *Canadian Oil and Gas Operations Act;*
- Wildlife harvesting compensation requirements of the Inuvialuit Final Agreement presented including need for a harvesters' compensation agreement based on worst case scenario that could include reclamation requirements; and
- An environmental agreement covering potential liabilities is under negotiation with the GNWT. (pgs. 15-1 to 15-3)

Closure and Reclamation

- Alternatives might be considered in consultation with local stakeholders and regulators;
- General commitments made for well abandonment, surface flow line removal, granular pad removal or revegetation; and
- Commitment to post-closure monitoring of revegetation for success and erosion but no criteria specified. (pgs. 10-27 to 10-28)

Financial Security

- Proof of financial capability required under *Canada Oil and Gas Operations Act* and may be a condition of the agreements with the Inuvialuit and the GNWT, and *NWT Waters Act.* (pg. 15-3)

The proponents submitted the EIS in August 2004 and other materials in response to Information Requests and Undertakings. Several sections of the EIS and other materials deal with liability, closure and reclamation, and security as follows:

Liability

- The proponents submitted a Worst-Case Scenarios in the Inuvialuit Settlement Region in November 2004 (J-IORVL-0007). Well blow-outs in each of the three anchor fields are generally described, although some information on the effects of natural gas liquids dispersion remains outstanding. Pipeline ruptures in several locations are also described.
- The Inuvialuit Game Council has apparently accepted the scenarios set out by the proponent and submitted information to the JRP that would allow for the calculation of harvesting compensation (response to IR JRP-R2-019). The IGC is of the view that the combined scenarios for the blow-outs and pipeline ruptures happening at the same time, should serve as the worst-case scenario (JRP Transcript pg. 8647, lines 17-19) for the purpose of calculating potential liability.
- The proponents continue to negotiate a process and specific procedures for harvester compensation but have submitted preliminary materials for the ISR (response to Undertaking J U-184 and Commitment 12-8 to 12-10 in J-IORVL-00934).

Closure and Reclamation

- Section 3.8 of Volume 7 Environmental Management of the EIS provides some details on the scope of reclamation (with a goal of a stable, vegetated ground surface) and regulatory requirements (does not mention potential water licences, *COGOA* provisions, or possible land lease conditions).
- Commitment to address community concerns but not for direct involvement in preparation or review of plans, monitoring or other activities.
- General reclamation objectives are identified related to soil cover, drainage, natural recovery, erosion control, some revegetation but not specific to project components such as drilling operations, above and below ground facilities, access roads, aggregate sources, or others (pgs. 3-58 to 3.59).
- General revegetation guidelines are presented (pgs. 3-59 to 3-60).

- Decommissioning and abandonment left to individual operators and future regulatory requirements (pg. 3-62).
- Potential protection measures during cleanup and reclamation set out in Table 4-16 for matters such as scheduling, restoration of watercourses, temporary erosion control, removal of debris, vehicle ruts and erosions gullies, surface material replacement, use of seeds, access control, and plant salvage. Suitable revegetation grasses for pipelines, pads and borrow sites in Taiga Plains and Tundra and Transition Forest identified in Table 4-17.
- Commitment to carry out progressive reclamation of wildlife habitat (Commitment 7-46 in J-IORVL-00934).

Financial Security

- No explicit references in the EIS other than in the context of regulatory requirements and IFA provisions for wildlife harvesting and compensation.

3.5 Review of the Liability, Reclamation and Closure, and Financial Security Regime for Oil and Gas Development in the NWT

This section will review the most relevant legislative and policy provisions that relate to closure and reclamation for oil and gas exploration and development in the NWT. Detailed reviews of the various overall regimes for hydrocarbon development in the NWT are available as part of a regulatory roadmap project and were reviewed for this submission (see Erlandson 2002, Erlandson and Sloan 2002a, Erlandson and Sloan 2002b, Sloan et. al. 2001, and Sloan et. al. 2002).

This is not an exhaustive review nor does it detail the historical development of the regime and provides limited coverage of implementation or application within the NWT or relevant regions through which the MGP is located. As one might expect with the complex integrated resource management regime in the NWT, there are several key pieces of legislation and regulations that relate to oil and gas development activities, water use and waste disposal into water, land use and wildlife harvesting compensation. This section does not deal with privately owned lands (i.e. lands owned by Aboriginal governments) or regulatory requirements of the Government of the NWT as these are beyond the scope of this submission and the limited requirements set out do not have much relevance to closure and reclamation.

The following legislation and regulations were identified as having the most relevance to the MGP in the context of liability, closure and reclamation, and financial security.

Oil and Gas Development

- *Canada Oil and Gas Operations Act*, *Canada Oil and Gas Drilling Regulations*, *Canada Oil and Gas Installation Regulations*, *Canada Oil and Gas Production and Conservation Regulations*, *Oil and Gas Spills and Debris Liability Regulations* (regulation of drilling, oil and gas production, covers the anchor fields)

- *National Energy Board Act* and *Onshore Pipeline Regulations* (regulation of natural gas pipelines and liquids pipelines)

Water Use and Waste Disposal

- *NWT Waters Act* and *NWT Waters Regulations* (facilities or activities that require water or involve the deposit of waste water)
- *Mackenzie Valley Resources Management Act* (sets up Mackenzie Valley and regional land and water boards)

Land Use

- *Territorial Lands Act, Territorial Lands Regulations, Territorial Land Use Regulations* and *Federal Real Property and Federal Immovables Act* and *Federal Real Property Regulations* (surface land regulation for facilities, right-of-way and related activities)
- *Mackenzie Valley Land Use Regulations* (surface land regulation for facilities, and related activities)

Wildlife Harvesting and Compensation

- Inuvialuit Final Agreement

A summary of the provisions of the above legislation and regulations, as they relate to liability, closure and reclamation, and financial security is found in Appendix 2 with some further comments below.

3.5.1. Specialized Oil and Gas Law and Regulation for the NWT

In general, the NEB regulates pipelines that cross boundaries within Canada and into the United States, and exploration and development for hydrocarbons in the frontier areas (including the NWT) through specialized laws for oil and gas activities.

This authority to regulate includes the power to allow pipelines to be abandoned and includes terms and conditions considered in the public interest. The authority of the Board over pipelines appears to end once an abandonment order has been made (Pipeline Abandonment Legal Working Group 1997). The liability provisions of the National Energy Board Act that require compensation for damages from pipeline operations, would also likely cease with abandonment. This would leave civil remedies or other legal requirements as the major alternatives for post-closure remediation. Easement agreements or leases may also establish some post-closure obligations.

Abandonment of a pipeline requires leave of the Board and a public hearing. A *Canadian Environmental Assessment Act* screening and a *Mackenzie Valley Resource Management Act* preliminary screening would be required for an abandonment of the proposed MGP natural gas

and liquids pipelines. No specific requirements for abandonment or reclamation are found in the specialized oil and gas law and regulations for the NWT, although detailed guidance for pipeline abandonment exists in National Energy Board policy (see the NEB Filing Manual details presented in Appendix 2).

Oil and gas operators generally are required to show financial responsibility for exploration and development activities. It is not clear what form this may take and how an appropriate amount may be calculated for security and whether it may relate to reclamation liability. No public review is necessary and there are no requirements to update this periodically. For activities and facilities other than pipelines there are no mandatory closure or reclamation requirements. Liability for spills and debris during operations is capped at a maximum of $40 million (generally higher for offshore areas), and there are no requirements for third-party insurance.

3.5.2. Land and Water Management in the NWT

There are several laws of general application for land and water management in the NWT and these have been modified to accommodate Aboriginal land claims settlements and co-management regimes established pursuant to those settlements. Resource management legislation generally applies to MGP activities and facilities that exceed certain thresholds for water use, land use and physical activity criteria. A system of water licences and land use permits for temporary uses is established under this regime. Conditions can be attached relating to reclamation and security but are purely at the discretion of the responsible authority. New water licence applicants may be required to provide compensation to other licence holders or water users that successfully prove a claim but this rarely, if ever happens.

Security has generally been required for larger projects in the NWT. Many smaller and older projects have resulted in public liabilities, especially with mining operations (Wenig and O'Reilly 2005, and Commissioner of the Environment and Sustainable Development 2002)

Various regional land and water boards have the jurisdiction to issue water licences and land use permits, depending on the location of an activity and whether it has any potential trans-boundary effects.

Longer term land tenure for permanent facilities such as the MGP pipelines, compressor stations, production plants and similar infrastructure will likely require other forms such as leases on Crown or privately owned lands. Federal surface leases are made at virtually the total discretion of the Minister and are considered confidential contractual arrangements as a matter of policy. Closure and reclamation requirements are often contained in newer leases and land-based reclamation liabilities may be covered by financial security. There are no guidelines, policy or regulatory interpretations that make a distinction between land and water related reclamation liability (Wenig and O'Reilly 2005).

3.5.3. Wildlife Harvesting Compensation

The Inuvialuit Final Agreement (IFA) was completed in 1984 and implemented by the federal government through the *Western Arctic (Inuvialuit) Land Claims Settlement Act*. Section 13 of the IFA establishes a very strong regime to protect the wildlife harvesting rights of the Inuvialuit including requirements for compensation and financial security whenever those rights may be affected by resource development.

During the environmental review of any resource development activities, there must be consideration of a worst-case scenario and its potential impacts on Inuvialuit resource harvesting. The losses to be considered are comprehensive in scope, including loss of equipment, cost of temporary relocation, replacement value of wildlife products and other matters.

Liability of resource developers is absolute without the need to prove negligence and includes the cost of mitigation and remediation. Authorities issuing permits or licences that authorize resource development may require financial security for the potential loss of resource harvesting rights and remediation. In practice this appears to be done for the larger projects. The federal Crown assumes liability for the compensation where it has been involved in setting the terms and conditions of licences, even if the developer cannot provide the compensation. Compensation claims need to be filed within three years of a perceived loss, must be proven on a balance of probabilities and can be arbitrated.

The significance of these compensation provisions for closure and reclamation of the MGP in the Inuvialuit Settlement Region (ISR) are very significant. An agreement on compensation measures is a legal requirement and there is a very strong onus for the proponents to provide financial security for potential damage to wildlife habitat and harvesting based on a worst-case scenario. There are no similar provisions for wildlife harvesting compensation for other areas, outside the ISR, covered by the MGP.

3.6 Conclusions

In terms of the overview of the ideal regime set out in section 3.2 above, the following points may be made about the existing regime in the NWT for closure and reclamation that will apply to the MGP.

3.6.1. The scope of lands and oil and gas development subject to the reclamation regime

- Requirements vary across the NWT according to the applicable land claims agreements, if finalized, and there are separate regimes that may apply on privately owned lands.

3.6.2. Reclamation planning

- There are no mandatory requirements for closure plan preparation or approval in advance of operation. There is no need for periodic reviews or updates unless specified in individual permits or licences.
- There are few reclamation objectives for use in designing and reviewing plans. Approved land use plans not available for all areas and no clear thresholds established for ecological disturbance to ensure sustainability.
- Economic constraints of individual operators can be considered in setting discretionary security.
- There are no deadlines for reclamation plans or requirements for progressive reclamation. Emphasis is placed on preventions.
- There are no requirements, other than in policy for pipelines only, for plan contents.
- There is no coordination of reclamation planning amongst regulators set out in legislation or regulation or any identifiable agreements.

3.6.3. Security requirements

- There is a requirement for financial responsibility for operators but it is not related to closure and reclamation liabilities.
- There are uncertainties over the distinction between land and water-based liabilities and related security.
- Forms of security to ensure liquidity and availability of secured funds are not always specified.
- Costing methodologies are not specified. There are mixed requirements for timing of security and no requirement to review and update periodically.
- There is limited protection to prevent operators from double-counting reclamation liabilities due to lack of coordination.
- Release of security is not necessarily tied to success in achieving prescribed reclamation objectives and measurable closure criteria for each component of a project.
- There are no provisions for wildlife harvesting compensation outside of the ISR.
- Liability caps may not provide for adequate compensation or reclamation.

