MONITORING OF NORTHERN MEGA-PROJECTS:

MISSED OPPORTUNITIES?

A CASE STUDY OF

THE NORMAN WELLS OILFIELD DEVELOPMENT

AND PIPELINE PROJECT

by

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ABSTRACT

This study examines the degree of public and private sector adherence to the Environmental Assessment Review Panel recommendations and the National Energy Board terms and conditions with respect to the Norman Wells oilfield development and pipeline project. The main objective of this study is to review and assess project monitoring implemented or proposed by the public and private sectors in response to the EAR Panel recommendations, NEB terms and conditions, and subsequent commitments made by the public and private sectors.

The study reviews the relevant literature to develop a theoretical perspective on project monitoring and its relationship to the broader planning issues of project assessment and impact management. In addition, the relevant literature on native claims, northern development planning, and federal-territorial resource revenue sharing is reviewed. A case study of the Norman Wells oilfield development and pipeline project is the basis for analyzing the extent to which government and project proponent commitments are implemented. The decision documents of the EAR Panel and the NEB were examined to obtain the recommendations and terms and conditions set by the EAR Panel and NEB respectively, to obtain specific information on the issues and concerns raised at the formal public reviews, and to identify public and private sector responsibilities and commitments made at the reviews and subsequent to them. To obtain more specific information on the case study, personal and/or telephone interviews, and correspondence with government, project proponent, and native group representatives were conducted.

The study concludes that the approach to project monitoring and project management taken in this project suggests a situation of missed opportunities to learn about, and to understand the impacts of large projects, and to try

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out new approaches to deal with the impacts that do occur. More specifically, the basic questions of what is to be monitored and why, who is responsible for the monitoring, and what is done with the results, have not been systematically addressed. There is no framework, of the type suggested by the above questions, for the monitoring activities that are planned or in place for the Norman Wells project.

Important deficiencies in the proponents' plans were noted by the EAR Panel and the NEB. The processes of project review and subsequent project planning have been characterized as a situation where the proponents set the pace of project development and control the flow of information about their intentions and plans to government and the public. This lack of detail provided by proponents affects project review and government planning and preparedness.

Government departments and agencies should play a more active role in program design and planning at the project assessment and review phases. Their presentations to the EAR Panel should be more than a critique of the proponent's EIS.

FEARO involvement in the Environmental Assessment Review Process appears to end after the Panel report is released. FEARO follow-up to the Panel recommendations is essential to determine the effectiveness of the EAR Process.

Coordination of the many project construction and initial operation activities by government is critical. There is a need for a Project Management and Liaison Office under the authority of the Minister of DIAND to facilitate DIAND's coordination role and to provide feedback to all project participants on the proponents' handling of project implementation. This Office must have both management and coordination responsibilities.

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It is important that what is learned from this and subsequent projects whether it be in the form of research reports, program evaluations, follow-up findings, and the like, be made available at suitable locations in Canada, to all interested government and non-government groups and individuals. Such information should be made available as soon as it is gathered and analyzed, for use in the design, evaluation and assessment of subsequent proposals.

We are looking at a critical point in northern development. The Norman Wells project will provide the impetus for more industrial development in the Mackenzie valley. This project presents an opportunity to learn about the social, economic, and environmental consequences associated with this type of industrial development. This preliminary review of project monitoring and management, indicates however, that this opportunity to learn from experience is not being seized.

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CHAPTER ONE

INTRODUCTION

1.1 THESIS FOCUS AND OBJECTIVES

This thesis examines the degree of public and private sector adherence to the Environmental Assessment Review Panel recommendations and the National Energy Board terms and conditions respecting the Norman Wells oilfield development and pipeline project. The main objective of this study is to review and assess project monitoring implemented or proposed by the public and private sectors in response to the EAR Panel recommendations, NEB terms and conditions, and subsequent commitments made by the public and private sectors. More specifically, the objectives of this study are:

- 1. To develop a case history of the Norman Wells oilfield expansion and pipeline project.
- 2. To assess the effectiveness of existing institutional arrangements and mechanisms for monitoring project construction and operation.
- 3. To review department and agency performance in the assessment and management of the Norman Wells project impacts.
- 4. To contribute to the literature on project management through what has been learned from the Norman Wells project.

1.2 CASE STUDY CONTEXT

In November 1981, Interprovincial Pipe Line (NW) Ltd. was granted a Certificate of Public Convenience and Necessity by the federal cabinet to construct a 324 mm diameter pipeline from Norman Wells, N.W.T. to Zama, Alberta. The pipeline will transport crude oil and natural gas liquids to markets in southern Canada. Related to the pipeline project is an expansion of the oilfield production at Norman Wells by Esso Resources Canada Ltd. Formal assessment and review of this joint undertaking included a review of the joint proposal by an Environmental Assessment and Review Panel (EARP) and a review of the pipeline project by the National Energy Board (NEB).

The Norman Wells Environmental Assessment Panel's review of the joint proposal of Esso Resources Canada Ltd. (Esso) and Interprovincial Pipe Line (NW) Ltd. (IPL) concluded that:

"before the Norman Wells Oilfield Expansion and Pipeline Project can be built within acceptable limits of environmental and socio-economic impact, important defiencies in the Proponents' planning and in the preparedness of government need to be rectified." (EARP 1981:3) (original emphasis)

The EAR Panel report provided extensive recommendations to government and the project proponents on a variety of technical, planning, environmental, and socio-economic issues (see Appendix 1).

In its "Reasons For Decision" in the matter of the application by IPL to construct and operate the pipeline, the NEB concluded that:

"provided that the policies, programs and commitments given in the course of hearing the application are implemented and provided that certain additional measures are taken, the proposed project is feasible . . . " (NEB 1981:172).

The Board's approval of the pipeline project was made subject to 25 terms and conditions (see Appendix 2). Included in the terms and conditions were provisions that allow intervenors of record to review and comment on IPL's study reports, programs, measures and procedures (NEB 1981; see Appendix 2, conditions 7 & 8).

On July 30, 1981 John Munro, Minister of the Department of Indian Affairs and Northern Development (DIAND) announced the federal government's approval of the Norman Wells project.

"There are several criteria I believe a resource project in the north should meet before it proceeds. First, it must be managed in a socially and environmentally acceptable manner; and second, the project should provide opportunities and benefits for northerners. Based on the timetable we have approved, the terms and conditions that we will attach to the project and the programs that we as a government have committed ourselves to, I believe that the Norman Wells oilfield expansion and pipeline project meets these criteria." (DIAND 1981a:2).

1.3 THESIS RATIONALE

The Environmental Assessment Review Process with its provision for public review and the National Energy Board review with its public hearings suggests a significant government commitment to ensure that project planning and implementation take into account local, as well as national concerns. Much department, agency, interest group, and community time and effort is spent reviewing and critiquing project proposals that fall within the purview of these review processes. The public generally assumes that following the project review and approval there is a similar commitment by those responsible, to implement the review report recommendations and/or terms and conditions. A review of the literature on EARP, the NEB, and past resource development in the north suggests that less effort is directed to following up the implementation of public and private sector commitments than to the review of the project itself. Several factors combine to make this study of the Norman Wells project an ideal case study about northern mega-project assessment and subsequent implementation. The Norman Wells project or part of it was subjected to two formal reviews, one by an EAR Panel, the other by the NEB. Their decision documents «set out recommendations and/or terms and conditions under which development might proceed. Unlike other mega-projects that have been cancelled or placed on indefinite hold in recent years, the Norman Wells project is in fact being implemented. Therefore, in addition to the project specific benefits of this study, the study can provide a valuable timely prototype for the evaluation of future mega-projects in the North from the perspective of local/regional benefits.

1.4 METHODS EMPLOYED

Specifically, the study employed the following methods:

1. A literature review to gain an understanding of monitoring and its relationship to the broader planning issues of project assessment and impact management. Information on northern development and northern development policy setting the context for the Norman Wells project, was also provided by a literature review.

2. A review of the decision documents of the EAR Panel and the NEB to obtain the recommendations and terms and conditions set by the EAR Panel and NEB respectively: to obtain specific information on the issues and concerns raised at the formal public reviews, and to identify public and private sector responsibilities and commitments made at the reviews and subsequent to them.

3. Personal and/or telephone interviews and correspondence with government, project proponent and native group representatives; and analysis of background documents such as memos, reports, and agency briefs to obtain specific information on the case study.

CHAPTER TWO

CONCEPTUAL APPROACHES TO MONITORING

2.1 IMPACT ASSESSMENT, IMPACT MANAGEMENT, AND MONITORING

The concept of project monitoring is a logical outgrowth of the movement to socio-economic and environmental impact assessment (Carley 1982). Environmental impact assessment grew out of a widespread public concern in the U.S.A. and Canada during the 1960's about the effects of human activities (policies, programs, projects) on the natural environment (Lang & Armour 1981; Rees 1981). There was concern that government and private sector decisionmakers often failed to give sufficient consideration or weight to the probable or potential environmental impacts of major developments (Elder 1975). As well, most analysts agreed that existing laws and regulations were not wellsuited to consider the cumulative environmental impacts of additional developments, nor were they appropriate as guides to plan by. Social impact assessment has developed since the 1970's as an offshoot of EIA (Boothroyd 1978). The assessment process that was legitimized by EIA in practice, also provided an outlet for social concerns. People were concerned about the human implications of natural/physical environment problems; the human costs and benefits of a development and the distributions of these costs and benefits; and the attitudes of private and public sector decision-makers to the full range of needs and values expressed in a pluralistic society (Lang & Armour 1981).

Similarly, impact management has broadened in scope to include the management of social, economic, and environmental impacts associated with a project's construction and operation. Impact management is based on the principle that the severity and distribution of the types of impacts mentioned above, should be controlled, and/or mitigated. The Mackenzie Valley Pipeline Inquiry is an example of an attempt to identify project terms and conditions that could be attached to the granting of a right-of-way by government, for a natural gas pipeline across the Yukon Territory and along the Mackenzie Valley. In setting out project terms and conditions, the Inquiry took into account, the regional social, economic, and environmental concerns of Northerners (Berger 1977).

Monitoring is concerned with measuring and analyzing actual events (Fookes 1976). Monitoring provides a check of the adequacy and effectiveness of management measures, which are based on 'predictions' about a project's impacts, and which are implemented to control or mitigate impacts that occur during project construction and operation (Fookes 1979; Bankes & Thompson 1980). Monitoring serves to verify the accuracy of the predictions of project impacts and is thus related to the impact assessment process. Boothroyd (1978) refers to monitoring as continuous assessment. Monitoring is a component of a project planning process that includes impact assessment and impact management rather than a separate step in a fixed sequence of planning activities. See Figure 1 below.

Figure 1

Relationship of Project Monitoring, Project Assessment,





2.2. FEDERAL GOVERNMENT PROJECT ASSESSMENT AND MONITORING

In Canada, EIA and later SIA found concrete expression in the Federal Environmental Assessment Review Process (EARP). The process was instituted by Cabinet decisions in December 1973 and February 1977 (FEARO 1979). The process is a method of determining the potential environmental impact of federal projects, programmes, and activities. Federal projects are defined as those which are initiated by a federal department or agency; or require federal property; or solicit federal funds. The purpose of the process is to assess the potential environmental effects of a project before any commitments or irrevocable decisions are made in project planning, decision-making, and implementation. All federal departments and agencies, except for proprietary Crown Corporations (such as Petro-Canada) and federal regulatory agencies (such as the National Energy Board) are bound to participate in the Process. Federal departments or agencies which intend to undertake or sponsor a project, program, or activity for which the Process applies, are referred to as the "initiator" or "initiating department/agency" (FEARO 1979).

There are two distinct phases in the review process. The "initial environmental screening" phase relies on self-assessment by departments and agencies to determine if individual proposals are likely to have potential significant environmental consequences. If it is judged by the initiating department or agency that there are no potential significant adverse environmental effects, no further reference to the process is required. If there are potential significant environmental effects, the project is referred to the Minister of the Environment for formal review under the Process. If the project's effects are not fully known, the proposal is subjected to a more detailed examination known as an Initial Environmental Evaluation (IEE). The

question of significance is then resolved by the initiating department or agency, and a decision is then made whether or not to refer the project to the Process for formal review.

Phase two is the "formal review" of the project by an Environmental Assessment Review Panel appointed by the Executive Chairman of FEARO. One of the Panel's first tasks is to issue guidelines for the formal Environmental Impact Statement (EIS). Using the Panel's guidelines, the project proponent prepares a detailed EIS. This EIS forms the basis of the formal review by the Panel. The review includes public meetings during which government departments and the public can comment on the EIS and voice their concerns. Following public and technical reviews of the EIS, the Panel prepares a Panel report containing recommendations. This report is then submitted to the Minister of the Environment and the Minister of the initiating department.