3.6.4. Integration of the reclamation regime with other legal regimes related directly and indirectly to hydrocarbon development

- There is no relationship between land or resource tenure and reclamation requirements.
- There are limitations for liability in some cases but others allow for civil remedies.
- There are separate legislative provisions for land and water management and they are not linked to regulation of oil and gas activities.

3.6.5. The process for developing a jurisdiction-specific reclamation regime

- There are no clear requirements for transparency except in the context of pipeline abandonment and water licensing. Land leases are kept secret for federal Crown lands.
- There is little evidence of coordination in legislative provisions or otherwise.
- There are few explicit goals or objectives related to sustainability other than in the wildlife harvesting compensation provisions for the ISR.

3.6.6. The format of a written text of a reclamation/security regime

- Various complex laws and regulations are not easily understood or readable by the average northerner.
- Different terminology is used between the resource management regime and that for regulation of oil and gas activities.
- There is little written policy guidance for developers or the general public.

3.6.7. Principles and approaches to government decision-making

- Decision-making is often not transparent except where required by public hearings for water licences and abandonment of pipelines.
- There is no single agency and there is little evidence of coordination or consistency.
- Broad discretionary powers over reclamation standards and success of reclamation exist.
- There are few explicit requirements to consider sustainability or even protection of the public from assuming financial liabilities.

3.6.8. Public participation and government accountability

- Few opportunities exist for public participation.
- Access to information regarding reclamation plans, security, monitoring and decisions is limited and in some cases, not permitted due to policy or practice.
- Enforcement tools are broad but discretionary.

There is no coordinated approach to liability, closure and reclamation, or financial security for hydrocarbon development in the NWT, including the MGP. Closure and reclamation is handled on an ad hoc basis by myriad agencies and governments. There is very little regulatory guidance for closure and reclamation of oil and gas facilities in the NWT and detailed expectations or closure standards do not exist. Existing provisions for closure and reclamation do not require an agreed upon end use that does not compromise future generations or that ecological diversity and productivity be restored. There are no clear, mandatory requirements for closure plans before operations begin, or financial security to cover approved closure plans to ensure that the public purse is adequately protected.

The liability, closure and reclamation, and financial regime in place for the MGP does not meet, in any measurable way, the criteria for the ideal regime identified earlier in this submission.

Although it is still relatively early in the overall regulatory process for the MGP, it is doubtful whether the proponents have met the basic TOR for the EIS in the material presented to date. Specifically, there are gaps in the following areas:

- Specific compensation plans for wildlife harvesters throughout the area affected by the MGP;
- Description of the decommissioning phase of all MGP components;

- Details on the ownership, transfer, and control of the different Project components and responsibility for maintaining the integrity of decommissioned or abandoned facilities; and
- Identification of criteria for evaluating the success of mitigation or reclamation measures for fish habitat, and indicate when and how this evaluation would be conducted.

It is also notable that some progress has been made recently on improving the closure and reclamation regime for mineral exploration and extraction in the NWT. A mine site reclamation policy for the NWT was formulated and published by the Minister of Indian Affairs and Northern Development in 2002 (DIAND 2002) and accompanying guidelines were distributed in January 2006 (DIAND 2006) and are to be revised on an annual basis.
During the environmental reviews of several recent large mining projects in the NWT, proponents have submitted conceptual closure and reclamation plans. The same approach for the oil and gas sector and more specifically, for the MGP, should be adopted.

While it is not within the scope of this submission, there does appear to be some close working relationships between the NEB and the Alberta Energy Utilities Board (AEUB) as evidenced by a joint Pipeline Abandonment Steering Committee and other initiatives. A limited review of some of the Alberta legislation, regulations and policies governing liability, closure and reclamation, financial security revealed a regime much more in line with the ideal regime that the system currently in place in the NWT. Some of the most interesting practices and provisions include:

- An orphan well remediation program funded through a special industry-wide levy (see http://www.orphanwell.ca/);
- A 1998 memorandum of understanding between the AEUB and the Alberta Department of Environmental Protection on roles and responsibilities regarding abandonment, decommissioning, decontamination and surface land reclamation of active and inactive upstream oil and gas facilities (see http://www.eub.ca/portal/server.pt/gateway/PTARGS_0_0_277_240_0_43/http%3B/extContent/publishedcontent/publish/eub_home/industry_zone/rules__regulations__requirements/information_letters__interim_directives/informational_letters/il98_02.aspx);
- A comprehensive liability rating program where security is a mandatory requirement whenever reclamation liability is greater than assets (see http://www.eub.ca/docs/documents/directives/Directive006.pdf); and
- Publicly accessible liability rating reports for all operators (see http://www.eub.ca/docs/data/facilities/LLR_Report.pdf)

3.7 Recommendations

The earlier portions of this section set out an ideal regime for closure and reclamation, describe what is in place and what the proponents have done or committed to do for the MGP, and then assessed this against the ideal regime. This part of the submission will focus on a number of specific recommendations that the Joint Review Panel should make to ensure that there is an adequate system in place to properly manage potential liability, closure and reclamation, and financial security for the proposed MGP. Some of these recommendations apply to the

proponents but the majority are directed at the regulators. The rationale and justification for the recommendations is found in the earlier sections of this submission.

RECOMMENDATION

11. The Joint Review Panel should recommend to all Responsible Authorities the following guiding principles for closure and reclamation related to the MGP and that these principles be incorporated into all project approvals:

- **Sustainability should be the cornerstone and goal of all reclamation activities to ensure that the decisions made today do not take away or threaten the productivity and diversity of ecological systems or diminish the economic and social opportunities for future generations.**
- **There should be full financial security for all MGP components and related activities to ensure that there is full cost accounting, no hidden subsidies, and zero public liability all while avoiding double-counting of liabilities. Security should be in an easily accessible form with as few conditions as possible. Release of security should be based on achievement of agreed upon and measurable closure criteria.**
- **Use of best available technology.**
- **Avoidance of any and all perpetual care situations whenever predictable.**
- **Transparency and accountability of decision-making through meaningful and fair public participation in all stage of reclamation planning.**
- **Conceptual reclamation plans should be submitted and approved before any construction or operation of any MGP component commences, with requirements for more detailed plans on a regular basis, building on and linked to research, with clear objectives and measurable criteria to determine success.**
- **There should be recognition of the special role of Traditional Knowledge and communities in setting a baseline, understanding trends and monitoring of reclamation.**

12. The Joint Review Panel should recommend to appropriate Responsible Authorities (i.e. NEB, DIAND, Land and Water Boards) that the current closure and reclamation regime for oil and gas development in the NWT be reformed to reflect the principles noted above with the objectives of:

- **A comprehensive, integrated life-cycle approach to exploration, development, production and planned abandonment.**
- **Recognizing the differences in management roles and responsibilities as a result of regional land claims settlements but providing consistency and better coordination, effectiveness and efficiency.**
- **Creating specific legislative and regulatory changes in a planned and fair manner to adequately regulate the MGP. In the absence of such changes, there should be administrative arrangements and agreements to facilitate closer coordination.**
- **Establishing clear limits on discretionary powers and mandatory requirements for reclamation planning and financial security to provide regulatory**

consistency, clarity and minimal financial risks to the public. These measures should remove ability to pay as a consideration in determining the necessity of and amount of security that should be required.

- **Empowering agencies and governments to take early preventative and remedial steps to avoid liability transfer to the public sector and examining the opportunities to implement joint, several and retroactive liability.**

13. The Joint Review Panel should recommend the following specific priority initiatives related to closure and reclamation for the MGP:

- **Negotiation of a Memorandum of Understanding between the Department of Indian Affairs and Northern Development and the Mackenzie Valley Land and Water Board regarding their roles and responsibilities related to overall closure and reclamation as it relates to water, land and security.**
- **Development of closure and reclamation guidelines and financial security calculation guidelines by the Mackenzie Valley Land and Water Board to be used by all regional land and water boards and in setting water license and land use permit terms and conditions.**
- **That the NEB include requirements for reclamation plans, periodic revisions to such plans, and financial security in all *Canada Oil and Gas Operations Act* approvals related to the MGP and in the certificate(s) for the natural gas and liquids pipelines.**
- **That all Responsible Authorities for the MGP require appropriate financial security in all the MGP approvals to fully implement the wildlife harvesting compensation provisions of the IFA.**

4.0 ENVIRONMENTAL AGREEMENTS AS MANAGEMENT TOOLS

4.1 Introduction

To better understand the potential role of environmental agreements in relation to the MGP, this section reviews in summary form the following:

- What was asked of the proponents and government with regard to environmental management;
- What was submitted on environmental management by the proponents;
- Theory and practice of environmental agreements in the NWT and other jurisdictions;
- Conclusions; and,
- Recommendations

4.2 What was asked of the proponents and government with regard to environmental management

Direction is found in section 25 of the TOR where the proponents are to:

> Identify and describe proposed environmental and socio-economic monitoring programs in terms of:
>
> Compliance Inspection: the activities, procedures and programs undertaken to confirm the implementation of approved design standards, mitigation, conditions of approval and company commitments, including proposed mitigation.
>
> Monitoring: monitoring to track conditions or issues during the Project lifespan or at certain times; and
>
> Follow-up: a program to verify the accuracy of impact predictions and determine the effectiveness of mitigative measures.
>
> Detail should be adequate to allow an understanding of the purpose of the programs, how issues, subjects or indicators would be selected, how the programs would function, who would be responsible for their implementation and how reporting would take place. Identify any regulatory requirements relevant to monitoring as well as corporate management plans, programs, policies and quality assurance/quality control measures.
>
> Specifically, describe how the follow-up programs would verify any predictions of significant adverse impact on the physical, biological, and human environment and the effectiveness of related mitigation. Discuss how the programs could

identify or measure how the Project advances the objectives of sustainability and maximizes beneficial impacts in the Project area, in relation to impact predictions.

Describe how the results of the programs would be used to refine or modify the design and implementation of management plans, mitigation measures and Project operations. Include the process by which the programs would be developed, the timing of program development and updating and the method(s) by which adequacy and effectiveness of the programs would be evaluated and tracked. Discuss how programs would be managed, including adaptive management, over the lifespan of the Project.

With respect to proposed monitoring programs related to social and cultural impacts indicate the level (i.e. community or regional) and the duration of the program.

Additionally, identify the communities, agencies, boards and regulators that would be involved during the preparation of the programs and any opportunities for partnerships, coordination and participation. Discuss the ways in which holders of traditional knowledge and area residents would be involved in the design and implementation of the programs.

Discuss how monitoring results would be communicated back to the communities and their involvement in program refinement, if required.

Specifically discuss the need for, and requirements of, a follow-up program, including consideration of:

- the need for such a program and its objectives
- the main components of the program
- how it would be structured
- the roles to be played by the Proponent, regulatory agencies, Aboriginal people and others in such a program
- possible involvement of independent researchers
- the sources of funding for the program
- information management and reporting

The Guidance document for the Joint Review Panel states that the hearing for Topic 14a on Environmental Management should address “the parties responsible for oversight of plan/program implementation” and advances the objectives of sustainability and maximizes beneficial impacts in the Project area, in relation to impact predictions. One of the matters of discussion is “lessons learned from existing independent monitoring agencies in the NWT as they may apply to the MGP”.

The proponents and intervenors are also encouraged to present and discuss their views on "should there be an independent effects monitoring agency (or more than one involving all parties, and, if so, which parties? How should it be funded and governed? On what principles would it operate and what expertise and resources might it require?" and "which regulators or other institutional arrangements will be responsible or should be responsible for oversight of implementation of adaptive management provisions?

4.3 What was submitted by the proponents with regard to environmental management

As part of the EIS, the proponents submitted environmental management plan outlines, an environmental protection plan, a contingency plan, and an environmental compliance and effects monitoring plan.

Environmental management plans for the following matters were submitted as part of the EIS:

- Emissions;
- Water;
- Waste;
- Hazardous Materials;
- Transportation and Logistics;
- Wildlife;
- Reclamation; and
- Operations.

For each plan, there is coverage of its scope, guiding principles, regulatory requirements, community involvement, and a description of resource use, consequences or treatment.

An outline of an environmental protection plan that describes mitigation measures was also submitted. The plan includes:

- notification requirements;
- general protection measure processes and procedures;
- sensitive periods for various water bodies;
- conceptual wildlife mitigation;
- waste handling measures;
- site preparation;
- rare plant community mitigation;
- timber salvage;
- conceptual right-of-way configurations;
- construction mitigation procedures;
- protection measures for infrastructure sites (staging areas, fuel storage, camps, production facilities, borrow sites, access roads, drilling, testing);
- water crossings;
- equipment and vehicle crossings; and

- clean-up and reclamation measures including drainage and erosion control.

A contingency plan for spills, fires, archaeological materials, unexpected terrain conditions and other matters was submitted.

An environmental compliance and effects monitoring plan was submitted to evaluate project effects, monitor the success of mitigation, respond to community concerns, ensure compliance, and to continuously improve environmental protection. The proponents' internal inspection process is outlined including inspector training and qualifications. As-built reports for each major component of the MGP are to be produced and submitted to applicable regulatory authorities. Environmental audits are to be carried out during the construction phase. Environmental monitors are to be agreed upon between the proponents and communities, with their qualifications left to the communities to determine but duties are spelled out.

Post-construction monitoring is described and is to include a trained reclamation expert to determine if natural revegetation requires augmentation. Post-closure monitoring reports are to be submitted to applicable authorities.

Environmental effects monitoring is to be carried out as part of any regulatory requirements, to confirm the effectiveness of mitigation measures, verify accuracy of predictions made in the EIS, and to identify any unpredicted effects. Valued ecosystem components and key indicators are to be monitored. There is a commitment to collaborate with other monitoring programs during the operations phase. A five-year reporting cycle is proposed and the status of issues is to be tracked.

The environmental management system presented by the proponents in the EIS is not clear or comprehensive. The relationships amongst the various plans (environmental management, environmental protection, contingency, and environmental compliance and effects monitoring) and monitoring programs (environmental effects and post-construction) are not discussed or presented. It is not clear when these plans and programs will be put into place as there is no overall timeframe presented, nor are there clear lines of authority and reporting internally or externally, particularly in terms of who would review and approve various plans, program and results. The recently submitted Commitments Table (J-IORVL-00934) does little to clarify the organization, structure and process for environmental management by the proponents.

Information Requests were filed with the proponents and governments twice during the Joint Review Panel process, about their respective views of an environmental agreement. The proponents have not indicated any interest in the concept and governments are not prepared to make any commitments in this regard (see Appendix 3).

4.4 Environmental Agreements in the NWT and Other Jurisdictions

Environmental agreements are a relatively new management tool. There is a growing body of literature on the subject (Galbraith 2005, Kennett 2001, O'Faircheallaigh 2006, Ross 2004, Weitzner 2006).

The Norman Wells Pipeline panel review was supplemented with an environmental agreement as a contractual arrangement in 1982 setting out some principles for minimizing impacts and outlining:

- commitments by the proponent to carry out monitoring programs;
- requirements for environmental training programs;
- permafrost disturbance mitigation measures;
- forest fire prevention, including strict proponent liability for fires;
- contingency emergency procedures;
- a restoration plan;
- agreement amendment provisions; and
- annual meetings of the parties.

A report from a workshop held for and with DIAND staff in October 2005 discussed lessons learned from the construction and operation of the Norman Wells pipeline (Service North 1985, see J-INAC-00073). Participants included those involved in the administration, inspection, and monitoring of that project, and DIAND staff likely to be involved in similar activities for the proposed MGP. The report noted:

> The authorities issued for the planning and construction phases of an activity, Water Licences and Land Use Permits, will not remain in place during the operating phase of the pipeline. Once the terms and conditions of these authorities have been successfully fulfilled and they have been closed, there is no requirement for the proponent to continue to monitor, or even cooperate with a government sponsored monitoring plan, beyond their own normal day to day monitoring activities. In the case of the Norman Wells Pipeline, IPL signed an Environmental Agreement that contracted them to cooperate in the development and implementation of a monitoring program designed to commit the proponent of the project to long term monitoring and the continued ownership of environmental problems along the pipeline right-of-way. The agreement also committed them to a cooperative effort to improve on impact evaluation and mitigation and assess the effectiveness of regulation on pipeline construction and operation. It also included a commitment to develop and get approval of a restoration/abandonment plan. It is not clear if NEB can include these types of requirements into their approvals and the requirement for a similar agreement on the MGP needs to be evaluated in light of the new regulatory/land ownership realities. (Service North 1985, pg. 6)

The report went on to recommend that an environmental agreement be negotiated for the MGP:

> An "Environmental Agreement" or a "Cooperation Agreement" between the land owners and the proponent will ensure that programs are in place to monitor pipeline effects for the life of the pipeline. The agreement would assist in:
>
> - formalizing cooperation in pre planning, developing and implementing a monitoring program;
> - ensuring the operator is maintaining its monitoring commitment
> - establishing agreed upon goals and expectations for government and the proponent;
> - incorporating cumulative effects;
> - identifying practical improvements;
> - verifying field performance;
> - highlighting maintenance/erosion control;
> - formalizing abandonment requirements;
> - committing the proponent to a yearly discussion on pipeline conditions;
> - providing access for others e.g. government, to install monitoring equipment during construction; and
> - committing all parties to share information. (Service North 1985, pp. 6-7)

The Norman Wells Pipeline environmental agreement basically served to firm up commitments made by the proponent during the environmental assessment. A similar need was found during the review of the proposed BHP diamond mine in the NWT where Aboriginal organizations also wished to play a direct role in negotiating and implementing an environmental agreement (O'Reilly 1998). An independent oversight body was also developed as part of the agreement for this first diamond mine in Canada. Similar agreements were negotiated for the next two diamond mines in the NWT, Diavik and Snap Lake. Each of those agreements contains provisions for an oversight body. Negotiations are under way to amalgamate the three diamond mine agreements and oversight bodies into a multi-project environmental monitoring agency (MPEMA).

The evolution of the diamond mine oversight bodies under the environmental agreements is noteworthy. The first body, the Independent Environmental Monitoring Agency, has been praised by Aboriginal and public governments for its technical advice but its contributions to capacity building could be improved (Macleod Institute 2000, O'Faircheallaigh 2006). The second body, the Environmental Monitoring Advisory Board has the company at the table and includes Aboriginal governments as signatories. The EMAB has a mandate that includes the promotion of Aboriginal involvement in environmental management at the mine, and Aboriginal government appointees tend to be from northern communities. This Board had tended to focus on communications, cooperation and the part of its mandate that deals with Aboriginal involvement in monitoring and other environmental matters (O'Faircheallaigh 2006). The third body, the Snap Lake Environmental Monitoring Agency attempts to combine successful aspects

of both of its predecessors with a strong scientific advisory panel, a Traditional Knowledge panel, and all-Aboriginal Board. This body is still in the early stages of its operation.

The NWT Environmental Audit found the following that supports the need for an environmental agreement that contains provisions for independent oversight of the environmental performance of the MGP and its regulators:

- The internal capacity of the Mackenzie Valley co-management bodies are stretched due to the small pool of available expertise, competition for that expertise, and recruiting and retention issues (DIAND 2005, pg. 6-10);
- The capacity of governments in environmental management in the NWT faces important constraints due to unstable budgets, high staff turnover, and competing demands (DIAND 2005, pg. 6-11);
- Some government departments have multiple mandates, and some senior government officials indicated that, based on their experience, there are insufficient "firewalls" between the multiple mandates of government (DIAND 2005, pg. 6-11);
- Dispersed and fragmented scientific expertise amongst various government agencies has likely affected the effectiveness and efficiency of the regulatory process (DIAND 2005, pg. 6-11);
- Federal funding timelines and budgets are often incompatible with the physical realities of the north (e.g., by the time budgets are approved it is too late to carry out work within short field seasons) (DIAND 2005, pg. 6-18);
- In many cases, budgeting timelines prevent program synergies from occurring with other federal or territorial departments (e.g., DFO or ENR) or Aboriginal communities (DIAND 2005, pg. 6-19); and
- One of the most commonly cited and forcefully stated challenges facing the NWT regulatory process was that Aboriginal communities lack the capacity to participate in environmental management processes in a meaningful way (DIAND 2005, pg. 6-12).

The Audit also found that:

> Based on insights collected from a variety of participants in the Audit process, the monitoring agencies appear to be making important contributions to environmental management by providing an additional opportunity for the identification of potential environmental impacts. They are also facilitating a greater degree of community participation in environmental management processes. Notwithstanding these positive contributions, the Audit team feels that the monitoring agencies and the Environmental Agreements they oversee should not be used to fill regulatory gaps (e.g., air quality). While contractual agreements and non-regulatory agencies have an important role to play, they should, wherever possible, be backed by a comprehensive regulatory regime that protects all environmental components (DIAND 2005, pg. 4-20).

These important findings from the Audit support the need for better coordination amongst the regulators and decision-makers, and the need to better address the limited capacity within the co-management bodies, governments and communities. Environmental agreements that contain provisions for independent oversight can assist with these challenges.

An environmental agreement was concluded for the Voisey's Bay nickel mine in Labrador in 2002. As this project was on provincial crown lands involving two Aboriginal governments without settled claims agreements, there was a very strong incentive for certainty and involvement of the Innu and Inuit in environmental management of the mine (O'Faircheallaigh 2006). With no co-management bodies in place and few mandatory processes for public let alone Aboriginal consultation or involvement in permitting and licensing, an Environmental Management Board with strong Aboriginal representation was established to ensure input into terms and conditions of such approvals. The input of the Board is advisory in nature but has generally been accepted. The 2005 Annual Report of the Board noted:

> The mandate of the Board, as laid out in the Environmental Management Agreement and Undertaking Order prescribes a number of items and issues for review. Now that the volume of permits and plans has diminished and the project has advanced, the scope of work on other issues must broaden. This will include a review of monitoring and compliance on site, often related to conditions prescribed in earlier permits and approvals.
>
> Finally, as the five year Environmental Management Agreement approaches closure in 2007, the four parties represented at the Voisey's Bay Environmental Management Board will be challenged to define the mechanism to ensure ongoing sound environmental management at the site. (Voisey's Bay Environmental Monitoring Advisory Board 2005, pg. 9)

Two further examples of environmental agreements and independent oversight were located in Alaska. As a result of the 1989 grounding and spill from the Exxon Valdez oil tanker, Congress passed a comprehensive oil spill prevention bill the following year known as the Oil Pollution Act. The Act was the result of public hearings around the state where citizens and local government leaders demanded public involvement in the oversight of oil transportation from Alaska.

Two regional citizen advisory councils were created by the legislation. The one for the Prince William Sound area was the result of a contract between Alyeksa that operates the Trans-Alaska pipeline and a regional advisory committee. The contract was competed before the legislation had been passed so it was incorporated by reference. The other advisory body was set up directly through the bill for the Cook Inlet area.

The councils include representatives of local governments, Alaska native organizations, state chamber of commerce (tourism), environmental groups, recreational groups, commercial fishing groups, and aquaculture associations. Government agency representatives also participate in a non-voting capacity.

Funding for the Council's activities come from a group of oil companies. The Councils provide advice and recommendations on policies, permits and site-specific regulations for terminal and

tanker operations and maintenance; monitor environmental impacts of the operation of terminals and tankers; monitor terminals and tanker operations and maintenance that may affect the environment near terminals; review the adequacy of oil-spill prevention and contingency plans for terminals and tankers; provide advice and recommendations on port operations, policies and practices; and review standards for tankers bound for, loading at, or exiting from oil terminals among other duties.