The Panel recommendations are not binding on either the proponent or government departments/agencies. That is, they are not enforceable in the legal sense. Success of the process relies heavily on the good-will of agencies, first to self-assess their actions in the initial screening, and second, to cooperate by implementing Panel recommendations (Rees 1980).

The construction and operation of interprovincial and international oil and gas and petroleum products pipelines come under the authority of the National Energy Board (NEB 1982a). Under section 44 of the National Energy Board Act, the NEB determines whether the pipeline project should proceed or not, and if so, under what conditions. The Board takes into consideration relevant matters such as: the availability of oil to the pipeline, project financing, and the public interest that may be affected. As part of the detailed information requirements it takes into consideration when hearing an

application for a Certificate of Public Necessity and Convenience, the Board assesses environmental, social, and economic impacts (Hunt & Lucas 1981). The Board is a quasi-judicial tribunal. Major pipeline applications would be reviewed through formal public hearings. The hearings are held much like a trial --- evidence is submitted, testimony sworn, witnesses can be subpeoned.

The Board sets out its decision in a written report called "Reasons for Decision" which explains the Board's decision and sets terms and conditions that an approved project would be subject to. The decision cannot be appealed by the Applicant. The Board's decision is then submitted to Cabinet. Cabinet can accept or reject a decision of the Board, but may not modify the terms and conditions (Hunt & Lucas 1981). Unlike the voluntary nature of the EARP recommendations, the Board has the authority to enforce certificate terms and conditions.

The rationale for impact assessment is that social and environmental concerns over project impacts can only be properly addressed if direct and indirect project impacts are identified, and planning decisions regarding them made, at the earliest stages of the project planning process. There is no doubt that the inclusion of SIA and EIA in the project approval process has widened the scope of concerns that are assessed, and also brought more public involvement into the project approval process. In both processes described above, formal public involvement ends with the completion of the formal review, however.

Critics of EARP question whether the process has really changed, or for that matter, can change, the approach to project decision-making that project proponents and government officials take when assessing and managing project impacts.

- 1. The process assesses projects on a one-by-one basis, without taking into consideration wider planning issues. "It is a priori assumed that a given project is the best use of the land and resources." (Dickinson 1978:1)
- 2. The process lacks a statutory base. There is no legally enforceable action-enforcing mechanism to ensure that recommendations arising from the panel report will in fact be carried out (Lucas & Peterson 1978).
- 3. "There is little evidence of strong political support for the findings and recommendations of EARP panels." (Rees 1980:373)

The National Energy Board review process has the statutory base and a

legally enforceable action-forcing mechanism that EARP lacks. Critics, however,

have raised concerns about the weight given to socio-economic and environ-

mental impacts by the Board in its decisions and the follow-up to Board de-

cisions.

- 1. Those environmental and social issues that are unresolved at the hearings may not be adequately dealt with later by the Board even if provision for their consideration is made in the project terms and conditions. "At present, any postponed assessment and decision-making authorized by the Board (after a certificate has been approved) takes place as a private procedure between the applicant and the Board's staff without any right on the part of the inter-venors to be heard." (Bankes & Thompson 1980:40)
- 2. "Social and economic issues . . . do not have a major significance under the Board's statutory mandate." (Lucas & Peterson 1978:82) In addition to environmental and socio-economic matters, the Board considers other factors such as the availability of oil to the pipeline, the existance of markets, project economic feasibility, project financing, and national interests. Advice from the Board's lawyers is that the Board's jurisdiction would not include the authority to deny an application solely on environmental grounds (Lucas & Bell 1977).
- 3. The Board does not attemp to monitor socio-economic impacts unless they directly relate to environmental impacts. Board inspections are limited to the pipeline right-of-way. This further limits the range of impacts monitored (Bankes & Thompson 1980).

2.3 THE UNCERTAINTY PROBLEM

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Associated with the technical, social, economic, political and environmental complexity of projects such as the Norman Wells project are uncertainties about whether predicted impacts or even unforeseen impacts will occur, and uncertainties about the effectiveness of management strategies to control or modify project impacts.

There are three basic options for dealing with uncertainty. They are: to ignoreit, to reduce it, or to accept it (Hickling 1975). The all too common approach is to ignore it. Uncertainty can be reduced by collecting more information, clarifying objectives, or developing closer collaboration between proponent and government decision-makers, and community interest groups (Brown 1981). It is not always possible to reduce or eliminate uncertainty, however; decision-makers often require information that is not readily available in the short-term. The standard approach to uncertainty derived from human nature, is to call for a study to provide more data, in the hope that uncertainties may be resolved. This task is usually delegated to the proponent. Where a study is impractical, for example, because of prohibitive cost, or because it would delay the project, the tendency is to exact or force a commitment from the proponent to monitor his activities and to have a contingency plan ready in case of emergency. The last option is to accept uncertainty; that is, to develop strategies which are judged to be the most effective for dealing with a particular problem but which can accommodate unexpected impacts (Holling 1978).

The National Energy Board's approach to classifying areas of uncertainty associated with environmental impacts was stated explicitly in the <u>Northern</u> <u>Pipelines Decision</u> (NEB 1977: 1-152, see Figure 2). Category two effects would require changes in project planning and/or the development of mitigative measures. A decision to proceed with the project could mean, in the case of category one effects, for example, that monitoring and research

programs be established to learn the actual extent of impacts and to experiment with various mitigative measures. Monitoring of category two effects would provide a check of mitigation measures.

Figure 2

NEB Classification of Environmental Effects



One approach to deal with uncertainties about project impacts is to monitor systematically, project construction and operation. If impact statement predictions concerning project impacts were restated as hypotheses, systematic monitoring of actual events would provide a 'test' of those hypotheses (Rees 1981; Beanlands & Duinker 1982). Conjecture at assessment reviews about whether an impact would occur or not, or whether proposed mitigative measures are adequate or not, would be replaced with discussion about design and implementation of research and monitoring programs. This approach to monitoring, in effect, shifts the emphasis from surveillance which regulates the proponent's activities, to testing or experimenting with public sector and proponent project impact management strategies. Such an approach is in accord with Holling's adaptive management strategy. Holling (1978) argues that attempts to manage a project by regulating the proponent are futile and unproductive because many uncertainties about project impacts and the adequacy of impact management actions will be unresolved at the time of project approval. Since everything cannot be measured, predicted, managed, and decided on, in advance of project construction and operation, the optimal strategy is to recognize that uncertainties exist and to devise management strategies which can accommodate future 'surprises'.

For monitoring to fulfill this hypothesis testing role, impact assessments must be more than generalizations or broad descriptions about project impacts. In practice, impact assessments often do not facilitate hypothesis testing. A review of 21 recent environmental impact statements from across Canada showed that

"less than one-half included recognizable predictions, and the majority of these were generalizations, the accuracy of which could not be determined." (Beanlands & Duinker 1982:99)

In a study of the social impacts in Fairbanks, Alaska, of the Trans-Alaska Pipeline, Dixon concluded that not only is there a need to evaluate impact assessment predictions, but also the assumptions behind the predictions. This is rarely done (Dixon 1978).

2.4 MONITORING DELINEATED

Monitoring as defined by Webster's Dictionary is "to watch or observe for <u>a special purpose</u>" (emphasis added). This implies that monitoring is concerned with more than the collection of data. What is important is how the information is used (Carley 1982). Interest in project monitoring will

reflect the concerns of the various interests. Using the example of the Norman Wells pipeline, a regulatory agency such as the NEB is primarily interested in monitoring along the pipeline right-of-way for proponent compliance with project certificate terms and conditions. The proponent, in this case, IPL, will be interested in monitoring to fulfill statutory requirements and as the routine of process control. A nonregulatory agency such as the Canadian Wildlife Service may be interested in monitoring for research purposes. Its interests extend beyond the project right-of-way and are directed to impacts on birds. The GNWT Department of Health and Social Services will be interested in monitoring pipeline construction impacts on individuals and communities as a check of program delivery. Its concern will extend to people and communities outside the immediate area of the pipeline. Non-governmental interest groups such as the Dene Nation, on the other hand, will view project monitoring in the broad sense, that is, as an indicator of how well the entire project is being managed so that benefits are enhanced and costs to native northerners are minimized. The operational meaning of monitor will differ then, by the mandated orientation of an organization, for example, the pipeline (NEB), migratory birds (CWS), and people (Dept. of Health), and by the role an organization has, or perceives to have with respect to project management.

The literature suggests three general needs for monitoring:

1. to determine what impacts actually occur (Fookes 1979; Bankes & Thompson 1980)

2. to determine the effectiveness and sufficiency of mitigation measures (Bankes & Thompson 1980; Beanlands & Duinker 1982)

3. to improve the ability to predict project impacts, to manage impacts,

and to plan future projects (Fookes 1979; Boothroyd 1978; Bankes & Thompson 1980).

The basic need for monitoring then, is to come to grips with the uncertainties related to project management. The greater the uncertainties associated with a project, the greater the need for monitoring. The basic need for monitoring, and the three general needs, and their relation to individual monitoring programs, are shown in Figure 3 below.

Figure 3

Hierarchy of Monitoring Needs

Objective of Monitoring Purpose of Monitoring

General Need for Monitoring

Basic Need for Monitoring

Precise questions to be addressed Surveillance, identification of problems, research, information gathering, program evaluation, etc. Determine actual impact, test effectiveness of impact management, learn by doing Deal with project uncertainties

Most monitoring programs will ultimately work toward meeting these three general needs. Individual monitoring programs, however, require more explicit purposes. Some specific purposes of monitoring programs are:

1. Surveillance and policing of compliance with statutes, regulations, terms and conditions, agreements, approval understandings, contracts, and the like (Nelson & Jessen 1980). This type of monitoring is done mainly but not limited to government agencies, who have a statutory regulatory interest in the project. For example, where the proponent contracts out the construction to a third party, this type of monitoring program could be implemented by the proponent. In the case of the Norman Wells pipeline project, the NEB monitors IPL for compliance with the Certificate terms and conditions. IPL in turn is responsible for ensuring that these terms and conditions are met by its contractors (Gales 1982).

2. To identify potential problems sufficiently early to permit impact management measures to be implemented or modified as the case may be (Fookes 1979; Beanlands & Duinker 1982). Again using the Norman Wells project as an example, there will be no drilling activity on the artificial islands constructed by Esso in the Mackenzie River for a one year period after island construction. The islands will be monitored by Esso to check how well they withstand winter ice formation and spring break-up (Thomas 1982).

3. Research (Gardner 1972; Fookes 1979; Baker 1976). Where uncertainties about the occurence of an effect and/or the effectiveness of remedial actions exist, monitoring for research can be undertaken by the proponent, government agencies or both. The Environmental Protection Agency and other government agencies, to use the Norman Wells project as an example, and other government agencies are currently working out research and monitoring programs that would provide information to aid future decision-making on pipeline routing and construction (Wilson 1982a).

4. In the longer term, to provide information that will aid project decision-making and government policy-making (Boothroyd 1978; Baker 1976). Much of the monitoring authorized by the National Energy Board for the Norman Well project is of this type (see for example, Appendix 2, conditions 18, 23, & 24).

Other purposes include process monitoring by the proponent and program evaluation by government departments and agencies. A monitoring program

may have several purposes. For example, purposes 1, 2, and 3 above could be met through the same monitoring program.

It is essential, however, that the objective of a particular monitoring program be explicitly stated (Cowell 1978). With regard to monitoring program design, this helps ensure that the program delivers the kind of information that decision-makers require (Gardner 1972; Brakel 1982). Once it is known what decision-makers want to know from the data, then the methodology and technique that provides the most information can be chosen (Gardner 1972). Cowell (1978) suggests that those responsible for the monitoring ascertain from managers not what they would like to know, but what specific information they require to make decisions about project planning, program planning, project studies and the like. Those responsible for designing and implementing the monitoring program need to be concerned with for example, "not with how much data would be needed to understand the whole ecosystem, but with how few are needed to answer the questions that are posed by management." (Cowell 1978:275). Gardner (1972) suggests that the most difficult part of designing an environmental monitoring program is to decide or in some cases identify, which environmental variables are the most significant and thus should be monitored. In these situations, it is crucial that the objectives of a monitoring program be clearly stated.

An associated matter is the question of who is responsible for carrying out the monitoring and research program (Cowell 1978; Wilson 1982c). Both Cowell and Wilson feel that government should be responsible for supplying the base line information requirements. Wilson feels that proponents should be responsible for generating project-specific information as well as what he calls "accelerated base line information", that is, knowledge about the

ecosystem that would have to be known once any development occurs, but is required by a particular project right now. The difficulty lies in delineating exactly what information requirements are included in this category and thus who should be responsible for needed research studies and monitoring. Wilson (1982c) and Brakel (1982) feel that EARP serves an important role in this regard by bringing out the existing information that is spread throughout the various departments and agencies, and by focusing on the needed information requirements of decision-makers.

2.5 A CONCEPTUAL APPROACH TO PROJECT MONITORING

The usual government tool for project impact management is regulation (Alaska Highway Pipeline Panel 1979). Terms and conditions, statutes, regulations, and the like, do not by themselves guarantee either enforcement on the part of a government agency or compliance on the part of the proponent. For example, in a case study of the Interprovincial Pipeline Ltd. Sarnia-Montreal extension, carried out by the Ontario Ministry of the Environment, one of the report's major conclusions was that "Unfortunately, NEB inspection and monitoring to see that their orders relating to environmental matters are carried out was very poor or non-existent." (Ontario 1978:107)

In most instances the general regulatory powers of a statute only infer a monitoring role. The duty to carry out or enforce an impact monitoring program is unlikely to be clearly defined in a statute. If a monitoring function is mentioned at all, it will likely be permissive and at the discretion of the government agency (Bankes & Thompson 1980). The regulation of social impacts is less certain and more complex (Lang & Armour 1981). Many impacts such as in-migration, inflation, demand for medical services,

and demand on the transportation system cannot be controlled by the project proponent alone. What is required, is a process for monitoring and controlling project impacts. This process should include project proponents, government, and people affected by the project.

This study identifies three management tasks which the monitoring process should address, adapted from Bankes and Thompson (1980):

- 1. identification of uncertainties, and commitments to monitoring
- 2. design and implementation of specific monitoring programs.
- 3. development of impact management strategies in response to the results of monitoring.

2.5.1 Identification of uncertainties and commitments to monitoring

The concerns of proponents, government agencies, and affected communities and individuals are brought together at the formal review of the project. In a broad sense, the terms and conditions of a project approval certificate reflect a judgement by a panel or board about the uncertainties regarding the severity and distribution of predicted project impacts and uncertainties about avoiding or mitigating negative impacts. Successful implementation of monitoring programs and impact management such as mitigation and prevention are dependent to a large extent on the obligations the various parties feel that project terms and conditions impose on them. Impact assessments should answer questions about project impacts. Where answers are not available, commitments to resolving them should be made. Relevant questions include:

- 1. What uncertainties were identified or expressed by intervenors at the formal public reviews?
- 2. What programs were proposed to deal with the uncertainties that were raised?
- 3. To whom were responsibilities assigned and who made commitments to carry out impact monitoring and management?

2.5.2 Design and implementation of specific monitoring programs

Once the objectives of, responsibilities for, and commitments to, monitoring have been explicitly stated, attention then shifts to the bureaucratic arrangements necessary to carry out the monitoring (Carley 1982). This study is concerned with those institutional structures that are in place to collect and to analyze the data to provide the specific information that decision-makers require to develop management options or strategies. Relevant questions include:

1. What project monitoring can be put in place to address the specific uncertainties identified?

- 2. Are there statutes, regulations, guides or other documents for use by monitoring personnel?
- 3. How is the information that is derived from monitoring to be used by government and proponent project managers?

25.3 Development of impact management strategies

From the identification of uncertainties and monitoring commitments made to deal with them, decision-makers develop management strategies which include adaptive approaches to program delivery. In short, monitoring provides the information necessary to deal with actual impacts that occur. Relevant questions include:

- 1. Are the required monitoring and other programs being put in place and are they operating effectively?
- 2. What specific management strategies are required in response to the results of monitoring?
- 3. Are affected interests satisfied? Why or why not?

CHAPTER THREE

THE NORMAN WELLS PROJECT AND ITS CONTEXT

The purpose of this chapter is to describe the Norman Wells project, outline the broad political issues concerning development in the north, and review the project approval processes.

3.1 OVERVIEW OF THE NORMAN WELLS OILFIELD EXPANSION AND PIPELINE PROJECT

The Norman Wells oilfield expansion and pipeline project (henceforth referred to as the Norman Wells project) is a joint proposal by Esso Resources Canada Ltd. and Interprovincial Pipe Line (NW) Ltd. "to expand oilfield production facilities at Norman Wells and to construct an 866 km. long pipeline to carry crude oil and natural gas liquids from Norman Wells to join with existing pipeline facilities at Zama, Alberta." (EARP 1981:7)

3.1.1 Norman Wells Oilfield Expansion

Esso proposes to increase oil production rates plus total oil production from the Norman Wells oilfield by injecting water into the oil reservoir to maintain reservoir pressure. Utilizing this waterflood scheme, recovery of the oil-in-place is expected to increase from 17% to 42%. Production rates would increase from 500 m³/day (3,000 barrels) to 4000 m³/day (25,000 barrels). Since 60% of the reservoir is under the Mackenzie River, Esso has proposed constructing six artificial islands to serve as drilling platforms. Facilities required for this project include:

- 1. six artificial earthfill islands
- 2. 151 new oil and water injection wells
- 3. an oil gathering pipeline system
- 4. a central processing plant (the fieldgate) to condition the oil for pipeline transmission

5. support facilities including docks, roads, and tank storage (EARP 1981; Esso 1982; GNWT 1982). (See Figure 4)

The oilfield expansion will be spread over three years. The construction workforce requirements will average 850 persons with a peak of over 983 during the summer of 1984. The oilfield and refinery operations when fully operational in 1985 will require a permanent workforce of 174 persons (Esso 1982).

3.1.2 Pipeline Project

IPL proposes to build a 324 mm (12.5") diameter pipeline which will be buried along its entire length. The pipeline will have a capacity of 5000 m^3 (32,000 barrels) of product per day. Facilities required for the project include:

- 1. the pipeline
- 2. three pumping stations, located near Norman Wells, Wrigley, and Fort Simpson
- 3. support facilities such as temporary wharves, stockpile sites and service roads (EARP 1981; GNWT 1982). (See Figure 5)

IPL proposes to construct the pipeline in two 90 day winter construction periods. The pipeline construction workforce will peak at about 800 persons each winter. The operations and maintenace workforce will require 29 persons (EARP 1981).

3.2 THE POLITICAL CONTEXT

In the Northwest Territories, native claims, federal northern development policy, northern land-use planning, and revenue sharing between the territorial and federal governments are issues of great political contention because they are all related to the overall political, social, and economic development of the north. The Norman Wells project touches on all of these

Figure 4

Ν



Source: Esso Resources Canada Ltd. (1982) Socio-Economic Action Plans (Norman Wells Project), p.3. issues. A basic understanding of these political issues is necessary since through these issues one identifies the various public and private interest groups associated with the project, their roles, their priorities, and their relationships with each other. It is from the various groups that perceptions of project benefits and costs arise and from whom commitments to project monitoring and impact management are given.

The Government of the Northwest Territories (GNWT) for the first time at an EARP review and a NEB hearing, took an official position on a development project, that is, the Norman Wells project. This is an indication of the concern the GNWT has about industrial development in the Mackenzie Valley (Donihee 1982). The GNWT position on the Norman Wells project is that five broad concerns need to be addressed if the project is to benefit northerners. These concerns are shared by the Dene Nation and Metis Association although there are differences in perspective regarding the resolution of these concerns. The concerns are:

- 1. The need for an overall, long term non-renewable resource development plan in the Northwest Territories.
- 2. The need for a northern based planning authority to control and regulate non-renewable resource development, and to represent or protect the interests of the people of the Northwest Territories.
- 3. The need for resource royalty arrangements between the federal and territorial governments.
- 4. The need for policies and programs that will ensure that with the depletion of northern energy resources, the supply of energy supplies to northerners in the future will be available.
- 5. The need to resolve outstanding claims for aboriginal rights. (Braden 1980)

The discussion below expands further on the issues of native claims, northern development planning, and revenue sharing.

3.2.1 Native Claims

The Dene Nation are not against development per se, but they want to ensure that the Dene people are able to control it, and thus be in a position to receive maximum benefits when development occurs (Norwegian 1982). Historically, contact with white society, which began with the fur trade and continues today with the industrial development of the North, has created economic and social conditions which weaken native society and culture. Mining, and now the oil and gas industry, which are seen by the federal government as the vanguard of economic development in the North, have in fact further undermined what most natives consider to be their preferred or culturally important way of life (Asch 1977).

Wage labor replaces collective values with individualistic ones. The nature of the work in the mining and oil and gas industries means that most job opportunities go to young single males. It is with these individuals who have the fewest economic responsibilities that wealth, in terms of purchasing power, has become concentrated. It undermines the respect for those who engage in the traditional economic pursuits of hunting, fishing, and trapping, yet it is the latter who perform socially more valuable labor in native society (Asch 1977).

Besides encouraging a movement of native labor out of the native economy, industrial development uses or affects the lands on which the native economy depends. Oil and gas exploration results in increased human activity in native hunting and trapping areas. Once oil and gas are found, an extensive network of pipelines, pumping stations and accompanying support infrastructure such as roads, airstrips, and supply depots removes additional lands from use in the native economy. While mining impacts are limited to a relatively more restricted area, the questions of land use and ownership remain (Berger 1977).
According to Asch (1977), the native economy has failed to solve the problem of native dependency on external agencies which accelerated when the fur trade economy collapsed in the early 1950's. Natives find themselves in a position of being dependent on government policies and private enterprise undertakings which are destroying and weakening native society. Natives not only have no control over the future development of native society, but they are also forced to accept southern Canadian notions of frontier economic development. Forced to accept southern values and institutions, however, they have nevertheless secured few of the advantages assumed to be associated with the industrial wage economy. Little permanent employment for natives has been provided (Berger 1977). In addition, natives have not received a fair share of the revenues from resource development nor are there institutions in place at this time for ensuring anything different (Jelliss 1977).

Native claims represent more than the land claims with which they are often mistakenly equated. Native claims represent a formalization of native views as to how future northern development should occur. Land claims are the focal point, however. Ownership of the land would allow natives not only to protect the land-based native economy but also give them a measure of control over the manner and scale of development in keeping with local needs and wishes to protect the renewable resource base and the environment. Ownership and hence, control of the land, is seen as the last opportunity to guarantee native rights and native involvement in further exploitation of northern natural resources (Watkins 1977).

3.2.2 Northern Development Planning

The federal government as owner, administrator and manager of Canada

lands north of 60, has the major responsibility for the initiative in northern development policy and planning. Rather than set the direction of northern development, federal government policy traditionally has mostly reacted to new developments, or demands by particular groups (Stabler & Olfert 1980; Rees 1982). Historically, the initiative for resource development in the north has come from outside interests whose interest has been in the extraction of non-renewable resources such as oil, gas, and minerals. This emphasis on non-renewable resource extraction has been fostered in part by an implicit assumption of government decision-makers that the future of northern economic development is in non-renewable resource development (Berger 1977). This situation of private sector initiative, government reaction, and assumptions about northern development have fostered an institutional environment in government that does not generate northern development policy alternatives which involve non-industrial-type development projects (Abele & Dosman 1980). Land uses such as trapping, recreation and fishing come to be considered as inferior to national interest land uses such as oil exploration and mining (Berger 1977). In short, there is no northern based planning authority which represents or protects the interest of the people of the Northwest Territories (Braden 1980).

In the Northwest Territories, at present, there is no long term plan for non-renewable resource development nor is there a northern based planning authority in place which can control or regulate this type of development (Braden 1980; Weisbeck 1980). There are two major interrelated consequences of this for northerners when development projects are proposed and reviewed formally. In the absence of a long term development plan, developments are reviewed on a project-by-project basis (Monaghan 1980; Dacks 1981). This

may preclude the consideration and evaluation of cumulative impacts, and other development alternatives. For example, the Norman Wells project pipeline will be the probable catalyst for more and larger developments in the Mackenzie Valley including: an acceleration of exploration and the development of oilfields along the pipeline route, the construction of large diameter gas and oil lines down a Mackenzie Valley corridor, and the extension of the Mackenzie Highway to Norman Wells (EARP 1981). Esso president Robert Peterson has publicly stated that this pipeline could be the forerunner of a small diameter pipeline from the Beaufort Sea by the early 1990's (Gibb-Clark, 1982). In fact, Esso has already had preliminary discussions with senior GNWT officials about extending the Norman Wells pipeline north to Richards Island at the mouth of the Mackenzie River on the Beaufort Sea (Best 1982). All of these possible developments have environmental, socio-economic and political consequences that should be considered during the Norman Wells project review.

Secondly, non-renewable resource development, which is justified as being in the national interest, usually conflicts with local/regional interests in renewable resources. Without a development plan as a baseline there is no opportunity to clarify objectives and develop priorities. Because there is no forum in government for introducing and generating renewable resource development options, national interests usually prevail over local interests. In the case of pipeline route selection, for example, there are no federal government criteria for linear development route selection in the Northwest Territories (Monaghan 1980). The responsibility for this task is left to the proponent. The route selected may not be the most appropriate one if it is a catalyst for the development of an energy

and/or transportation corridor. Such uses might conflict with local land uses such as hunting and trapping. A northern based comprehensive land use planning process would provide a mechanism for resolving conflicts between local/regional and national interests (Monaghan 1980).