Further information on independent oversight bodies and environmental agreements can be found at:

Prince William Sound Regional Citizens' Advisory Committee
Website: http://www.pwsrcac.org/index.html
Contract between Alyeska and Committee: http://www.pwsrcac.org/docs/d0000100.pdf

Cook Inlet Regional Citizens Regional Advisory Committee
Website: http://www.circac.org/index.html
Oil Pollution Act 1990: http://www.circac.org/documents/pdf/circac/opa90.pdf

Independent Environmental Monitoring Agency [for BHP Ekati diamond mine]
Website: http://www.monitoringagency.net/Portal/
Environmental Agreement:
http://www.monitoringagency.net/Portal/Portals/0/pdf/key_documents/BHP%20Environmental%20Agreement1997.pdf

Environmental Monitoring Advisory Board [for Diavik diamond mine]
Website: http://www.emab.ca/
Environmental Agreement: http://www.emab.ca/pdfs/diavik_enviro_agree.pdf

Snap Lake Environmental Monitoring Agency [for DeBeers diamond mine}
Website: http://www.slema.ca/
Environmental Agreement:
http://www.slema.ca/documents/debeers_fnl_envir_agreement.pdf

Voisey's Bay Environmental Management Board [INCO nickel mine]
Website: http://www.vbemb.net/index2.html
Environmental Agreement: http://www.nr.gov.nl.ca/voiseys/pdf/envmanagement.pdf

4.5 Conclusions

Based on a review of the available agreements and personal experience, environmental agreements need not create additional work for proponents or government but can promote better coordination of their activities. There are several distinct advantages to environmental agreements. For example, environmental agreements can:

- Provide a mechanism to confirm and implement agreed upon proponent commitments made during an environmental assessment;
- Ensure coordination of review and approval of the design of environmental management plans and environmental monitoring programs;
- Allow for a coordinated approach to follow-up programs including evaluating effectiveness of mitigation measures, assessment of actual project effects against predicted effects, and identification of long-term trends and potential problems from monitoring program results that feed back into project management;
- Build public confidence in environmental performance though independent oversight and public reporting; and
- Provide a means for coordination of financial security for closure and reclamation.

4.6 Recommendations

There are well established co-management bodies and systems in the Inuvialuit Settlement Region and elements in the Gwich'in and Sahtu regions too. Any environmental agreement for the MGP must recognize these respective jurisdictions and not create duplication or overlap.

RECOMMENDATION

14. The Joint Review Panel should recommend that environmental agreements be negotiated amongst Aboriginal and public governments and the MGP proponents to ensure the following:

- **Provide a mechanism to confirm and implement agreed upon proponent commitments made during the Joint Review Panel process;**
- **Ensure coordination of review and approval of the design of environmental management plans and environmental monitoring programs;**
- **Allow for a coordinated approach to follow-up programs including evaluating effectiveness of mitigation measures, assessment of actual project effects against predicted effects, and identification of long-term trends and potential problems from monitoring program results that feed back into project management;**
- **Build public confidence in environmental performance though independent oversight and public reporting; and**
- **Provide a means for coordination of financial security for closure and reclamation.**

15. The Joint Review Panel recommend the following provisions for the environmental agreements for the MGP:

Scope and Mandate

- **There should be two separate agreements, one for the anchor fields, gathering systems and related facilities, and another for the pipelines. Special emphasis on cumulative effects assessment and management for the agreement covering the region for exploration and production is required.**
- **Parties to the agreement should include the MGP proponents, regional Aboriginal governments and public governments (federal and territorial). There should be a public review period for a draft agreement, with reasons provided at its conclusion.**
- **The agreements should be in place prior to any commencement of construction and staging activities, and last for the entire life-cycle of the MGP through to the completion of post-closure monitoring and reclamation.**
- **Any expansion of the current MGP should be automatically included under the environmental agreements.**

Funding

- **Funding for the implementation of the agreement should come from the proponents, with some consideration of a contribution from public governments for start-up costs.**
- **Funding during the construction phase of the pipeline in particular, will need to reflect the increased level of activities. The pipeline operations phase will likely see a reduced level of activities and need for funding.**
- **Funding for the environmental agreements should be set in advance, in relation to the expected levels of activity related to the MGP, with annual increases tied to cost of living increases.**
- **There should be a clear process for decisions around requests for additional funding.**
- **For those communities and regions without settled land claims agreements, there should be some consideration for the provision of funding for involvement in the negotiation and implementation of an environmental agreement.**

Access to Information and Information Sharing

- **All information collected and created as a result of the agreement should be publicly available (preferably at an appropriate physical location and on the internet whenever possible) except for a very limited range of data or reports (e.g. proprietary information, archaeological sites, raptor nesting sites). Specific information sharing provisions with regulators should form part of the agreement.**

Proponent Duties

- **The Agreements should be based on commitments made in the EIS, during the environmental assessment process, and recommendations made by the Joint Review Panel.**

- **The proponents should submit construction phase environmental management plans and monitoring programs for review (including the oversight bodies) and approval (by regulatory authorities) before construction begins.**
- **The same process should apply to the review and approval of the operations and closure phase plans and programs.**
- **The proponents should be required to prepare annual monitoring program reports, with firm deadlines for submission, with sufficient time for review with recommendations to modify the following season's program design. A plain language summary of annual monitoring programs and other relevant information on the development of the MGP and its environmental effects should also be prepared and submitted by the proponents. General contents of the annual reports should be specified in the agreements but should include summary of operations over the previous year, operations anticipated in the new year, compliance monitoring results, results and findings from monitoring programs, results and findings of research from research and studies, and lists and abstracts of all environmental reports from the previous year.**
- **There should be a requirement in the Agreements for periodic cumulative impacts reports that review results of compliance monitoring, predicted effects vs. monitored effects, success of mitigation measures, adaptive management performance, and trends in environmental effects monitoring results in comparison to pre-project baseline conditions with management responses, where appropriate.**
- **The proponents should provide timely access to monitoring data to governments and the independent oversight bodies, and specifically in an appropriate form to assist with future NWT environmental audits.**

Default, Remedies and Dispute Resolution

- **There should be sanctions for default on the part of the proponents including possible fines or contributions into an environmental trust fund, and ability by governments to take remedial and emergency actions in defined circumstances.**
- **Financial security for performance related to commitments made in the agreements should be set aside and should not be the subject of arbitration, with some consideration of enforceability initiated by third parties.**
- **Dispute resolution processes and mechanisms should be spelled out to ensure timely completion.**
- **There should be regular and periodic review of the agreement and the ability to amend the agreement with the consent of all the parties.**

Independent Oversight Bodies

- **The primary focus of the oversight bodies should be on sound technical review of the design of and results from environmental management plans and environmental monitoring programs, including assessment of the performance of regulators and inclusion of Traditional Knowledge in environmental management. This function should include the ability to intervene in regulatory and legal processes related to environmental matters, including**

dispute resolution related to the agreement. The secondary objectives should include support for capacity-building efforts.

- **Membership should be based on technical expertise with nominations/appointments from Aboriginal and public governments. Members should act independent from the nominating or appointing body. Members should serve indefinite terms, with allowance for removal with cause.**
- **Independent oversight bodies should have the ability to establish an office in proximity to the MGP, with staff.**
- **Recommendations from the oversight bodies should come with an obligation for a response, within a defined timeframe, from the developers and regulators.**
- **Overlapping membership of the two oversight bodies should be considered and perhaps even encouraged. Combined annual reports from the two oversight bodies should be considered.**
- **Oversight bodies should function as registered non-profit societies under the laws of the NWT.**
- **Oversight bodies should serve as a public repository of environmental data and information related to the MGP, including the maintenance of a public registry.**

5.0 OVERALL CONCLUSIONS

This submission attempted to review the following key issues in relation to environmental management of and for the MGP:

- State of the NWT environmental management regime;
- Liability, closure and reclamation and financial security; and,
- Environmental agreements including independent oversight.

The NWT environmental management regime was found to have very serious gaps, problems and uncertainties as identified in the NWT Environmental Audit. These issues included the need to complete and possibly revise land use plans in the areas covered by the MGP to provide the proper context for managing its environmental effects through the identification of ecological thresholds, limits of acceptable change, and appropriate terms and conditions on regulatory approvals. Without a functioning CIMP, it will be difficult, if not impossible, to properly assess and manage cumulative effects in the Mackenzie Delta and Beaufort Sea areas. The roles and responsibilities of one of the most significant regulators for the MGP, the NEB, remain beyond the reach of northerners as there is no northern office and access to information is limited. Northerners are accustomed to much more accessible, open and transparent environmental management as a result of the co-management systems established pursuant to land claims agreements. The NEB presents a particular challenge for northerners used to a different style of management.

The relationships amongst the regulators are not well developed in some cases and there are areas of overlapping responsibilities but no clear roles and little agreement on coordinating important matters. For example, closure and reclamation planning, financial security and the review and approval of management plans and monitoring programs for the MGP are not articulated by either the proponents or the regulators in any organized or coherent fashion. With regard to financial security, it is difficult to understand how the 'polluter pays' principle will be applied to protect the public purse, or even to prevent operators from double-counting of liability.

How can the public or the Joint Review Panel feel confident that environmental management of the MGP is coordinated, conducive to adaptive management, accountable, and clear? How will the various commitments made by the proponents and government be woven together in a coordinated fashion into a system that can effectively mitigate, monitor and manage the environmental effects of the MGP in a comprehensive, accountable, and transparent fashion?

Environmental agreements offer one potential solution in solidifying commitments, laying out a clear process and timelines for the review and approval of environmental management plans and monitoring programs, and building public confidence through independent oversight. Unfortunately, none of the key parties to this review, the proponents or regulators, have endorsed the concept of environmental agreements. In the absence of environmental agreements covering the MGP, it is difficult to imagine a properly functioning internal environmental management system for the proponents that is properly coordinated with the

overlapping legal and regulatory requirements of governments and co-management bodies. Perhaps the proponents and regulators are playing a waiting game to see what the Joint Review Panel and NEB come up with before committing to or being drawn into an environmental agreement. Leadership is required now.

Without the adoption of the recommendations presented in this submission, proper environmental management of the MGP will not be possible, and the MGP should not be allowed to proceed in its current form.

Further recommendations may be suggested to the Joint Review Panel at later hearings, building on what takes place in the environmental management and other sessions.

6.0 CONSOLIDATED LIST OF RECOMMENDATIONS TO THE JOINT REVIEW PANEL

1. The Joint Review Panel should recommend that DIAND and GNWT take the following measures be taken as soon as possible, and in any event, before construction begins on the potential MGP:

    - DIAND should amend the *Canada Mining Regulations* to ensure Mackenzie Valley land use plans are legally binding on all land uses. In the interim, the land withdrawals for the Gwich'in Land Use Plan conservation areas should be renewed indefinitely by DIAND;
    - DIAND should provide the Sahtu Land Use Planning Board with the resources and assistance necessary to expedite the review of the Draft Plan, required revisions, and final approval as quickly as possible. Once a Plan has been approved by the Sahtu, the federal and territorial governments should review and approve the Plan as quickly as possible, and in any event, before December 31, 2007.
    - DIAND and GNWT should approve the Dehcho Land Use Plan as quickly as possible and DIAND should provide written policy direction to the Mackenzie Valley Land and Water Board to follow the plan pursuant to s. 13 of the *NWT Waters Act*.

2. The Joint Review Panel should recommend to the Gwich'in Land Use Planning Board and the Inuvialuit Game Council that as exploration and development activities related to the MGP increase in scope and intensity in the Mackenzie Delta and Beaufort Sea area, regular and periodic reviews of the appropriate land use plan and community conservation plans will become necessary with a special emphasis on ensuring that development remains within ecological thresholds and agreed upon limits of acceptable change, and measurable and enforceable ecological thresholds.

3. The Joint Review Panel should recommend to the NEB, Environment Canada and the GNWT that an agreement be negotiated on the regulation, monitoring and enforcement of air emissions from all MGP facilities and activities based on the maintenance of ecological integrity and human health. In the absence of any clear legislation or regulation, appropriate air emission standards need to be incorporated into NEB approvals for all MGP facilities and activities.