3.2.3 Revenue Sharing

At present, there are no arrangements or mechanisms by which the Government of the Northwest Territories can share directly in the federal government revenues associated with non-renewable resource development projects (Jelliss 1977; Braden 1980). The federal government receives the major share of corporate income tax and special oil and gas levies (Nerysco 1982). Even in the area of personal income taxes, because personal income tax is based on the place of residency on December 31 of each year, southern workers do not contribute to the GNWT personal income tax revenue. The GNWT has the mandate to legislate direct taxation initiatives, however, the Parliament of Canada can disallow these initiatives through legislation of its own (Nerysco 1982). Under existing agreements and statutes, the GNWT share of revenues from non-renewable resource developments is thus limited to corporate taxes and revenues calculated on a basis of a 'sales, wages, and salaries formula' (Weisbeck 1980). Resource royalties are not included in the calculations.

Under present fiscal arrangements, in the short run, the GNWT is dependent on the federal government for financial assistance to meet project related demands. This lack of fiscal independence constrains the ability of the GNWT to manage and direct economic development. In the longer term, the share of benefits that accrue to the GNWT from northern development remains small (Weisbeck 1980). The people of the Northwest Territories

have benefited little from non-renewable resource development. Little secondary economic activity has been generated in the Northwest Territories as a result of the mining, and oil and gas activity. As well, earnings and returns on capital within the North have not been retained there (Berger 1977).

For the Norman Wells project, the projected returns to the GNWT from taxation will average about six million dollars annually. By contrast, the federal government revenue will be about 172 million dollars annually, based on corporate income taxes, royalties and its one third equity in the project (EARP 1981).

From the GNWT's view, a transfer of ownership of northern non-renewable resources to the territorial government could lead to increased financial autonomy for the GNWT, and give it a greater responsibility for providing direction and quidance in formulating resource development policy.

3.3 PROJECT APPRAISAL AND APPROVAL

3.3.1 The Federal Environmental Assessment and Review Process (EARP)

The Department of Indian Affairs and Northern Development (DIAND) is responsible for land use and administration, and native affairs in the Northwest Territories, and for native affairs in Alberta. DIAND was thus initially responsible for assessing the Norman Wells project, and the significance of environmental impacts. DIAND in this case is the "initiating department". Because the project was judged to have potential for major significant impacts, DIAND referred the project to the Federal Environmental Assessment and Review Office (FEARO) for formal review in February, 1980 (EARP 1981).

As described in Chapter Two, the usual procedure once a project has been referred to FEARO, is the appointment of a Panel by the Executive

Chairman of FEARO. The Panel then issues guidelines for the preparation of the Environmental Impact Statement (EIS)

"to ensure that the EIS contains the information that the Panel, technical reviewers, and the public need to evaluate the proposal's environmental and related social implications." (FEARO 1979:5)

Because the proponents (Esso and IPL) submitted a joint EIS <u>before</u> the Panel formation was completed, the Panel chose not to issue EIS guidelines.

"Instead the Panel decided to review the EIS and then issue requests for additional information where the EIS was found to be incomplete." (EARP 1981:15)

Four requests for additional information were issued by the Panel during the review period. Following a four month public review of the EIS, the Panel held two weeks of community meetings in 12 communities including High Level in Alberta and one week of technical hearings in Yellowknife in August 1980 (EARP 1981).

While a representative of the Dene Nation attended the public meetings, it was to state the Dene policy that no development occur before a land settlement is negotiated with the federal government. The Dene did not speak of their concerns with the EIS. The Metis Association of the Northwest Territories did not present a brief to the Panel either (EARP 1981). (See Appendix 5 for a list of federal and territorial government department participants).

The Panel's report was submitted to the Minister of the Environment and the Minister of Indian Affairs and Northern Development. On January 22, 1981 the report was released to the public. The Panel made 61 recommendations covering environmental and socio-economic impacts, and government and proponent preparedness (see Appendix 1).

Twenty-seven of the Panel recommendations deal with environment and engineering issues. Many of the recommendations respond to intervenor

concerns about the inadequacy of the proponents' EIS or the failure of the proponent to detail mitigative measures and contingency plans. Some examples are given below:

Pipeline Integrity

"The Panel is of the opinion that this brief analysis [of pipeline integrity] is insufficient for an adequate evaluation of the likelihood of any of these problems developing, or of their possible magnitude." (EARP 1981:34)

Water Crossings

"The Panel learned that there are five intermediate size crossings. The EIS is deficient in information on both the construction plans for these water crossings and on the fisheries information for evaluation of potential impacts." (EARP 1981:36)

Island Construction

"The Panel further recommends that final approval for the construction and operation of the islands should not be given until the river scour and filter cloth questions have been satisfactorily resolved." (EARP 1981:38)

Wildlife

"The Panel recommends that IPL undertake baseline studies on hunted and trapped species to provide information aimed at both the assessment of the impact of the pipeline construction and operation on wildlife, and the development of mitigation measures." (EARP 1981:39)

Oilspill Prevention and Countermeasures

"Up to the time of the public meetings the Proponents had not finalized oilspill contingency plans for the project." (EARP 1981:41)

Environmental Impact Management

"Following the development of terms and conditions, the impact management process for this project should itself be monitored and evaluated . . . the Panel recommends that an effective, on-going public information program be established with the objective of responding to the concerns of the residents of the Mackenzie Valley." (EARP 1981:44)

At the request of DIAND, the Panel assessment of the Norman Wells project included socio-economic issues. The Panel found the social impacts of the project harder to forecast (EARP 1981). The Panel recommendations fall roughly into three categories: government planning and preparedness, government-proponent liaison, and proponent plans and programs for providing northern employment and business opportunities (see Appendix 1).

Government Preparedness and Planning

"A principal concern of the Panel is the lack of government and planning needed to administer the project within the time frames proposed by the Proponents." (EARP 1981:64)

Government-Proponent Liaison

"Apparently a comprehensive liaison between the Proponents and government has not yet been formed. The Panel recommends that an on-going consultative program be established and maintained at the initiative of the GNWT, and include such Federal agencies as required. The purpose of this program would be to predict, identify and deal with opportunities and issues raised by the project and requiring cooperative action by government and the Proponents." (EARP 1981:65)

Proponent Plans and Programs

The Panel did not comment on the proponents' proposed socio-economic plans and programs, although serious short-comings were identified in the DIAND brief and in a consultant's report commissioned by the Panel.

"The primary problem with the socio-economic impact statement from the impact assessment point of view is that the Applicants have not not developed in sufficient detail their action plans for implementation of the policies . . . The important question which must be asked, however, is whether indeed any of the details of the action plans called for in the preceding review can in fact be prepared and implemented in the time frame within which this project is theoretically to be realized." (DIAND 1980)

"When it seems that the project might have undesirable results the Assessment recommends that the Applicants or the relevant authorities monitor the change. Possible action is seldom spelled out beyond consultation. When a statement is made in relation to the effectiveness of liaison or monitoring it is convoluted." (Hawthorn 1980:7)

Significantly, the Panel chose not to make recommendations on the issues of native claims and revenue sharing, saying that these issues are political issues that must be resolved through the political process. The Panel's overall conclusion was that there were important deficiencies in the proponents' planning, and in the preparedness of government "to administer the project within the time frames proposed by the proponents" (EARP 1981:64). The Panel recommended that there be a one year delay in project start up to allow time for concerns to be addressed.

3.3.2 The National Energy Board

In order to construct and operate the oil pipeline, IPL must apply to the National Energy Board for a Certificate of Public Convenience and Necessity. The oilfield development does not come with the NEB's jurisdiction. Public hearings were held in Yellowknife, Edmonton, and Ottawa in October-November 1980. The Board released its decision giving approval to the Norman Wells pipeline on April 22, 1981.

This approval was granted despite concerns raised by the GNWT and others about the adequacy of IPL's environmental work, and the acknowledgement by both IPL and the NEB that additional studies would be required. Some of the views as reported in the NEB decision, are cited below.

Government of the Northwest Territories

"The GNWT indicated that they were not satisfied with the degree of information provided by the Applicant, particularly with that relating to contingency plans." (NEB 1981:101)

Canadian Arctic Resources Committee (CARC)

"CARC felt that the Applicant's environmental assessment was seriously deficient in many areas. Further, CARC found it difficult to rely on the Applicant's good intentions to supply adequate levels of information since the Applicant had failed to demonstrate these intentions by preparing a thorough environmental impact assessment." (NEB 1981:100)

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"The Applicant acknowledged that a considerable amount of detailed field

work would have to be done prior to the start of construction. The Applicant undertook to carry out such work and testified that there was sufficient time to accomplish the studies prior to the scheduled start of the main construction." (NEB 1981:99-100)

The National Energy Board

"The Board accepts the Applicant's undertaking to provide additional detailed information based on further design work or additional studies. The Board notes that a considerable number of additional site-specific studies are required in many areas to establish environmental conditions, develop mitigative measures and establish maintenance and rehabilitation procedures." (NEB 1981:101)

Despite concerns expressed by intervenors about the inadequacy of IPL's programs, plans, and studies, the Board noted that it was satisfied "that the public facilities can be constructed in an environmentally acceptable manner" (NEB 1981:171). The Board, however, set up a procedure that would allow intervenors to comment on environmental submissions that IPL was required to submit for Board approval (see Appendix 2, conditions 5, 6 & 7).

With regard to socio-economic impacts of the project, the NEB noted that project benefits to natives would be small and that natives would bear most of the negative impacts (NEB 1981). The Board, as a condition of the project certificate, required that IPL prepare and develop, the key elements of each of the socio-economic plans and programs that IPL had undertook to carry out. The areas dealt with include: "information-consultationliaison, cultural and traditional resource harvesting, opportunities for Northerners and northern businesses, effects on communities, regional effects, compensation and monitoring." (NEB 1981:126-127). An intervenor review procedure similar to that for environmental concerns, was also provided for (see Appendix 2, condition 8). In addition, the Board also required that IPL report to the Board on the actual socio-economic impact of the project within 6 months after the pipeline is in operation for one year (see Appendix

2, condition 24).

In the "Northern Pipeline Decision" in 1977, the Board had noted that the broad issues of government program provision and coordination to facilitate project activities, to monitor project socio-economic impacts, and to manage socio-economic and environmental impacts, would warrant "special and urgent consideration. These matters may lie outside the Board's normal sphere of activities." (NEB 1977:1-157) In the Norman Wells pipeline decision, the Board again has made it quite clear that its role with respect to socio-economic impact management is limited. The Board clearly feels that the implementation of these plans and programs is outside its jurisdiction.

"Apart from the above conditions that would be imposed pursuant to the National Energy Board Act, [conditions 5, 6, 8 & 24 in Appendix 2] the Board suggests that the Applicant, the GNWT, and the appropriate federal government agencies, prepare and implement a plan for monitoring socio-economic impacts at the regional level during construction. Such a plan should have the capability of seeing that corrective measures were taken as required." (NEB 1981:127)

With regard to the larger issue of native claims, the Board noted that "these are not matters with which the Board is involved" (NEB 1981:137). Intervenors also argued that the pipeline would be a first step towards further developments in the Mackenzie Valley and that the larger issues should be dealt with first. The Board concluded, however, that the proposal met the requirements of the National Energy Board Act (NEB 1981).

In view of the large number of studies, programs, practices, plans and procedures that the Board required of IPL, four intervenors of record (the Dene Nation, the Metis Association of the N.W.T., the Canadian Arctic Resources Committee, and the Committee for Justice and Liberty Foundation) sought leave in the Federal Court to appeal the Board's decision to issue the certificate. The application for leave to appeal by these four parties was in response to the deficiencies in evidence furnished by IPL with respect to pipeline design, environmental matters, and regional socio-economic impacts (see Appendix 7). Their legal argument questioned the Board's jurisdiction to decide on the issues of public convenience and necessity prior to this "fundamental, important, and crucial evidence" being tendered at the public hearings. The appellants also cited their lack of opportunity to cross-examine and test the evidence required of IPL by the certificate terms and conditions (see Appendix 7). The request was subsequently dismissed on a point of law (NEB 1982a).

3.3.3 Federal Government Approval

On July 30, 1981, John Munro, Minister of Indian Affairs and Northern Development announced government approval of the Norman Wells project conditional on a two year delay before any field construction could be commenced and a two and one half year delay before construction could begin. This decision delays substantive construction work on the oilfield expansion until the summer of 1983 and pipelaying in the Northwest Territories until November of 1983 (DIAND 1981a). Government commitments to the project emphasize means to ensure economic benefits to northerners through local employment and business opportunities (see Appendix 4). Among the federal government commitments to the project are "funding for the Government of the Northwest Territories to finance additional public services that will be required, and contributions to the Dene and Metis to permit them to be involved in planning and programming activities in conjunction with all levels of government" (DIAND 1981a:4). The minister also announced that he would be appointing a project coordinator.