4. The Joint Review Panel should recommend to the GNWT, Environment Canada, DIAND and applicable Renewable Resource Management Boards that an agreement be negotiated (possibly through an environmental agreement or as terms to NEB approvals) on the monitoring and management of wildlife in relation to all MGP facilities and activities.

5. The Joint Review Panel should recommend to the MVEIRB and the ISR environmental assessment regime that guidance documents be developed for proponents and the public on the issues of climate change and follow-up to ensure proper assessment and use of best practices for additions to and expansions of the MGP.

6. The Joint Review Panel should recommend to DIAND and the CIMP Steering Committee that they develop a detailed operational plan, design a responsible authority, and draft regulations to give effect to CIMP before December 31, 2007.

7. The Joint Review Panel should recommend to DIAND that it secure stable and long-term funding for the CIMP as soon as possible, and in any event, at least two years in advance of any construction activity for the MGP. The Joint Review Panel should consider recommending that the NEB make CIMP implementation a condition of a certificate for the MGP pipelines.

8. The Joint Review Panel should recommend to DIAND that:

- Boards and agencies responsible for the review and issuance of MGP approvals have full membership at all times, assuming timely nominations from all other parties;
- Funding requirements for effective operation be reviewed with boards and agencies well in advance of any applications or construction to address increased workloads should the MGP be approved; and
- A participant funding program be established, with adequate funding, to ensure meaningful public participation as soon as possible, and in any event before July 1, 2008.

9. The Joint Review Panel should recommend to the National Energy Board that it open an office in the NWT in relation to its regulatory authority and responsibilities with regard to the Mackenzie Gas Project.

10. The Joint Review Panel should recommend to the National Energy Board that it prepare a communications strategy for the NWT to improve the pubic awareness and understanding of its roles and responsibilities. This strategy should include a new section on its website where applications, decisions, approvals, amendments, inspection reports and other relevant information be posted in the interest of openness, transparency and accountability.

11. The Joint Review Panel should recommend to all Responsible Authorities the following guiding principles for closure and reclamation related to the MGP and that these principles be incorporated into all project approvals:

- Sustainability should be the cornerstone and goal of all reclamation activities to ensure that the decisions made today do not take away or threaten the productivity and diversity of ecological systems or diminish the economic and social opportunities for future generations.
- There should be full financial security for all MGP components and related activities to ensure that there is full cost accounting, no hidden subsidies, and zero public liability all while avoiding double-counting of liabilities. Security should be in an easily accessible form with as few conditions as possible. Release of security should be based on achievement of agreed upon and measurable closure criteria.
- Use of best available technology.
- Avoidance of any and all perpetual care situations whenever predictable.

- Transparency and accountability of decision-making through meaningful and fair public participation in all stage of reclamation planning.
- Conceptual reclamation plans should be submitted and approved before any construction or operation of any MGP component commences, with requirements for more detailed plans on a regular basis, building on and linked to research, with clear objectives and measurable criteria to determine success.
- There should be recognition of the special role of Traditional Knowledge and communities in setting a baseline, understanding trends and monitoring of reclamation.

12. The Joint Review Panel should recommend to appropriate Responsible Authorities (i.e. NEB, DIAND, Land and Water Boards) that the current closure and reclamation regime for oil and gas development in the NWT be reformed to reflect the principles noted above with the objectives of:
    - A comprehensive, integrated life-cycle approach to exploration, development, production and planned abandonment.
    - Recognizing the differences in management roles and responsibilities as a result of regional land claims settlements but providing consistency and better coordination, effectiveness and efficiency.
    - Creating specific legislative and regulatory changes in a planned and fair manner to adequately regulate the MGP. In the absence of such changes, there should be administrative arrangements and agreements to facilitate closer coordination.
    - Establishing clear limits on discretionary powers and mandatory requirements for reclamation planning and financial security to provide regulatory consistency, clarity and minimal financial risks to the public. These measures should remove ability to pay as a consideration in determining the necessity of and amount of security that should be required.
    - Empowering agencies and governments to take early preventative and remedial steps to avoid liability transfer to the public sector and examining the opportunities to implement joint, several and retroactive liability.

13. The Joint Review Panel should recommend the following specific priority initiatives related to closure and reclamation for the MGP:

    - Negotiation of a Memorandum of Understanding between the Department of Indian Affairs and Northern Development and the Mackenzie Valley Land and Water Board regarding their roles and responsibilities related to overall closure and reclamation as it relates to water, land and security.
    - Development of closure and reclamation guidelines and financial security calculation guidelines by the Mackenzie Valley Land and Water Board to be used by all regional land and water boards and in setting water license and land use permit terms and conditions.
    - That the NEB include requirements for reclamation plans, periodic revisions to such plans, and financial security in all *Canada Oil and Gas Operations Act* approvals related to the MGP and in the certificate(s) for the natural gas and liquids pipelines.
    - That all Responsible Authorities for the MGP require appropriate financial security in all the MGP approvals to fully implement the wildlife harvesting compensation provisions of the IFA.

14. The Joint Review Panel should recommend that environmental agreements be negotiated amongst Aboriginal and public governments and the MGP proponents to ensure the following:

    - Provide a mechanism to confirm and implement agreed upon proponent commitments made during the Joint Review Panel process;
    - Ensure coordination of review and approval of the design of environmental management plans and environmental monitoring programs;
    - Allow for a coordinated approach to follow-up programs including evaluating effectiveness of mitigation measures, assessment of actual project effects against predicted effects, and identification of long-term trends and potential problems from monitoring program results that feed back into project management;
    - Build public confidence in environmental performance though independent oversight and public reporting; and
    - Provide a means for coordination of financial security for closure and reclamation.

15. The Joint Review Panel recommend the following provisions for the environmental agreements for the proposed MGP:

    Scope and Mandate

    - There should be two separate agreements, one for the anchor fields, gathering systems and related facilities, and another for the pipelines. Special emphasis on cumulative effects assessment and management for the agreement covering the region for exploration and production is required.
    - Parties to the agreement should include the MGP proponents, regional Aboriginal governments and public governments (federal and territorial). There should be a public review period for a draft agreement, with reasons provided at its conclusion.
    - The agreements should be in place prior to any commencement of construction and staging activities, and last for the entire life-cycle of the MGP through to the completion of post-closure monitoring and reclamation.
    - Any expansion of the current MGP should be automatically included under the environmental agreements.

    Funding

    - Funding for the implementation of the agreement should come from the proponents, with some consideration of a contribution from public governments for start-up costs.
    - Funding during the construction phase of the pipeline in particular, will need to reflect the increased level of activities. The pipeline operations phase will likely see a reduced level of activities and need for funding.
    - Funding for the environmental agreements should be set in advance, in relation to the expected levels of activity related to the MGP, with annual increases tied to cost of living increases.
    - There should be a clear process for decisions around requests for additional funding.

- For those communities and regions without settled land claims agreements, there should be some consideration for the provision of funding for involvement in the negotiation and implementation of an environmental agreement.

Access to Information and Information Sharing

- All information collected and created as a result of the agreement should be publicly available (preferably at an appropriate physical location and on the internet whenever possible) except for a very limited range of data or reports (e.g. proprietary information, archaeological sites, raptor nesting sites). Specific information sharing provisions with regulators should form part of the agreement.

Proponent Duties

- The Agreements should be based on commitments made in the EIS, during the environmental assessment process, and recommendations made by the Joint Review Panel.
- The proponents should submit construction phase environmental management plans and monitoring programs for review (including the oversight bodies) and approval (by regulatory authorities) before construction begins.
- The same process should apply to the review and approval of the operations and closure phase plans and programs.
- The proponents should be required to prepare annual monitoring program reports, with firm deadlines for submission, with sufficient time for review with recommendations to modify the following season's program design. A plain language summary of annual monitoring programs and other relevant information on the development of the MGP and its environmental effects should also be prepared and submitted by the proponents. General contents of the annual reports should be specified in the agreements but should include summary of operations over the previous year, operations anticipated in the new year, compliance monitoring results, results and findings from monitoring programs, results and findings of research from research and studies, and lists and abstracts of all environmental reports from the previous year.
- There should be a requirement in the Agreements for periodic cumulative impacts reports that review results of compliance monitoring, predicted effects vs. monitored effects, success of mitigation measures, adaptive management performance, and trends in environmental effects monitoring results in comparison to pre-project baseline conditions with management responses, where appropriate.
- The proponents should provide timely access to monitoring data to governments and the independent oversight bodies, and specifically in an appropriate form to assist with future NWT environmental audits.

Default, Remedies and Dispute Resolution

- There should be sanctions for default on the part of the proponents including possible fines or contributions into an environmental trust fund, and ability by governments to take remedial and emergency actions in defined circumstances.

- Financial security for performance related to commitments made in the agreements should be set aside and should not be the subject of arbitration, with some consideration of enforceability initiated by third parties.
- Dispute resolution processes and mechanisms should be spelled out to ensure timely completion.
- There should be regular and periodic review of the agreement and the ability to amend the agreement with the consent of all the parties.

Independent Oversight Bodies

- The primary focus of the oversight bodies should be on sound technical review of the design of and results from environmental management plans and environmental monitoring programs, including assessment of the performance of regulators and inclusion of Traditional Knowledge in environmental management. This function should include the ability to intervene in regulatory and legal processes related to environmental matters, including dispute resolution related to the agreement. The secondary objectives should include support for capacity-building efforts.
- Membership should be based on technical expertise with nominations/appointments from Aboriginal and public governments. Members should act independent from the nominating or appointing body. Members should serve indefinite terms, with allowance for removal with cause.
- Independent oversight bodies should have the ability to establish an office in proximity to the MGP, with staff.
- Recommendations from the oversight bodies should come with an obligation for a response, within a defined timeframe, from the developers and regulators.
- Overlapping membership of the two oversight bodies should be considered and perhaps even encouraged. Combined annual reports from the two oversight bodies should be considered.
- Oversight bodies should function as registered non-profit societies under the laws of the NWT.
- Oversight bodies should serve as a public repository of environmental data and information related to the MGP, including the maintenance of a public registry.

7.0 REFERENCES

Commissioner of the Environment and Sustainable Development. 2002. Abandoned Mines in the North. Chapter 3 of the 2002 Report of the Commissioner of the Environment and Sustainable Development. (see http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20021003ce.html/$file/c20021003ce.pdf)

Contract Between Regional Citizen's Advisory Council and Alyeska Pipeline Service Company. February 8, 1990. (see http://www.pwsrcac.org/docs/d0000100.pdf)

Department of Indian Affairs and Northern Development (DIAND). 2002. Mine Site Reclamation Policy for the Northwest Territories. (see http://www.ainc-inac.gc.ca/ps/nap/recpolnwt_e.pdf)

DIAND. 2005. Northwest Territories Environmental Audit. (see http://nwt-tno.inac-ainc.gc.ca/nwt-a_e.htm)

DIAND. 2006. Mine Site Reclamation Guidelines for the Northwest Territories.

Department of Indian Affairs and Northern Development. (see http://www.oilandgasguides.com/guides/nwt-smv/nwt-smv.pdf)

Erlandson, G. 2000. Oil and Gas Approvals in the Northwest Territories, Southern Mackenzie Valley. A guide to regulatory approval processes for oil and natural gas exploration and production on public lands in the Southern Mackenzie Valley

Erlandson, G, and J. Sloan. 2002a. Oil and Gas Approvals in the Northwest Territories, Gwich'in Settlement Area. A guide to regulatory approval processes for oil and natural gas exploration and production on Gwich'in lands and Crown lands in the Gwich'in Settlement Area of the Northwest Territories. Department of Indian Affairs and Northern Development. (see http://www.oilandgasguides.com/guides/nwt-gsa/nwt-gsa.pdf)

Erlandson, G, and J. Sloan. 2002b. Oil and Gas Approvals in the Northwest Territories, Sahtu Settlement Area. A guide to regulatory approval processes for oil and natural gas exploration and production on Sahtu lands and Crown lands in the Sahtu Settlement Area of the Northwest Territories. Department of Indian Affairs and Northern Development. (see http://www.oilandgasguides.com/guides/nwt-ssa/nwt-ssa.pdf)

Galbraith, L. 2005. Understanding the Need for Supraregulatory Agreements in Environmental Assessment: An Evaluation from the Northwest Territories, Canada. Unpublished Masters' Thesis. Department of Geography, Simon Fraser University. (see http://www.sfu.ca/~leg/Galbraith_MAThesis_2005%20-%20for%20library.htm)

Gartner Lee Ltd. 2005. Independent Evaluation of the Frontier Exploration and Production Function. Prepared for the National Energy Board. (see http://www.neb-one.gc.ca/Publications/InternalAuditReports/2005/FrontierExplorationProductionFunction_e.pdf)

Government of the Northwest Territories. 1985. Review of the Norman Wells Project. Lessons Learned and Recommendations for Future Projects. (see http://www.ngps.nt.ca/Upload/Interveners/Indian%20and%20Northern%20Affairs%20Canada/070130_INAC_RESPONSE_JRP_R5_Review_of_the_NW_Project_Lessons_Learned_and_Recommendations_for_Future_Projects_Sept_1985.pdf)

Joint Review Panel. 2007. Guidance Document for Hearings: Topics and Locations of Community, General and Technical Hearings (Revised March 19, 2007). (see http://www.ngps.nt.ca/Upload/Joint%20Review%20Panel/070319_Guidance_Document_for_Hearings.pdf)

Kennett, S. 2001. Project-Specific Environmental Agreements In The NWT: Review Of Issues And Options. Canadian Institute of Resources Law. Prepared for Environment and Conservation, DIAND, NWT. Draft. (see http://www.ngps.nt.ca/Upload/Interveners/Indian%20and%20Northern%20Affairs%20Canada/INAC%20(Government%20Organization)/011217_DIAND_Project-Specific_Env_Agrmts_NWT.pdf)

Macleod Institute. 2000. Independent Environmental Monitoring Agency Evaluation Report.

National Energy Board. 2005. Response to an Independent Evaluation of the Frontier Exploration and Production Function. (see http://www.neb-one.gc.ca/Publications/InternalAuditReports/2005/FrontierExplorationProductionResponse_e.pdf)

NEB. 2007. Strategic Plan 2007-2010. (see http://www.neb-one.gc.ca/AboutUs/strtgcpln2007_2010_e.htm)

O'Faircheallaigh, C. 2006. Environmental Agreements in Canada: Aboriginal Participation, EIA Follow-up and Environmental Management of Major Projects. Canadian Institute of Resources Law.

O'Reilly, K. 1998. The BHP Independent Environmental Monitoring Agency as a Management Tool. Prepared for the Labrador Inuit Association for the Voisey's Bay Environmental Assessment Panel. (see http://www.carc.org/rndtable/vbpanels.html)

Oil Tanker and Oil Terminal Environmental Oversight and Monitoring Act of 1990. (see section 5002 of http://www.circac.org/documents/pdf/circac/opa90.pdf)

Pipeline Abandonment Steering Committee. 1996. Pipeline Abandonment. A Discussion Paper on Technical and Environmental Issues. (see http://www.neb-one.gc.ca/safety/aband_e.htm)

Pipeline Abandonment Legal Working Group. 1997. Legal Issues Relating to Pipeline Abandonment: A Discussion Paper. Prepared for the Pipeline Abandonment Steering Committee. (see http://www.eub.ca/docs/Documents/reports/PLAbandLegalWorkingRep_199705.HTM)

Ross, B. 2004. The Independent Environmental Watchdog: A Canadian Experiment in EIA Follow-up. In J. Arts (Ed.), Assessing Impact: Handbook of EIA and SEA Follow-up (pp. 178-192). Sterling, VA: Earthscan.

Service North. 2005. Lessons Learned: Norman Wells Pipeline. Prepared for NWT Region, Department of Indian Affairs and Northern Development. (see http://www.ngps.nt.ca/Upload/Interveners/Indian%20and%20Northern%20Affairs%20Canada/2006_09_22_INAC_Rd_5_IRs.pdf)

Sloan J., G. Erlandson and L. Beinhauer. 2001. Oil and Gas Approvals in the Northwest Territories, Inuvialuit Settlement Region. A guide to regulatory approval processes for oil and natural gas exploration and production in the Inuvialuit Settlement Region. Department of Indian Affairs and Northern Development. (see http://www.oilandgasguides.com/guides/nwt-isr/nwt-isr.pdf)

Sloan J., G. Erlandson and L. Beinhauer. 2002. Oil and Gas Approvals in the Beaufort Sea. A guide to regulatory approval processes for oil and natural gas exploration and production on Canada's Frontier Lands in the Beaufort Sea. Department of Indian Affairs and Northern Development. (see http://www.oilandgasguides.com/guides/nwt-bft/nwt-bft.pdf)

Voisey's Bay Environmental Monitoring Advisory Board. 2005. Annual Report. (see http://www.vbemb.net/pdf-files/2005_annual_report_vbnc_eng.pdf)

Weitzner, V. 2006. "Dealing Full Force: Lutsel K'e Dene First Nation's Experience in Negotiating with Mining Companies. North-South Institute. (see http://www.nsi-ins.ca/english/pdf/lk-en.pdf)

Wenig, M. and K. O'Reilly. 2005. The Mining Reclamation Regime in the Northwest Territories: A Comparison with Selected Canadian and U.S. Jurisdictions. Canadian Institute of Resources Law and Canadian Arctic Resources Committee. (see http://www.carc.org/2005/mining49.NWTMiningReclam%20final%20-21Jan05.pdf)

APPENDIX 1

National Energy Board Frontier Evaluation Table

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
3. Improvements to Existing Legislation and Regulations Applicable in Northern Frontier Areas It is recommended that the NEB consider undertaking a review and revision of the regulations administered by its Frontier Exploration and Production Function. **7. Improvements to Guidelines and Best Practices** It is recommended that the NEB consider using the goal-oriented approach to regulating Frontier activities, providing this approach is proven to be more efficient and effective, and consider alternative methods of program delivery and decision-making.	HIGH [HIGH] MEDIUM [HIGH]	**Strategy:** Review and revise legislation, regulations & guidance material 1. Create a plan and schedule for revising goal-oriented regulations under COGOA and Accord Acts. Revise and modernize the legislative framework within which we currently work, the Canada Petroleum Resources Act (CPRA), the Canada Oil and Gas Operations Act (COGOA). 2. Draft and submit recommendations to NRCan and DIAND for implementation. 3. Implement plan for preparing goal-oriented regulations and guidance notes. 4. Consult and engage companies to review draft regulations at an early stage and contribute to the preparation of guidance materials. 5. Adopt appropriate guidance material from Offshore Petroleum Boards. 6. Share plan with clients, stakeholders, and internally. 7. Meeting with CAPP scheduled for Jan 06 8. Prepare a plan for Semi-annual meetings with companies and their association to identify issues	 1. 30 Jun 2005 2. March 2007 3. As per regulatory update plan 4. As per regulatory update plan 5. As per regulatory update plan 6. As per regulatory update plan 8. 31 Oct 2005

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
		and to advance understanding and solutions. 9. Meeting with CAPP scheduled for Jan 06 and Jun-Jul 06 10. Semi-annual meetings with companies and their associations to identify issues and to advance understanding and possible solutions. 11. Meeting with CAPP scheduled for Jan 06. 12. Meetings with Chevron, ConocoPhillips, EnCana, Paramount, and Devon are on-going.	 10. Semi-annual 12. on-going
1. Improved Northern and Frontier Presence It is recommended that the NEB establish a presence in the Northwest Territories (NWT), Nunavut, and other Frontier areas. **8. Educational and Outreach Programs for Clients and Stakeholders** It is recommended that the NEB develop and implement a specific educational and outreach program in Frontier exploration and production matters for clients and stakeholders.	HIGH [HIGH] MEDIUM [HIGH]	**Strategy:** Engagement of clients and stakeholders 1. Assess and develop options for additional northern presence, i.e., NEB Northern Office, following MGP decision. 2. Leverage communication opportunities in the Frontier. 3. Meetings are planned about two (2) months in advance or by invitation. Where possible, meetings are scheduled with inspections or other activities in the area. 4. Meetings were held with the Inuvialuit (Inuvialuit Lands Administration and Environmental Impacts Steering Committee), Fort Liard (Ache Dene Cho),	 1. After MGP decision 2. At available opportunities

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
		Colville Lake (Shatu). Additional meetings are scheduled with the representatives from Deline (Shatu) and Inuvialuit Game Council in Nov 05. 5. Hold semi-annual meetings with companies to identify issues and to advance understanding and solutions as noted above. 6. Prepare a plan for annual coordinated INAC, northern communities and NEB meeting. The plan will be developed in Fiscal Q4 as there is a new Director at Northern Oil and Gas in Ottawa. 7. Hold annual northern communities meeting as per above plan.	 5. Semi annual 6. 31 Oct 2005 7. As per plan
4. Streamlining the Canadian Petroleum Resources Act regulatory application process. It is recommended that the NEB consider streamlining the regulatory process for significant discovery and commercial discovery applications under the CPRA. **10. Decision Making Processes** It is recommended that the NEB investigate alternative methods and approaches for achieving a more constructive and effective dialogue with clients during the application and approval processes.	HIGH [HIGH] MEDIUM [HIGH]	**Strategy:** Leverage QMS for process improvements Assess adequacy of current process 1. Map and publish current COGOA and CPRA processes under QMS. DONE 2. Establish linkages within sub-processes and with other processes under QMS. Underway. 3. Use QMS for process improvements. To be undertaken in 2006-07	 1. 31 May 2005 2. 31 Mar 2006 3. 31 Mar 2007
5. Internal NEB Team Development It is recommended that the NEB develop internal methods	HIGH [HIGH]	**Strategy:** Focus on internal team development and capacity building	

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
and programs for enabling Relationship Building between the Frontier Exploration and Production Function and other Teams and Business Units. **12. Maintaining and Enhancing Internal Capacity** It is recommended that the NEB develop an active internal mentoring program to assist in succession planning over the long term, to ensure capacity issues are addressed, and to facilitate the retention of corporate knowledge among staff.	HIGH [HIGH]	1. Hold Accountability and Development discussions with E&P team members to prepare Results for 2005-06. These would include PL, Environment and PL, Safety and Engineering in the initial discussions and facilitation of implementation of the development plan. 2. Individual Results discussions and mid-year discussions have taken place. Development plans have been identified and actions initiated. 3. Implement Development Plan action items. Action underway in most cases. 4. Information sessions and discussions on E&P internally. 5. Frontier Days and informal session with Team Leaders held in September. An additional session with economists is planned for late October 05. Additional sessions will be planned for Q4. 6. Explore and expand work share opportunities. 7. Staff are working on a 'NEB' Emergency Preparedness and response program. Inspection officers are 'shadowing' and learning Frontier operations and vice versa as opportunities arise. 8. Identify gaps and solutions in People Strategies 2006-09.	1. 30 Sep 2005 3. 31 Mar 2006 and beyond 4. 31 Mar 2006 6. 31 Mar 2006 8. 31 Mar 2006