3.4 CONCLUSIONS

A review of the EAR Panel and NEB decision documents and subsequent events reveals that there are a large number of unresolved uncertainties about the project proponents planning and government planning and preparedness to manage the project.

3.4.1 Identification of Uncertainties, and Commitments to Monitoring

1. What uncertainties were identified or expressed, by intervenors at the formal public reviews?

A large number of uncertainties about the Norman Wells project impacts and their management stem from the lack of detail made available by the proponents about their plans and intentions. The project was approved by the EAR Panel and the NEB even though both bodies acknowledged that many of Esso's and IPL's plans and programs were inadequate (EARP 1981; NEB 1981). The information requirements referred to by the NEB terms and conditons and the EAR Panel recommendations indicate a large information gap about the project that covers a wide range of intervenor concerns. For example, see Appendix 3 for a list of studies, programs, and reports that IPL is required to submit to the NEB prior to obtaining NEB authorization to begin pipeline construction.

An inadequate EIS, in turn, results in uncertainties about government planning and preparation since program design and delivery to meet project demands requires information about proponent intentions and plans. From the standpoint of the native organizations in the NWT, the refusal of both the EAR Panel and the NEB to make recommendations about the larger political issues of native claims raises additional uncertainties about the actual

benefits that will accrue to northern natives. As noted earlier, IPL and Esso submitted and EIS before the EAR Panel could issue guidelines about the EIS content.

Government departments and agencies, and the public have had to respond to an EIS which inadequately addresses their concerns regarding the proponents' project planning. They have also had to respond within a time frame largely determined by the proponents.

2. What programs were proposed to deal with the uncertainties that were raised?

The EAR Panel report contained an extensive number of recommendations which were intended to address intervenor concerns about proponent and government preparedness and planning. A number of recommendations deal with project monitoring (e.g. see Appendix 1, recommendation 10, 20, 23, 25, 26, 52). The types of monitoring programmes recommeded, appear to this reviewer, to be at the level of meeting general information needs, for example determining actual impacts (refer to Figure 3 in Chapter Two). For example, the opportunity to answer precise management strategy questions, such as, "What would be the best type of rotation work schedule?" is not conveyed by the EAR Panel recommendation about work arrangements.

"52. It is recommended that Esso rotational work arrangement be encouraged with careful monitoring of results. Esso should keep the arrangement flexible, extend the system geographically as needed, and minimize transportation delays for rotating workers." (EARP 1981:79) (See Appendix 1)

The NEB provisions for project monitoring, for the most part, deal with monitoring for pipeline integrity (e.g. see Appendix 2, conditions 15, 18, 20, 22, 23, 24). Important exceptions are conditon 22(a), which deals with the effects of pipeline construction and operation on the environment, and condition 24, which deals with socio-economic impacts of the whole Norman Wells project. Similar to the EAR Panel approach to monitoring, the level of monitoring provided for in the NEB terms and conditions, appears to be oriented to meet general needs for information than to test hypotheses about impact predictions and the effectiveness of avoidance and mitigation measures during the actual construction phase.

The environmental agreement signed between IPL and the federal government also provides for a monitoring program to be established. Again, the purpose of the monitoring program appears oriented to post-construction learning about actual impacts rather than to resolve specific uncertainties during project construction. At the time of writing I had not been able to see and review a copy of the socio-economic agreement between IPL and the federal government.

When monitoring is viewed at the more general level of meeting general post-construction information needs, the tendency for managers is to view monitoring as a separate entity in the impact management process rather than as an ongoing part of the project management decision-making process. The tendency appears to be the case for this project.

3. To whom were responsibilities assigned and who made commitments to carry out impact monitoring and management?

The EAR Panel made recommendations which were directed to the proponents (e.g. recommendation 14), the territorial government (e.g. recommendation 30), and the federal government (e.g. recommendation 60). The explicit assignment of monitoring responsibilities, and government intervenor and proponent commitments to monitoring are limited, however. Few of the recommendations which are directed to government departments or

agencies, for example, assign responsibilities to a specific department or agency. Recommendation 60 is an example of one that is specifically directed (see Appendix 1). EARP has a number of limitations which conspire to weaken its usefulness for affecting project design and planning, monitoring, and impact management; one limitation being the apparent lack of commitment by departments and agencies to EARP recommendations (refer to section 2.2 in Chapter Two).

While the NEB has the statutory authority to enforce its terms and conditions, the NEB's mandate is limited to directing the actions of the applicant (in this case, IPL) on the pipeline portion of the project. No certificate terms and conditions are or can be directed to any government department or agency.

As a condition of obtaining a pipeline right-of-way easement from DIAND, IPL signed socio-economic and environmental agreements with the federal government. An examination of the environmental agreement by this reviewer reveals an absence of specific performance standards or penalty clauses for failure by IPL to comply satisfactorily with its terms. It is unclear, to this reviewer exactly what IPL's and DIAND's specific commitments are in this particular agreement.

Federal government, IPL, and Esso initiatives announced by John Munro (see Appendix 3) were welcomed by the Dene Nation and Metis Association (Dene National Office, 1981). Their optimism is qualified, pending the degree to which these initiatives are realized (Casaway, 1982: Irving, 1982).

CHAPTER FOUR MONITORING RESPONSIBILITIES, COMMITMENTS, AND ACTIONS IN THE NORMAN WELLS CASE

The focus of this chapter is on project monitoring and impact management programs that are or will be implemented in the course of the Norman Wells project construction.

Table 1 identifies the lead federal and territorial government departments and agencies by project component and category of impacts. The lead agency role may be designated by statute, as in the case of NEB; by virtue of department responsibilities, as in the case of DIAND north of sixty; or for administrative convenience, and expertise, as in the case of the GNWT Department of Renewable Resources.

Table 1

	Project Component	
Category of Impacts	Oilfield Development	Pipeline
Environmental	- DIAND - COGLA	- DIAND - NEB - GNWI Dept. of Renewable Resources
Socio- economic	- DIAND - GNWT Dept. of Economic Development & Tourism	- DIAND - GNWT Dept. of Economic Develop- ment & Tourism

Project Lead Agencies

The roles of these departments and agencies, as well as other involved departments and agencies are described below.

4.1 ENVIRONMENTAL MATTERS

4.1.1 Federal Departments and Agencies

Department of Indian Affairs and Northern Development (DIAND) DIAND administers a number of authorities which must be obtained by proponents before any northern resource development may take place (DIAND 1981b). For the Norman Wells project, DIAND will authorize water lot leases, land leases, easements, quarry permits, land-use permits, water licences and water authorizations (see Appendix 6). Water licences and water authorizations are authorized under the Northern Inland Waters Act by the Northwest Territories Water Board. "A water licence sets out the specific conditions governing any large-scale use of inland waters . . . to ensure that the quality of these waters is maintained." (DIAND 1981b:14) For the oil-field expansion component, a water licence is required for the artificial island construction, construction of dock facilities, water use for the waterflood program, authorization for the underwater oil gathering pipeline system, and plant facilities construction and operation. For the pipeline component, a water licence will be required for the construction of pipeline crossings of the Great Bear and Mackenzie rivers. Because the pipeline will cross literally scores of small streams and rivers, a water authorization will be issued to grant blanket approval (Umpherson 1982). This procedure eliminates the need to obtain a water licence for each water crossing (DIAND 1981b).

The Territorial Lands Act, the Territorial Land Use Regulations, Territorial Lands Regulations, and the Territorial Quarrying Regulations,

regulate the use and occupation of land including river beds (DIAND 1981b). A water lot lease is required to authorize the construction and provide tenure for the artificial islands and docks on the river beds. Long term maintenance conditions could be incorporated in this lease. An easement is required for the construction and operation of the oil gathering pipeline system that lies on the river bed. For the pipeline component, an easement is required for the pipeline right-of-way on land and on the river bed for pipeline water crossings. Leases will be required for all ancillary facilities including pump stations, staging and storage areas, work camps, and roads that are located outside the pipeline right-of-way. The pipeline has been divided into 6 spreads. One land use permit will be issued for each spread. Each permit will regulate all construction activities for that spread (Umpherson 1982). Examples of activities authorized are land clearing, construction of off-loading sites and storage sites, and construction of all-weather roads between sites (DIAND 1981b). Quarry permits authorize quarry operations for the artificial island construction, pipeline construction, and the construction and operation of ancillary facilities. One quarry permit is required for each pit (Umpherson 1982).

Monitoring activities will be directed to ensure compliance with permit, licence, terms and conditions; and to monitor changes in environment. Inspectors for the Norman Wells project will be drawn from existing staff. There will be one inspector on each spread and a chief in Yellowknife. A procedures manual is currently being written (Umpherson 1982).

National Energy Board (NEB)

The NEB is solely responsible for monitoring IPL's compliance with the

terms and conditions of OC-35, the certificate authorizing IPL to construct the pipeline. Except as provided by special legislation, none of the NEB's responsibilities can be delegated to other departments and agencies (NEB 1982b). In carrying out its responsibilities, the NEB deals directly with IPL (Gales 1982). IPL is responsible for ensuring that its subcontractors comply with the project terms and conditions.

In order to ensure that the undertakings of applicants are appropriate and effective, the NEB carries out on-site inspections of the pipeline during the construction and operations phases. The NEB also requires the proponent to submit follow-up reports, for example, see Appendix 2, condition 22 (NEB 1982a). The NEB will have its own inspection surveillance staff in the field to carry out on-site inspection. They will report directly to the NEB project manager (Gales 1982). At this time, surveillance logistics have not yet been determined. The NEB will be writing operating rules or guidelines for the project (Farmer 1982). Liaison between the NEB and the other government agencies is provided through the project coordination committee established by the Minister of DIAND. Working relationships between the various departments and agencies and the NEB are still being worked out (Gales 1982; Bohnet 1983).

Canada Oil and Gas Lands Administration (COGLA)

COGLA, which came into being on March 5, 1982 is responsible for the management of oil and gas exploration and development in the Canada Lands. The Agency combines the oil and gas management functions of the Departments of Indian Affairs and Northern Development, and Energy, Mines and Resources (DIAND 1982). COGLA will regulate and monitor exploratory drilling as well as development and production of the Norman Wells oilfield. While drilling

is regulated by the <u>Canada Oil and Gas Act</u>, the regulations regarding oilfield expansion and production do not yet have the force of law (Thomas 1982). They are being used now as guidelines. COGLA is responsible for: the technical evaluation of the artificial islands construction and operation; approval of the drilling program and waterflood program, approval of the oil gathering pipeline system construction and production; and plant facilities construction and production (see Appendix 6). COGLA is also responsible for inspecting project safety and environmental matters (Thomas 1982). With regard to the latter, DIAND provides the environmental and northern socio-economic operating conditions that are to be applied under the legislation (DIAND 1982).

Monitoring activity will be regulatory. COGLA does not have an inspector at Norman Wells continuously. Inspectors are rotated, spending two weeks at the Beaufort Sea and 2 - 3 days at Norman Wells (Thomas 1982). Since COGLA is a new agency, working relationships and lines of communication with other agencies are still being developed. For example, the GNWT Department of Renewable Resources expresses concerns to COGLA through DIAND (Donihee 1982).

Department of Fisheries and Oceans

Direct regulatory involvement in the Norman Wells project is through the issuance of Explosive Use Licences which are used to control impacts resulting from blasting operations near or in water (see Appendix 6). Proponents must comply with the <u>Fisheries Act</u> but no permit is required by this Act. GNWT wildlife officers are also fisheries officers in the course of their duties, and they will be fully appraised of Fisheries concerns and requirements (Lawler 1982).

The Fisheries office in Yellowknife participates in the federal land use and water use referrals process. Fisheries will try to include their concerns, related to artificial island construction and pipeline water crossings, in the terms and conditions of land use permits and water use authorizations (Wong 1982). Monitoring activity carried by the department will be regulatory. No extra staff will be assigned to the project (Wong 1982). There will be 3 enforcement officers in the field to monitor the effectiveness of stream crossing work and methods. These officers, however, will not be assigned exclusively to the Norman Wells project.

Department of Transport (DOT)

DOT concerns with the Norman Wells project will be handled by the Canadian Coast Guard (Cherrett 1982). The Canadian Coast Guard is concerned mainly with water pollution and keeping navigable channels open and marked. Permits are required by Esso for the construction and operation of the artificial islands, dock facilities, and oil gathering pipeline system. IPL requires construction and operation permits for the pipeline crossings of the Mackenzie and Great Bear Rivers (see Appendix 6). There will be no monitoring during the construction period. Inspections will be carried out by staff from the Vancouver office when the construction is completed (Ashworth 1982).