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
		9. Discussions are underway at Operations BULT. Key vulnerabilities are in the areas of Geophysics and drilling engineering. Staffing actions have been initiated as have capacity building steps in Data Coordinator role. 10. Plan and implement an E&P team building activity. To be undertaken in Q4 following completion of a "Team Dynamics" evaluation conducted in Sept-Oct 05.	 10. 31 Mar 2006
11. Information Management It is recommended that the NEB implement new computerized information management systems that facilitate efficient, effective and coordinated communications and information exchanges with clients and stakeholders.	HIGH [LOW]	1. Use e-mail to receive daily well log. 2. Develop plans to leverage technology to capture data electronically going forward. 3. Implement appropriate elements of the approved plan.	1. 31 Mar 2006 2. 31 Mar 2006 3. 31 Mar 2007
6. Industry Compliance It is recommended that the NEB develop an approach to working with the appropriate clients to bring them into regulatory compliance. This may include investigating techniques such as risk assessment, and verifying progress in this area.	HIGH [LOW]	NEB of the view evaluation rating is exaggerated. 1. Raise companies' awareness of filing requirements. 2. Escalate outstanding submissions requirement to management.	 1. 31 Mar 2006 2. 31 Mar 2006
2. Legal Certainty and Devolution It is recommended that the NEB consider the impact of devolution on the hydrocarbon industry through active interdepartmental consultation, and ensuring consistency	MEDIUM [LOW]	1. Keep current on status. 2. Develop plan for regulatory transfer to Northwest Territories.	1. On-going 2. 31 Mar 2006

Evaluation Recommendation	Evaluators' Priority [NEB Priority]	NEB Response	Timeline for Action
in the regulatory processes for clients during the transition period.		3. Develop E&P human resources and work plan.	3. 31 Mar 2006
9. Kyoto Protocol on Greenhouse Gas Emissions It is recommended that the NEB show leadership and provide guidance for clients on best available technologies and possible requirements for meeting the Kyoto Protocol.	MEDIUM [LOW]	NRCan and EC leads.	None

APPENDIX 2

Legislation, Regulations, and Policy
for Closure and Reclamation

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
National Energy Board	***Canada Oil and Gas Operations Act***	s. 24-26 establishes a liability regime for spills and debris related to oil and gas operations where losses (including loss of income from resource harvesting), no without proof of fault or negligence necessary, and no double counting of damages --Chief Conservation Officer can take over cleanup and recover costs --claims recoverable through the courts and must be filed within three years of loss or six years from the spill or discharge s. 27--oil and gas operators to provide proof of financial responsibility in the form of a letter of credit, a guarantee or indemnity bond or in any other form satisfactory to the National Energy Board, in an amount satisfactory to the Board to remain in force for the duration of the work or activity --security may be used to pay claims	---applies to the Anchor Fields and Gathering Systems (operating licences, exploration, drilling, wells, development plans, environmental protection plans, production operations, abandonment work, diving operations)	--unclear how financial responsibility implemented and whether it may relate to reclamation liability
National Energy Board	***Canada Oil and Gas Drilling Regulations***	s. 206--operator shall ensure all refuse is cleared from the drill site and the surface of the drill site is restored to the satisfaction of a conservation engineer, and on the termination of any offshore drilling operation, the seafloor is cleared of any material or equipment	--covers drilling operations only	--no requirements for closure plan or security

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
National Energy Board	***Canada Oil and Gas Installation Regulations***	. 43--Where a development plan requires it, the operator shall incorporate in the design of the installation measures to facilitate its removal from the site without causing a significant effect on navigation or the marine environment	--applies to diving, drilling and production facilities	--no requirements for closure plan or security
National Energy Board	***Canada Oil and Gas Production and Conservation Regulations***	s. 10--the Chief Conservation Officer may require conditions relating to safety, protection of the natural environment or conservation of oil or gas s. 11--an operator shall, before the work or activity is started, furnish the National Energy Board with proof of financial responsibility, in a form and in an amount satisfactory to the National Energy Board, for the purpose of ensuring that the operator completes the work or activity, and leaves the site at which the work or activity was carried on in the state required by the development plan relating to the pool or field approved s. 59--No person shall decommission a production installation at a pool or field other than in accordance with the development plan	--applies to anchor fields	--no requirements for closure plan or security
National Energy Board	***Oil and Gas Spills and Debris Liability Regulations***	s. 3--the limits of liability are in respect of any area of land or submarine area is a maximum of $40 million	--applies to spills or debris	--does not cover closure and reclamation

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
National Energy Board	***National Energy Board Act***	s. 24--pubic hearing necessary for leave to abandon the operation of a pipeline s. 52 and 54--the Board may issue a certificate in respect of a pipeline and may have regard to the financial responsibility and financial structure of the applicant and any public interest that may be affected by the granting or the refusing of the application. The Board may issue a certificate subject to such terms and conditions as the Board considers necessary or desirable in the public interest. s. 74--A company shall not, without the leave of the Board, abandon the operation of a pipeline. s. 75--A company shall do as little damage as possible, and shall make full compensation to all persons interested, for all damage sustained by them. s. 84.-- negotiation and arbitration procedures to determine compensation matters	--applies to the natural gas pipeline and liquids pipeline --pipeline abandonment requires a *Canadian Environmental Assessment Act* screening or *Mackenzie Valley Resource Management Act* preliminary screening	--no explicit requirement for a closure plan or security

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
National Energy Board	***Onshore Pipeline Regulations***	s. 48--A company shall develop and implement an environmental protection program to anticipate, prevent, mitigate and manage conditions which have a potential to adversely affect the environment. s. 49--the Board may direct a company to test, inspect or assess a pipeline in accordance with CSA standards or any other comparable standards s. 50--An application for leave to abandon a pipeline shall include the rationale for the abandonment and the measures to be employed in the abandonment	--applies to the natural gas pipeline and liquids pipeline	--no explicit requirement for a closure plan or security --NEB apparently reviewing this regulation including the concept of decommissioning (see NEB Regulatory Agenda, Sept. 2006)
National Energy Board	*National Energy Board Filing Manual*	The application for abandonment is to ensure: • the proposed abandonment will be carried out in a technically safe manner; • potential environmental, socio-economic, economic and financial effects are identified and addressed; and • all landowners and other persons potentially affected are sufficiently notified and have their rights protected. Confirm abandonment activities will follow the requirements of the latest version of CSA Z662.	--applies to the natural gas pipeline and liquids pipeline but not to other facilities	--detailed provisions for a closure plan but no requirement for public consultation --no explicit closure standards or expectations

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	National Energy Board Filing Manual	Provide: • a rationale for the abandonment; • a complete description of the facilities being abandoned; • an assessment of the potential safety hazards related to the facility abandonment and the mitigative actions planned to reduce such hazards; and • a plan outlining how the facility will be prepared for abandonment and how it will be monitored, if necessary, during its abandonment. Environment 1. Describe the different ecological settings found at the project location and identify the different land uses that are or will be in place, if known. 2. Identify the ecological settings in which each of the project components to be abandoned is located. 3. Describe and justify the methods that will be used to clean up any contamination found at the project component sites and: • quantify the amount of contamination that may exist; • describe special handling techniques that will be used; and • identify regulatory requirements that will be followed for cleanup and disposal. 4. For each project component, describe: • how and when it will be abandoned; • how the environment will be reclaimed; and • how the abandonment is appropriate for the ecological setting where it is located. 5. Use an appropriate level of detail and technical		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	National Energy Board Filing Manual	description to allow regulators, the public and others to thoroughly understand what is being proposed. 6. Describe any regulatory requirements for reclamation and remediation and how these requirements will be met. 7. Identify historical spills and releases that have occurred on the area to be abandoned. Economics and Finance 1. Provide details of the costs associated with the proposed abandonment, including details of any exposure to future liabilities. 2. Confirm that funding is and will be available to finance the proposed abandonment. 3. Provide the original book cost of the facilities and accumulated depreciation to the retirement date. 4. Provide accounting details whether the retirement is ordinary or extraordinary. Lands Information 1. Describe the location and the dimensions of the existing RoW and facility lands that would be affected by the abandonment. 2. Provide a map or site plan of the pipeline or facility to be abandoned. 3. Identify the locations and dimensions of known temporary work space required for the abandonment. 4. Describe any easement proposed to be acquired for the abandonment, including: • the location and dimensions of the easement; • the discussions with the landowners regarding the		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	National Energy Board Filing Manual	easement; • any concerns expressed by the landowner regarding the easement or the lands proposed to be acquired; and • how the applicant proposes to address any landowner concerns. 5. Provide the details of any reclamation plans developed in consultation with landowners affected by the proposed abandonment. 6. If any easement will be surrendered: • identify the lands where easement will be surrendered; • describe the contingency plans that will be put in place to protect the landowner should subsequent land issues arise following the abandonment of the facility and surrender of the easement; • describe the company's discussions with the landowners; • describe any concerns raised by landowners regarding surrendering of the easement; and • file evidence to demonstrate that affected landowners have been advised of the proposed abandonment and that if the Board approves the abandonment, the Board will no longer have jurisdiction over the pipeline. Abandonment Plan An application to abandon the operation of a pipeline could include an abandonment plan tailored to the individual project. This plan could also be used for input from stakeholders such		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	National Energy Board Filing Manual	as: • landowners; • occupants; • land managers; • lessees; • municipal agencies; • shippers; and • upstream and downstream users. If an abandonment plan is shared with stakeholders, any comments from the stakeholders should be considered and, where appropriate, incorporated into the plan. Environmental, safety and land-use issues may all be considered in the application. The application may also address reclamation of sites where surface facilities have been or will be removed and the management of any pipeline components that will be maintained in a deactivated state. Abandonment-in-Place or Removal of Pipeline Assessments and studies could be provided to support the choice between abandonment-in-place or removal of the pipeline. If the pipeline is to be removed, assess the impact of the removal on the environment. If the pipeline is to be abandoned in place, refer to CSA Z662, clause10. Abandonment Costs The costs associated with abandoning the facilities should include: • if the facilities will not be abandoned in place, an itemization of any costs for:		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	National Energy Board Filing Manual	dismantling; demolishing and removing the facilities; reclaiming the site; and carrying on other remediation work and applicable salvaging work; • if the facilities will be abandoned in place, an itemization of any associated costs; • for each cost, the expected salvage proceeds and the timing of expected receipt of the proceeds; • the methodology used to estimate costs; • a description of any funding, financial guarantees or other arrangements designed to cover those costs; and • the details of expected associated section 52 or 58 applications. Liability Exposure The exposure to future liabilities should include: • a description of the types of each liability and an estimate of the associated cost; and • a statement of which abandonment work is associated with a legal obligation and which work is not. Financing The confirmation that funding is and will continue to be available to fund the abandonment should include: • an explanation of the economic feasibility of the abandonment; and • the expected toll treatment and toll impact, including: • an explanation of how the tolls were determined;		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
		• the expected impact, if any, on shippers and other parties; and • a statement regarding the extent of shippers' and other parties' support for any toll increase.		
NWT Water Board, Mackenzie Valley Land and Water Board, Regional Land and Water Boards	***NWT Waters Act***	s.14--Board shall not issue a licence unless the applicant has entered into a compensation agreement with other licence holders or users that may be affected and the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for the satisfactory maintenance and restoration of the site in the event of any future closing or abandonment of that undertaking. In determining the compensation the Board shall consider all relevant factors, including provable loss or damage, potential loss or damage, the extent and duration of the adverse effect, including nuisance, inconvenience and noise.	--applies to any facility that is likely to use water or result in the deposit of wastes into water (drilling operations, water crossings, camps)	--no requirement for closure plans or security
	NWT Waters Act	s.17--The Board may require an applicant for a licence to furnish and maintain security with the Minister, in an amount and in a form satisfactory to the Minister. The security may be applied by the Minister to be compensate other users or to reimburse the Crown for reasonable costs for clean up. Where an undertaking has been permanently closed or abandoned, any portion of the security that shall be refunded to the licensee.		