Department of Environment (DOE)

The department does not issue any authorizations for the Norman Wells project. DOE's role is a supportive one as "a primary source of technical and scientific advice to the regulatory agencies" (Tywoniuk 1982). The Environmental Protection Service (EPS) is an agency in DOE. It has an

ongoing role at the Norman Wells refinery monitoring refinery effluent. Esso conducts the monitoring program with EPS conducting a field test once a year to provide an independent check. EPS also monitors refinery air emissions for research purposes. As part of the referral process, EPS advises DIAND of its concerns (Wilson 1982c). It depends on DIAND to enforce any of its suggested terms and conditions that are incorporated into permits or licences authorized by DIAND. The EPS occasionally checks inspection reports to see if its advice has been considered (Wilson 1982c). Another DOE agency is the Canadian Wildlife Service (CWS). The CWS is responsible for pursuing any infractions of the Migratory Birds Convention Act. Since it has no inspectors, however, it cannot lay charges. The GNWT wildlife officers and the RCMP have authority to enforce the Act but have no operating terms and reference for doing so (McCormick 1982). The CWS role is mainly a supportive one; for example, they provided advice to the GNWT Department of Renewable Resources at the NEB hearings (McCormick 1982). With respect to authorizations for the project, the CWS takes part in the permitting referral processes.

4.1.2 Territorial Departments

GNWT Department of Renewable Resources

The department will be the lead agency for GNWT environmental concerns (GNWT 1982). The Department of Renewable Resources directly administers the <u>Environmental Protection Ordinance</u> and the <u>Wildlife Ordinance</u>, and partially administers the <u>Petroleum Products Storage Ordinance</u> and the <u>Forest Protection Ordinance</u> (GNWT 1982). The department also is coordinating federal agency responses to the IPL environmental submissions, since none of the Federal agencies were intervenors of record at the NEB hearings

(Donihee 1982).

Eight new term positions will be established for the project. A Pipeline Coordinator will manage and organize the department's field monitoring and surveillance efforts, and liaise with other government agencies, the public, and IPL and Esso. A monitoring Biologist will review and evaluate IPL's environmental submissions to the NEB, review construction impacts on wildlife and habitat along the pipeline and review user compensation claims. Field staff will be responsible for the surveillance of the oilfield expansion and the pipeline construction; and the enforcement of the terms and conditions of GNWT authorizations. They will also enforce GNWT ordinances and regulations and act as officers appointed under the <u>Fisheries</u> Act and the Migratory Birds Convention Act (GNWT 1982).

GNWT Department of Local Government

The Lands Section of the department issues land use permits, leases, and development permits. The land use permits and leases are subject to the <u>Commissioners Land Ordinance</u> and <u>Commissioners Land Regulations</u>. The development permits are subject to the <u>Area Development Ordinance</u>, the <u>Norman Wells Development Area Regulations</u> and the <u>Mackenzie Highway Develop-</u> <u>ment Area Regulations</u> (GNWT 1982). All oilfield expansion development within Esso's leased area will require development permits. The pipeline right-of-way passes through parts of the Norman Wells and Fort Simpson Block Land Transfers and will require land use permits, development permits, and an easement for the right-of-way. A lease will be required for a pumping station within the Fort Simpson Block Land Transfer. The Lands Section will not have staff in the field but will probably utilize Department of Renewable Resources field staff (GNWT 1982).

4.1.3 Other Environmental Monitoring

A scientific research and monitoring program for the Norman Wells project is in the proposal stage. The working group presently includes representatives from DOE (including EPS and CWS), DIAND, Department of Fisheries and Oceans, and the GNWT Department of Renewable Resources (Wilson 1982a). The goals of the program are:

1. to identify and quantify actual environmental impacts;

2. to assess the accuracy of predictions and identify unexpected impacts;

3. evaluate the effectiveness of mitigation measures;

4. on the basis of monitoring and research results, develop guidelines for future northern pipeline developments (Wilson 1982b).

Research topics and programs are still being developed. Topic areas include: waterfowl impacts, raptor impacts, and waste management and disposal. In order to reduce possible conflict with regulatory agency or proponent activities in the field, the program will focus on scientific research monitoring only (Wilson 1982a).

4.2 SOCIO-ECONOMIC MATTERS

The socio-economic matters referred to in this study refer to those matters covered by the proponents' socio-economic action plans (see Esso 1982; IPL 1982b). It is possible to minimize damage to the environment by imposing terms and conditions on land use permits, project certificates and the like, and by enforcing other applicable environmental protection legislation. There is no comparable degree of enforceable protection for people from project social impacts. The task of managing the social impacts

of a project is made difficult by the fact that there are few legislated standards or objectives which the project can be made to conform to. Second, department and agency responsibilities are not as well defined as those agencies, for example, who deal with environment matters. Both of the above points are reflected in the EAR Panel and NEB decision documents for the Norman Wells project. While more than half of the EAR Panel recommendations deal with project socio-economic impacts, the recommendations do not set standards of performance nor define a base line by which activities could be judged to have been sufficient and effective. Nor are the recommendations directed to a specific department or agency (recommendation 60 being an important exception). The NEB's involvement in the socio-economic sphere is limited to requiring IPL "to prepare and develop . . . the key elements of each of the socio-economic plans and programs which the Applicant undertook to carry out" (NEB 1981:126) and by requiring IPL to submit a report on the actual socio-economic impact of the Norman Wells project during construction, after the first year of pipeline operation (see Appendix 2, conditions 8 & 24).

4.2.1 Federal Government Role

Federal Government Commitments

In announcing approval of the Norman Wells project, John Munro announced federal government commitments to programs and funding to allow northerners and the territorial government to prepare for, and minimize negative social impacts, and to ensure that local employment and business opportunities could be realized (DIAND 1981a) (see Appendix 3). Federal government commitments included: funding for the Government of the Northwest Territories to finance additional project-related demand for public services, and funding of training programs. These programs are designed to: a) supplement Esso and IPL programs, and b) to cushion natives from the potential negative project socio-economic impacts (JNAC 1982). The programs would be planned by natives in cooperation with both levels of government.

These commitments are now being implemented. Several planning and program committees have either been set up or are in the process of being The Joint Needs Assessment Committee is made up of representatives set up. from the Dene Nation and Metis Association executives, the GNWT, and native members from communities affected by the Norman Wells project. The committee will assess proponent, native, and institutional needs, and recommend and develop job training and native culture programs (JNAC 1982; Casaway The Community and Social Development Committee is made up of repre-1982). sentatives from the GNWT, the Metis, the Dene, the JNAC, and the Project Coordination and Review Committee. Committee purposes include: to ensure that there is no duplication of delivery of services, to identify community planning and social development issues, and to act as a communication and discussion group (Irving 1982; Bohnet 1982). The committee makes recommendations to the GNWT Executive Committee. Funding has been allocated for the formation of a Community Advisory Group to be made up of representatives from communities affected by the Norman Wells project. At this time, committee make-up and mandate have not been fully decided on (Scullion 1982; Bohnet 1983). The Project Coordination and Review Committee is made up of a project coordinator appointed by the Minister, and representatives of: the Dene Nation, the Metis Association, IPL, Esso, NEB, GNWT, and the Community Advisory Committee. Other members may be added if the need arises. Basically, the Committee will review the project to date, and

discuss concerns that arise during project construction. The Committee itself is still in the formative stages (Scullion 1982; Bohnet 1982).

Department of Indian Affairs and Northern Development

As the lead agency in the North for federal activities, DIAND is the federal focal point for socio-economic matters. The Department's experience with setting guidelines for pipeline socio-economic action plans is limited. The Department has experience with mines but the nature of pipelines is quite different since most of the project work requires specialized skills, and the work is intensive and of short duration (Moll 1982). DIAND's approach to the Norman Wells project is to let the proponents develop action plans and then work with them to ensure that these plans are specific enough to be effective (Meldrum 1982; Faulkner 1982). DIAND sees itself as a facilitator and a monitor (Moll 1982; Davis 1982). One example of this role was the department's efforts to persuade IPL to subdivide clearing work into smaller units to make it easier for northern companies to take on contracts (Meldrum 1982). In the field, officials from the Indian and Inuit Affairs Branch of the department provide a liaison between natives and the proponents (Davis 1982).

The department does not appear to have formulated goals for the project, or policies about the management of project social impacts to guide department activities. The two quotations below suggest that this basic lack of preparedness has not changed since the Norman Wells project was first reviewed in 1980.

Dr. Stager: Notwithstanding the policy statements of the company as you have heard them, how do we deal with the question of monitoring or seeing in fact policies are carried out? Does your department (DIAND) have any views on this? Mr. Wick: I think the first major step is perhaps the report of this Panel and discussions between my department and the Territorial Government on how we should proceed.

(Norman Wells Oilfield Development and Pipeline Project Transcripts, vol. 18, 1980:1868-69)

The second quote is taken from the "Proceedings of the Special Committee

of the Senate on the Northern Pipeline" held two years later.

The Chairman: . . . I hate to revert to it again, but I should like to ask you: Who is going to monitor these projects to see that the proponent is living up to his commitment?

Mr. Faulkner: We do not at the present time have what I would call a strong monitoring capacity within the program. It is an area that we are looking at at the moment . . . I suggest that we will be doing that in conjunction with the territorial governments, who were a party to developing the socio-economic aspects of it, and they would have a key role there.

To make it easier for everybody, we would like to think that the industry, through its presentation of that framework, and subsequently the discussion of annual work plans, will be providing an ongoing basis for evaluation by providing data, targets and objectives. These things will come up on an annual basis, and it is at the point that most of the work will be done. We hope that we will all be able to assess how successful the agreement has been and whether the targets and objectives struck in the agreement were actually realizable, and whether the best efforts were brought to bear to achieve them.

(Faulkner 1982:vol. 31:39)

4.2.2 Territorial Government Role

Department of Economic Development and Tourism

The Department has three goals for the Norman Wells project. They are to maximize: business opportunities for Northern businesses, employment opportunities for Northern residents, and training opportunities for Northern residents (Foster 1982). The latter two are being addressed by the Joint Needs Assessment Committee on which there is a department representative. The Department is thus devoting its attention to maximizing business opportunities. It has no predetermined plan to achieve this, however (Foster 1982). The department mainly lobbies with the companies

and acts as a liaison between businessmen and IPL and Esso. There is no formal monitoring program. Esso supplies the department with economic information concerning business and employment opportunities and construction expenditures. Field staff monitor the situation informally, including receiving and looking into public complaints about business opportunities.

4.3 CONCLUSIONS

A review of department, agency, and proponent activities since federal government approval of the Norman Wells project was announced on July 31, 1981, suggests that the management of the project is almost exclusively regulatory. As the consideration of the project has progressed from public review, to permit and licence issuance, to permit and licence enforcement, the public and in some instances, government departments and agencies, have seen their role in influencing project planning and implementation decrease correspondingly.

4.3.1 Design and Implementation of Monitoring Programs

1. What project monitoring is, or is being, implemented?

It was postulated in Chapter Two that the perception of the purpose of monitoring and actual monitoring itself by a particular agency stem from the agency's mandate and the role staff perceive the agency to have vis-a-vis the project. All agency personnel who were interviewed for this study described agency actions with regard to project monitoring in these terms. Department and agency monitoring effort has been directed mainly to surveillance of the proponent for compliance with environmental protection measures outlined in: NEB certificate OC-35, the environmental agreements signed between the proponents and government, and the various authorizations that the proponents require. Other monitoring activity focuses on post-construction assessment of the effectiveness of the various protection measures taken.

Personnel in those agencies not issuing authorizations, perceive their role in the Norman Wells project as advisory and therefore not entailing monitoring responsibilities. For example:

Department of Environment

"The Department of Environment does not have any surveillance/enforcement responsibilities arising from the regulatory and permitting processes for the Norman Wells project . . . Apart from surveillance and enforcement monitoring, this Department is a primary source of scientific and technical advice to the regulatory agencies for the Norman Wells project" (Tywoniuk 1982).

There has been discussion among a number of departments and agencies to establish a scientific monitoring and research program for the Norman Wells project. This program would be carried out by the various interested departments and agencies. The project, however, is still in the formative stages.

Both Esso and IPL will monitor implementation of their socio-economic and environmental plans and programs. Reports will be submitted at regular intervals to the appropriate government officials (Esso 1982; IPL 1982a; 1982b). IPL will also submit post-construction reports to the NEB (see Appendix 2, conditions 23 & 24).

There do not appear to be any formal department or agency socio-economic monitoring programs.

2. Are there statutes, regulations, guides or other documents for use by monitoring personnel?

At the time of writing, those departments and agencies which have a regulatory role in the Norman Wells project have developed or are developing

manuals, training programs, and/or guidelines for use by monitoring personnel. These activities were described more fully in section 4.1. Where project activities are routine, no special measures have been developed. For example, the Canadian Coast Guard will not develop any new procedures for the inspection of pipeline river crossing markers (Ashworth 1982). The NEB, DIAND, and GNWT Department of Renewable Resources have or will be developing project specific guidelines for use by their staff. The GNWT Department of Renewable Resources, for example, has produced a handbook which provides an overview of the Norman Wells project and the department's role in the project. The department Pipeline Coordinator will train and supervise field staff as well as liaise with other government departments, the public, and project proponents (GNWT 1982).

To satisfy NEB regulatory requirements [see Appendix 2, conditions 14(b) and 15(b)] IPL has prepared an Environmental Protection Plan to provide a field reference document to make all personnel aware of environmental concerns and appropriate protection measures, and to provide sufficient detail for the implementation of environmental protection measures (IPL 1982b).

This reviewer is not aware of project-specific guidelines developed by departments and agencies for the monitoring of socio-economic aspects of the Norman Wells project.

3. How is the information that is derived from monitoring, used by government and proponent project managers?

Project managers are defined in this study as those managers who make decisions which direct or influence project construction and operation. Much department and agency effort has been directed to the coordination of

project inspection effort, and the development of lines of communication among departments, agencies, proponents, and to a limited degree, the public. The lead departments and agencies, and proponents have designated contact people for the project. The Project Review and Coordination Committee was established to provide a forum for the proponents, the GNWT, the federal government, the National Energy Board, and others to review and discuss project events, concerns, and the like (Scullion 1982). The Committee has no project management decision-making authority, however. What is less clear and remains to be decided, is how matters involving overlapping jurisdictions will be resolved. For example, in the case of a fuel spill, who has the final authority on mitigative measures to be taken, DIAND who has issued the land use permit, or the NEB who is responsible for ensuring protection of the environment along the right-of-way?

A more fundamental concern is the emphasis by government managers on project regulation, that is, proponent surveillance. A major disadvantage of such an approach is that departments or agencies tend to focus on regulatory measures to <u>control the project proponents</u> rather than administrative strategies to <u>manage the project</u>. The latter approach requires that an agency identify its goals and objectives for the project and set performance standards. The department or agency can then develop management options which utilize the techniques of persuasion, incentives, and cooperative actions or programs, as well as regulation. It appears to this reviewer that the majority of Norman Wells project monitoring is directed to testing the effectiveness of regulatory measures rather than to the more active approach of testing various approaches to manage impacts. For example, while monitoring may indicate that one job creation program is successful

and another one is unsuccessful, the monitoring program could be designed to answer the question, "Why is a particular program successful or unsuccessful?" Knowledge gained from answering these types of questions during construction, would be useful for altering programs during project construction as opposed solely to designing tighter regulations for the next project that comes along.

4.3.2 Development of Impact Management Strategies

1. Are the required monitoring and other programs being put in place and are they operating effectively?

The Norman Wells project will affect, and be affected by, proponents, government decision-makers, and northern residents. The proponents, Esso and IPL, have as a primary goal, the construction and operation of the Norman Wells project. Their immediate interests lie in securing the required authorizations under terms and conditions that do not affect their corporate interests. Governments are concerned with ensuring maximum benefits for northerners (e.g. job and business opportunities, development of the economy) and minimizing potential negative impacts (e.g. damage to the environment, disruptions to native society). Native groups seek development over which they have some measure of control and from which they receive tangible benefits. Each interest group will have different conceptions of what "required" programs should be in place. Two broad categories of "required" which come to mind are: a) the legal connotation of "required" and b) the connotation associated with wants and needs. The former refers to programs, and the like which are stipulated as terms and conditions of permits, licences, certificates, agreements, and the like. The latter refers to the sufficiency and effectiveness of programs. That

is, do they achieve the purposes that various interests expect? This study answers the research question posed above from these two perspectives.

From a legal perspective, there are three broad categories of authorizations for the Norman Wells project--regulatory approvals, the NEB terms and conditions, and the socio-economic and environmental agreements between the proponents and the two governments. The necessary regulatory approvals required for clearing the pipeline right-of-way cover routine activities and it is anticipated that there will be no difficulties with regard to their issuance (Umpherson 1982). The NEB in its decision required that IPL submit a number of additional studies, programs, plans and procedures (see Appendix 4). Despite assurance to the contrary, IPL has fallen behind in its submission schedule (Donihee 1983; Spaulding 1983). One major submission, the Environmental Action Plan, has been scaled down and now deals with the right-of-way clearing phase only, rather than the whole construction phase, with additional plans to be made available in late spring 1983 (Donihee 1983). One supplemental report due in December, 1982 and seven of the eight reports due in January, 1983 have not been submitted at this time (Donihee 1983). It is too early to review enforcement efforts by the various departments and agencies. A monitoring program provided for in the environmental agreement signed between IPL and the federal government has not been implemented at this time (Umpherson 1982).

There is no equivalent regulation of socio-economic matters as with environmental matters since social legislation is more diffuse. With regard to the socio-economic matters addressed by the proponents' socio-economic action plans (see Esso 1982; IPL 1982b), it is still too early to assess their effectiveness. Government department and agency jurisdictions and subsequent responsibilities are less well-developed. For example, different levels of government, different departments, as well as different divisions within departments are involved in some aspect of manpower training and development; in this case, Manpower Development, and Employment Development divisions in the GNWT Department of Economic Development and Tourism, the GNWT Department of Education, and the Canada Employment and Immigration Commission.

The second perspective of "required" is more difficult to address. The comments of intervenors indicate that many of the uncertainties about the proponents' intentions and plans still remain. Proponents have either withheld information or have supplied what intervenors feel is inadequate information about proponent impact management plans and procedures. The Dene Nation supports the commencement of clearing activities this spring even though IPL has not yet submitted all of the required submissions. They have done so partly as a test of their own preparedness to take the job and business opportunities offered by pre-construction, and partly as a test of IPL's ability to manage the project (Spaulding 1983).

2. What Specific management strategies are required in response to the results of monitoring?

Since the construction work on both the oilfield expansion and the pipeline is still in the preliminary stages, this question cannot be directly addressed. The approach to project monitoring that this reviewer has observed, however, indicates that the results of monitoring are directed more to the post-construction evaluation of project impacts and the effectiveness of management strategies than to adapting current management strategies as events unfold. In other words, the opportunities to adapt current Norman Wells project management strategies and to test a variety of management options are not being seized. As well, what is being tested in essence, are the proponents' approaches to project impact management. This reviewer does not question the sincerity of the proponents in this regard; however,
with the emphasis on project surveillance and post-construction program evaluation, government departments and agencies are not taking the opportunities to test their own approaches to project impact management. Less hands-on experience by government in this project means less effective review and management by them of subsequent projects. More could be learned from this project by government, proponents and affected interests alike if the approach to project monitoring focused on 'testing' government and interest group as well as proponent management strategies and adapting management strategies as the need arises.

3. Are affected interests satisfied? Why or why not?

Basically, intervenors are dissatisfied with the adequacy of IPL's submissions, and intervenor opportunities to affect project planning and management decisions. Their concerns are, in part, a critique of the decisionmaking processes that unfold once a project has overcome the hurdles of formal public review and government approval. The discussion below answers the research question in the context of the NEB review procedure, and the agency and public review of other authorizations required by the proponents.

As noted earlier, many of IPL's policies, programs, and plans were incomplete and so the NEB set up a submission procedure that would enable intervenors to review and critique the submissions as they are handed in to the Board. The procedures are described in Appendix 2, conditions 7 and 8. Intervenors have a number of concerns both for project planning and monitoring that arise from the NEB procedure:

a) Much of the concern of intervenors arises from having to depend on IPL's stated good intentions to provide environmental protection and mitigation measures plans and programs in sufficient detail to address intervenor concerns. IPL has since applied to the NEB for a leave-to-construct order despite having

not completed the preparation of all of the required submissions. The submission schedule is now close to falling behind the proposed construction timetable (Spaulding 1983).

b) As noted earlier, government impact management planning requires that agencies are aware of proponent planning intentions and decisions. Until submissions are received, agency planning is held up. The GNWT Department of Renewable Resources also feels that the submissions so far have been inadequate to assist department planning (Donihee 1982).

c) Review of the submissions requires commitments of financial and human resources. The GNWT Department of Renewable Resources has enlisted input from other federal agencies with environmental concerns to facilitate the review of submissions (Donihee 1982). Non-governmental groups such as the Dene Nation and the Metis Association have found the procedure set out by the NEB to be time-consuming and costly (Spaulding 1982). Intervenors have also found the 30 day suggestion period difficult to adhere to.

d) The GNWT Department of Renewable Resources initiated a request to the NEB for a ruling which would allow the department to make oral arguments to the IPL submissions. The department finds the present method of critiquing IPL's submissions to be cumbersome and not as effective as oral presentations before the Board would be (Donihee 1982). The Board declined to change the procedure (Gilmour 1982).

e) Besides being responsible to the NEB, IPL is subject to the terms and conditions set by other agencies who authorize additional permits, leases, and licenses that IPL requires (NEB 1981). These agencies and the NEB so far have not determined who has final authority in matters involving overlapping jurisdictions (Gales 1982; Bohnet 1982; Scullion 1982).

Esso and IPL require a number of authorizations for the project. Examples

are the land use permits, quarry permits, and the like described in section 4.1. Other agencies have the opportunity to seek appropriate environmental operating terms and conditions for authorizations through the process of interdepartmental review. Criticism of the review process by agencies concerns the short period of time the agency has to respond to an application and the lack of feedback to the agency about whether its comments have been addressed in the authorization's terms and conditions. Comments about the process included "DIAND makes the decisions, we are left to sort out the problems" and "Once you have submitted a review to DIAND, you should not have to keep following it up to see if your concern was addressed". A general rule of thumb would appear to be that if an agency feel strongly about an issue, it must take the initiative to follow up its review comments, otherwise there is a chance of the concern "falling through the cracks".

Public involvement in the authorization approval process varies. In routine cases, government officials solicit local comments through meetings with councils or talks with individuals to determine if formal public consultation is warranted. As an example, the Canadian Coast Guard permits required by Esso never went through public meetings, but would have if public concerns about effects on navigation had been raised (Ashworth 1982). For land use authorizations, a community may request that a meeting be held. Whether a meeting is held is up to the Land Use Engineer (Spaulding 1982). The only information respondents have to work with is the information on the application form. This information is usually sketchy. Efforts to get additional information from DIAND do not usually get far. Where public meetings are held, people do not usually know the project particulars in advance. On the whole, people feel frustrated with the process. Only environmental concerns having to do with changes in the land are heard.

People often have concerns about effects on fish and wildlife resources and hence, the effects of the development on them (Spaulding 1982).

As a matter of routine, affected communities, the Dene Nation and the Metis Association do receive authorization applications and so are familiar with the referral process. The volume of land use permit applications is large, however, and it is left up to the recipient in the referral process to sort out the routine from the important (Irving 1982).

Criticisms of the Water Board decision-making process are similar--that more information be provided and that the public receive earlier notification of applications so that they are better prepared to take part in the hearings (Dacks 1981).

In the case of the Norman Wells project, basic concerns about the project were not addressed by the EAR Panel and the NEB; namely native claims, northern development policy and planning, and resource revenue sharing. It appears at first glance that there are a plethora of public and agency rereviews for the various authorizations that a project requires after it has received government approval, and thus plenty of opportunity for public and agency input into project planning and impact management. Each authorization covers only a small part of the project however. The reviews that take place subsequent to the overall project review thus do not address the fundamental concerns people have about the project itself.

CHAPTER FIVE CONCLUSION AND RECOMMENDATIONS

We have examined project monitoring in the review, planning, and early construction phases of the Norman Wells oilfield expansion and associated pipeline project. The Norman Wells project differs from previous large developments in the North both by its technical requirements and by its impact over a number of communities along the Mackenzie valley. The Norman Wells project is almost certain to be a forerunner of larger developments in the western Arctic. Analysis of the approach to project monitoring taken by the responsible government departments and agencies indicates that followup commitment and effort must be increased if the full intent of the EAR Panel recommendations and NEB terms and conditions is to be realized.

Associated with the technical, social, economic, political, and environmental issues surrounding the Norman Wells project, are uncertainties about whether predicted impacts will occur, or unforeseen impacts arise, and uncertainties about the effectiveness of management strategies to control or modify project impacts. Monitoring is the means for testing approaches or hypotheses that deal with the types of uncertainties mentioned above.