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
NWT Water Board, Mackenzie Valley Land and Water Board, Regional Land and Water Boards	***NWT Waters Act Regulations***	s. 6--An application for a licence shall also include plans for the abandonment, or any temporary closing, of the proposed undertaking. s. 11--An application for cancellation of a licence shall be in writing and set out the reason for the requested cancellation and a description of the measures taken or proposed to be taken, prior to cancellation, for abandonment. s. 12.--The Board may fix the amount of security required of an applicant in an amount not exceeding the aggregate of the costs of abandonment of the undertaking, restoration of the site of the undertaking, and any ongoing measures that may remain to be taken after the abandonment. The Board may have regard to the ability of the applicant to pay the costs or the past performance by the applicant. Security shall be in the form of a promissory note, a certified cheque drawn on a bank in Canada and payable to the Receiver General, a performance bond, an irrevocable letter of credit from a bank in Canada, or cash.	--applies to any facility that is likely to use water or result in the deposit of wastes into water (drilling operations, water crossings, camps)	--no requirement for closure plans or security

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
Mackenzie Valley Land and Water Board, Regional Land and Water Boards	***Mackenzie Valley Resource Management Act***	s. 71--A board may require the posting of security with the federal Minister in a form and amount prescribed by the regulations or a form satisfactory to the federal Minister. The federal Minister shall notify a board of the posting of security so required. Where damage to lands results from a permittee's contravention of any provision of the regulations or a permit, the board may request of the federal Minister that all or part of the security posted by the permittee be applied toward the costs incurred in repairing the damage. The federal Minister shall refund any part of the security posted by the permittee. s. 90--Cabinet may, following consultation by the with first nations and the Tlicho Government, make regulations specifying the amount, or the manner of determining the amount, of the security, the form and conditions of the security, and specifying the circumstances and manner in which it shall be refunded.	--applies to facilities outside the Inuvialuit Settlement Region --applies to land uses in the Mackenzie Valley --land use permits required even on leased Crown lands	--no requirement for closure plans or security --no regulations made regarding security or closure
Mackenzie Valley Land and Water Board, Regional Land and Water Boards	***Mackenzie Valley Land Use Regulations***	s. 15--After completing a land-use operation, a permittee shall restore the permit area to substantially the same condition as it was prior to the commencement of the operation. s. 26.--The Board may include in a permit conditions respecting the posting of security and restoration of the lands.	--applies to land use activities in the Mackenzie Valley that exceed certain thresholds but would likely cover temporary uses such as	--no requirement for closure plans or security

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	Mackenzie Valley Land Use Regulations	s. 32--The Board may require security to be posted in an amount not exceeding the aggregate of the costs of abandonment, restoration of the site of the land-use operation and any measures that may be necessary after the abandonment of the land-use operation. In setting the amount of security, the Board may consider the ability of the applicant to pay the costs, the past performance of the applicant, other security posted by the applicant pursuant to other federal legislation in relation to the land-use operation, and the probability of environmental damage or the significance of any environmental damage. The permittee shall not begin the land-use operation until the security has been deposited with the federal Minister. Posted security shall be in the form of a promissory note or letter of credit, a certified cheque, bonds issued or guaranteed by the Government of Canada, cash, or in such other form as the Minister may have indicated to be satisfactory. Posted security shall be returned after the Board issues a letter of clearance.	exploration activities, camp locations, staging areas, access roads, aggregate sites, and related activities	
Department of Indian Affairs and Northern Development (possibly delegated to other federal Ministers)	***Territorial Lands Act*** and ***Territorial Lands Regulations*** ***Federal Real Property*** and ***Immovables Act and Federal Real Property Regulations***	No express sections or language requiring consideration of abandonment, reclamation or security. Leases for surface uses may be issued at the absolute discretion of federal Ministers.	--leases may be issued on Crown lands for permanent activities and facilities such as the pipeline right-of-way, compressor	--surface leases are considered confidential --no requirement for closure plans or security

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
			stations or production facilities	
Department of Indian Affairs and Northern Development	***Territorial Land Use Regulations***	s. 36--the engineer may include in the permit a condition for a security deposit not exceeding $100,000. The permittee shall not begin the land use operation until a security deposit has been deposited with the Minister. A security deposit shall be in the form of a promissory note, a certified cheque drawn, bonds issued or guaranteed by the Government of Canada, or a combination of the securities described in above. A security deposit shall be returned by the Minister when the engineer has issued a letter of clearance. The Minister may retain the whole or a part of the security deposit to restore the lands to their former condition. Any deficiency shall be collectable as a debt due to the Crown.	--applies to land use activities in the Inuvialuit Settlement Region that exceed certain thresholds but would likely cover temporary uses such as exploration activities, camp locations, staging areas, access roads, aggregate sites, and related activities	--no requirement for closure plans or security
Inuvialuit Game Council	Inuvialuit Final Agreement	s. 13--The objectives of this section include restoration of wildlife and its habitat as far as is practicable to its original state and to compensate Inuvialuit hunters, trappers and fishermen for the loss of their subsistence or commercial harvesting opportunities. The Inuvialuit shall be compensated for actual wildlife	--applies to all activities in the Inuvialuit Settlement Region	--does not apply to activities in other areas --Crown bears some liability by permitting activities

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	Inuvialuit Final Agreement	harvest loss resulting from development in the Inuvialuit Settlement Region. Projects shall be assessed for an estimate of the potential liability of the developer, determined on a worst case scenario, taking into consideration the balance between economic factors including the ability of the developer to pay and environmental factors. Every developer shall be required to prove financial responsibility before being authorized to undertake any development in the Inuvialuit Settlement Region. The government authority may require a developer to provide for and ensure financial responsibility in the form of a letter of credit guarantee or indemnity bond or any other form satisfactory to the government authority. Liability of the developer shall be absolute and he shall be liable without proof of fault or negligence for compensation to the Inuvialuit and for the cost of mitigative and remedial measures. Canada acknowledges that where it was involved in establishing terms and conditions for the development, it has a responsibility to assume the developer's liability for mitigative and remedial measures to the extent practicable. No recourse may be taken against a developer unless a claim is made within three years from the time when the loss occurred or could reasonably be expected to have become known. Inuvialuit hunters, trappers and fishermen have the right to obtain compensation for damage to or loss of harvesting equipment and for loss or reduction of hunting, trapping or fishing		--no requirement for security or for closure plans

Regulatory Authority	Legislative/ Regulatory/ Policy Tool	Specific Provisions	Applicability to MGP	Comments
	Inuvialuit Final Agreement	income. The types of compensation that may be claimed include the cost of temporary or permanent relocation, replacement or equipment, reimbursement in kind subject to harvestable quotas, provision of such wildlife products as may be obtainable under existing Acts and regulations, payment in lump sum or by installments or any reasonable combination thereof. Inuvialuit have the right to seek recommendations of the Arbitration Board with respect to remedial measures including cleanup, habitat restoration and reclamation. The claimant must prove, on a balance of probabilities actual wildlife harvest loss or future harvest loss or both; and that the actual wildlife harvest loss or future harvest loss or both results from development.		

APPENDIX 3

Environmental Agreement Information Request Responses

Party	Round 1 Information Request Response (OREI-R1-02) January 2005 **IR Round 1 - to Proponent, APG, GNWT, INAC, Inuvialuit Regional Corporation, Gwich'in Tribal Council, Dehgah Alliance Society** **J-OREI-00002**	Round 5 Information Request Response (OREI-R5-01) September 2006 **O'Reilly, Kevin - Round 5 Information Requests** **J-OREI-00031**	Comments
Imperial Oil Resources Ventures Ltd.	Responses to Kevin O'Reilly Information Requests - Round 1 J-IORVL-00084 Proponents do not expect to enter into any environmental agreements. Potential for agreement has been discussed with GNWT but not expected.	IORVL Cover Letter and Response to Kevin O'Reilly Round 5 Information Requests J-IORVL-00814 Proponents do not expect to enter into any environmental agreements.	--no change in position
Mackenzie Valley Aboriginal Pipeline Limited Partnership (APG)		MVAPG e-mail to JRP re Round 5 IR responses J-APG-00003 APG participated in and concurs with IORVL response.	--defer to the majority shareholder in the proposed pipeline

Party	Round 1 Information Request Response (OREI-R1-02) January 2005 **IR Round 1 - to Proponent, APG, GNWT, INAC, Inuvialuit Regional Corporation, Gwich'in Tribal Council, Dehgah Alliance Society** **J-OREI-00002**	Round 5 Information Request Response (OREI-R5-01) September 2006 **O'Reilly, Kevin - Round 5 Information Requests** **J-OREI-00031**	Comments
GNWT	GNWT_IR_Round_1_Response_OREI_R1-01,OREI_R1-02_&_OREI_R1-03_050323 J-GNWT-00006 Supportive if found necessary as part of a follow-up program. May need to accommodate regional differences but should be in place before construction, if needed.	GNWT_Response_to_Round_5_Information_Request_–_Kevin_O'Reilly J-GNWT-00151 Supportive of concept if normal regulatory instruments do not cover issues. GNWT working to understand regulatory gaps. If an agreement is needed, it should be completed to and made effective before construction starts.	--does not corroborate information in the Development Plan applications for Niglintgak or Parsons Lake where proponents states negotiations are on-going

Party	Round 1 Information Request Response (OREI-R1-02) January 2005 **IR Round 1 - to Proponent, APG, GNWT, INAC, Inuvialuit Regional Corporation, Gwich'in Tribal Council, Dehgah Alliance Society** **J-OREI-00002**	Round 5 Information Request Response (OREI-R5-01) September 2006 **O'Reilly, Kevin - Round 5 Information Requests** **J-OREI-00031**	Comments
Department of Indian Affairs and Northern Development	Response to Round 1 IRs J-INAC-00004 INAC has not yet made a decision on the need for an environmental agreement. INAC will consider impacts, mitigation and follow-up, including an environmental agreement.	INAC responses to Kevin O'Reilly and the Sierra Club of Canada Round 5 Information Requests J-INAC-00080 Cannot determine if an environmental agreement is needed as mitigation measures and follow-up not known at this point. Preferable to use normal regulatory instruments.	--non-committal response
Inuvialuit Regional Corporation	Response to Kevin O'Reilly Round 1 IRs J-IRC-00003 IRC will review the EIS and other materials to develop a position on environmental aspects.	Inuvialuit Regional Corporation Responses to Kevin O'Reilly Round 5 Information Request J-IRC-00011 Terms of access to Inuvialuit lands include an environmental management plan and strategies.	--responses did not deal with several aspects of the original IRs

Party	Round 1 Information Request Response (OREI-R1-02) January 2005 **IR Round 1 - to Proponent, APG, GNWT, INAC, Inuvialuit Regional Corporation, Gwich'in Tribal Council, Dehgah Alliance Society** **J-OREI-00002**	Round 5 Information Request Response (OREI-R5-01) September 2006 **O'Reilly, Kevin - Round 5 Information Requests** **J-OREI-00031**	Comments
Gwich'in Tribal Council	Response to Round 1 IRs J-GTC-00003 No need for agreement as there will be permits and approvals, although wildlife monitoring, spill response, hazardous waste management, contaminated sites, air emissions, and GHGs may be an area worth considering. Agreements with environmental conditions necessary to access Gwich'in lands that include enforcement provisions, no sumps, and security deposits. Any costs should be shared between the proponents and regulators. Any agreement most likely should be completed before construction starts.	Gwich'in Tribal Council Responses to Kevin O'Reilly Round 5 Information Request J-GTC-00011 No need for agreement as there will be permits and approvals, although wildlife monitoring, spill response, hazardous waste management, contaminated sites, and air emissions may be an area worth considering. Agreements with environmental conditions necessary to access Gwich'in lands that include enforcement provisions. Any costs should be shared between the proponents and regulators. Any agreement most likely should be completed before construction starts.	--mixed position on the need for and advisability of an environmental agreement

Party	Round 1 Information Request Response (OREI-R1-02) January 2005 **IR Round 1 - to Proponent, APG, GNWT, INAC, Inuvialuit Regional Corporation, Gwich'in Tribal Council, Dehgah Alliance Society** **J-OREI-00002**	Round 5 Information Request Response (OREI-R5-01) September 2006 **O'Reilly, Kevin - Round 5 Information Requests** **J-OREI-00031**	Comments
Dehgah Alliance Society	Response to Kevin O'Reilly - IR Round 1 J-DAS-00007 DAS intends to try to address environmental issues in access and IBA. DAS would want to be a party to an agreement that should be enforceable. Canada should cover the costs of negotiation and implementation. Agreement should be complete and effective prior to issuance of final regulatory approvals.	Not filed.	--DAS ceased operations as of September 29, 2006