The approach to monitoring and project management taken in this project, however, suggests a case of missed opportunity to learn about, and understand the impacts of large projects, and to try out adaptive approaches to deal with the impacts that do occur. More specifically, the basic questions of what is to be monitored and why, who is responsible for the monitoring, and what is done with the results, have not been systematically addressed by the responsible departments and agencies. There is no framework of the type suggested by the above questions, for the monitoring activities that are planned or in place for the Norman Wells project. Most of the formal monitoring programs for the Norman Wells project that this reviewer identified, are of the regulatory, surveillance type associated with the terms and conditions of specific permits. Monitoring of this project by various departments and agencies appears to relate more to their respective roles in issuing authorizations rather than to their broader statutory mandate. For example, because it does not issue any permits, the Department of Environment views its role in the Norman Wells project management as "advisory". Where the statutory basis of a department or agency's mandate is not explicit, monitoring programs appear to be of the "wait-and-see" variety. For example, DIAND and GNWT Department of Economic Development and Tourism monitoring of Esso's and IPL's socio-economic action plans fit this mold.

Formal project reviews for example, by FEARO and the NEB should provide opportunities to determine: a) what the outstanding concerns are; b) to decide on programs for addressing these concerns; and c) to assign responsibilities for program implementation and monitoring. Government departments and agencies have taken little advantage of these latter two opportunities. They seem reluctant to make commitments. Further, they continue merely to respond to private sector initiatives. Agency briefs are directed to critiquing proponent EIA and SIA statements. Where there are uncertainties regarding impact severity and distribution, and measures to deal with them, government agencies are inclined to shift responsibility for their resolution onto the proponent rather than to set planning goals for the project and have the proponent and the appropriate government office work cooperatively to achieve them.

One determinant of the degree to which project impacts are identified and commitments made to monitor and manage them by a given department, is a

department's perception of its role in the formal project review. In interviews, agency personnel indicated that the EARP review had a number of purposes including: a process for synthesizing input for Cabinet, a forum for making agency concerns known to DIAND, (the initiating department in this case), and a forum for the public to raise their concerns. No one mentioned that the EARP review might be a useful process for determining his own departmental responsibilities and commitments to the project. Department perceptions of the EARP review appear to be more as a forum for critiquing the project and less as a forum to formulate impact management strategies, including monitoring. Other than general statements such as "we are willing to work with the proponents", agency briefs presented at the formal review generally lacked specific suggestions for strategies to undertake impact management and monitoring. Other comments dealt with the implementation of the EAR Panel recommendations which are only just that -- recommendations. Those respondents in environment-oriented departments indicated that they would make an effort, or had made an effort, to have their concerns addressed in the various authorizations required by the proponents following project approval. With regard to the socio-economic action plans of Esso and IPL, respondents noted that their major concern was with the actual implementation of the proponents' stated policies and programs.

Government departments and agencies need to play a more active role at the project assessment and review phases. Their presentations to the EAR Panel should go beyond a critique of the proponent's EIS. "Review Comments on the Regional Socio-Economic Impact Assessment for the Norman Wells Oilfield Expansion and Pipeline Project", a brief presented by the Northern Affairs Program Office of the Department of Indian Affairs and Northern Development is an example of a brief that not only critiques but also offers constructive

suggestions about programs and program design. Even an "advisory" department such as the Department of Environment, could become more actively involved in the design, implementation, monitoring, and evaluation of programs, studies, and the like.

- 1. It is recommended that departments and agencies, in their briefs to an EAR Panel, state the explicit department/agency goals and objectives for the proposed project, areas of uncertainties that should be dealt with, performance standards required or desired from the proponents, and the specific means by which the department/agency will cooperate with the proponents or government departments to implement the required programs, studies, and the like.
- 2. It is recommended that departments and agencies follow up their presentation to ascertain if and how their concerns are addressed by the EAR Panel in its recommendations, the proponent, or other responsible government departments/agencies.

The initial identification of impacts and subsequent commitments to monitor and manage them is contingent to a large extent on the amount of detail provided by project proponents about their plans and intentions. The processes of project review and subsequent project planning are often characterized by the situation where the proponents set the pace of project development, and control the flow of information about their intentions and plans to government and the public. This affects project review and government planning and preparedness.

- 3. It is recommended that EAR Panels address this issue explicitly in EIS preparation guidelines for all projects reviewed by them.
- 4. It is recommended that the National Energy Board withhold approval of a Certificate of Public Convenience and Necessity until the necessary preliminary plans, programs, studies, and the like are conducted and considered by the Board to be adequate.

FEARO literature states that "The Office has other major responsibilities including the evaluation of process implementation and the recommendation of adjustments to improve process effectiveness" (FEARO 1979:9). FEARO involvement in the Environmental Assessment Review Process appears to end after the Panel report is released. FEARO follow-up to the panel recommendations is essential if we are ever to determine the effectiveness of the EAR Process. It is this reviewer's interpretation of FEARO's responsibilities as stated above, that FEARO can investigate the follow-up to EAR Panel reports to see if their recommendations have been addressed.

- 5. It is recommended that FEARO carry out and publish the results of a self-monitoring study to determine how and to what extent the Norman Wells project EARP recommendations were addressed by the project proponents and the appropriate government departments and agencies.
- 6. It is recommended that such follow-up studies become standard operating procedure for future EARP reviews.
- 7. It is recommended that EAR Panel recommendations should state explicitly to whom specific recommendations are addressed. Panels should cite legislation where appropriate. This will facilitate the follow-up studies recommended above.

Coordination of the many project construction and initial operation activities by government is critical. This task is made difficult because responsibilities for project management and regulation are spread across departments and agencies and different levels of government. While individual project components may be addressed by the responsible departments and agencies, the cumulative effects of the many activities may not be addressed if it is outside any one department's purview. There is thus a need for a Project Management and Liaison Office (PMLO) under the authority of the initiating department/agency to facilitate the initiating department's coordinating role and to provide feedback to all project participants on the private sector's handling of project implementation. The PMLO would have both a management and a coordination role. The establishment of a PMLO would make it easier for the proponent to liaise with government agencies and to "track" its own performance. Such an Office would also be a catalyst and a vehicle for departmental and agency coordination and cooperation.

- 8. It is recommended that a Project Managment and Liaison Office under the authority of the Minister of the Department of Indian Affairs and Northern Development be established with project management and coordination responsibilities, and continue throughout the life of the Norman Wells project construction and initial operation phases.
- 9. It is recommended that for all projects reviewed by the Federal Environmental Assessment Review Office, the initiating government department or agency be responsible for establishing a PMLO.

Once a project has overcome the hurdles of formal public review and government approval there is no forum for the public in the on-going management and development of the project. Yet as we have seen, there are many project uncertainties that directly affect the public.

10. It is recommended that project monitoring be designed so that non-governmental groups such as the Dene Nation or people from affected communities are able to participate as fully as possible.

It is important that what is learned from this and subsequent projects whether it be in the form of research reports, program evaluations, followup findings, and the like, be made available, at suitable locations in Canada, to all interested government and non-government groups and individuals. Such information should be made available as soon as it is gathered and analyzed, for use in the design, evaluation and assessment of subsequent proposals.

11. It is recommended that an Impact Information Office (IIO) be established and operated on an ongoing basis, in Yellowknife, and other centres in Canada. The Office would be a clearinghouse and repository for information about project monitoring, research, management, and follow-up studies of the Norman Wells project and subsequent non-renewable resource development projects.

We are looking at a critical point in northern development. The Norman Wells project will provide the impetus for more industrial development in the Mackenzie valley, but may at the same time cause or hasten social and environmental changes. This project presents an opportunity to learn about the social, economic, and environmental consequences associated with this type of industrial development. The Norman Wells project is not being monitored as fully as it could be. This preliminary review of project monitoring and management indicates that this opportunity to learn from experience and to maximize benefits from the project is not being seized.

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EAR PANEL CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

In its review of this project the Panel has arrived at several conclusions in this report, and only the most important ones will be repeated here.

Main Conclusion

Before the Norman Wells Oilfield Expansion and Pipeline Project can be built within acceptable limits of environmental and socio-economic impact, the following important deficiencies in the Proponents' planning and in the preparedness of governments need to be rectified. The Panel has concluded this work could be done in time to start work on the project in 1982. The reasons for this overall conclusion are given below and specific recommendations on them are given in the following section of this chapter.

Environmental

- Esso should undertake a model study of local scour on the artificial islands at Norman Wells to determine the potential for scour, the level of monitoring required, and the development of remedial or contingency measures.
- Esso should study the alternatives to the filter cloth design on the artificial islands to ensure that erosion of the artificial islands is minimized.
- Esso should undertake an accelerated research and technology development program on oilspill countermeasures and for equipment to deal with oilspills into or under ice-covered or ice-infested river waters.
- Esso and IPL should develop a detailed oilspill and toxic and hazardous materials contingency plan

which should be in place prior to the start of drilling from artificial islands and construction of the pipeline. This plan should include provision for a more accurate oilleak detection system for the oilfield project. The contingency plans should cover the construction and operational phases of the oilfield and pipeline project. The plans should be developed, tested, evaluated and approved by the responsible government agency prior to the start of construction.

5. IPL should carry out and publish the results of a detailed thermal analysis of the pipeline in different terrain types in different seasons. The objective of the study is to understand the potential for thaw settlement and frost heave, ponding of water, and erosion of the pipeline ditch as well as ultimate repair and rehabilitation requirements.

Economic and Social

The principal economic conclusion of the Panel is that the project will provide a needed economic stimulus to the Mackenzie Valley, and the recommendations are intended to insure that economic benefits, particularly for local employment and business opportunities are realized.

Although the social effects of the Norman Wells project are less easy to forecast with accuracy, the Panel concluded that the impact on society can be made to be within acceptable limits. The nature of the social effects will not be different from the effects caused by accelerated oil exploration programs of the past decade in the Mackenzie Valley and the Beaufort Sea areas. The scale of the construction phase would not be much different than activity now experienced in the Mackenzie Delta and Tuktoyaktuk region, although in this case, all the settlements from Fort Good Hope south will be involved. The recommendations of the report are aimed at anticipating, preparing for, and minimizing social disruption.

The Panel has concluded that a 1982 start-up on the project could provide time to assess the situation and carry out necessary economic and social undertakings on such items as inflationary effects on the economy, wage differentials, a data base for social and health care services, cooperation between the Proponents and government, and adjustment of government priorities to put programs and staff in place. Certain recommendations of this report specify these and other items which could be acted upon in the next year, in anticipation of a 1982 start-up.

- 1. Esso and IPL should prepare and submit plans to show that for all project jobs in the NWT, they will endeavor to maximize local hiring.
- Esso and IPL should prepare and submit plans to show that for all contracts for work in the NWT, equal opportunity to tender on the work will be given to northern businesses.
- 3. IPL should prepare and submit plans showing a detailed review of the pipeline route with emphasis on route changes to minimize project-related effects on the lives and activities of the native people in the Mackenzie Valley and in Alberta.
- 4. To maximize benefits to the North and to give the economy encouragement and stability, the following need to be undertaken:

- (i) A review of sharing of projectrelated revenues.
- (ii) Initiation of land settlement negotiations and substantial progress made.
- (iii) Preparation and implementation of a land and resource plan for the project area to accommodate this project and others that may follow.
- (iv) Development of a policy and public information on oil products pricing and assurance of oil supplies for northern consumers.
- (v) Development of specific priorities for the employment of northerners. A cooperative plan needs to be drawn up by the Proponents, GNWT, and the Federal Department of Employment and Immigration.
- (vi) The development of equitable tendering opportunities for northern businesses and the development of policies to stimulate the growth of these businesses.

Government Preparedness

- DIAND should take the lead in preparing a preliminary land use plan for the Mackenzie Valley to provide a framework in which the proposed project can be planned and evaluated.
- The GNWT should move promptly to insure that adequate staff and resources are available to accommodate the Norman Wells project. The coordination of Territorial and Federal Government programs should be assured.

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3. A public information program needs to be planned and carried out expeditiously in order to inform residents and workers about the project and its potential impacts and mitigation measures, and also to obtain the advice of Mackenzie Valley residents for the purposes of planning and decision making. An impact information centre should be developed similar to the Alaska Oil Pipeline centre at Fairbanks. The program should be under the leadership of the GNWT with local workers carrying out the on-site work.

7.2 RECOMMENDATIONS

ENVIRONMENT AND ENGINEERING

Pipeline Alternatives

 It is recommended that IPL investigate minor alternative routings to keep the pipeline further east from the settlements of Fort Norman and Wrigley.

Geotechnical Concerns, Pipeline Integrity and Permafrost

- 2. It is recommended that pipeline summer construction be permitted only in areas where it can be clearly demonstrated that there would be no greater impact than winter construction in the same area.
- 3. It is further recommended that, before the project is authorized, IPL undertake and publish a more detailed thermal analysis of the pipeline to predict more accurately the behavior of the pipe in a variety of terrain and temperature regimes. The analysis should cover the possibility of climatic change over the life of the project.

- 4. It is recommended that detailed and environmentally acceptable plans for the maintenance of the right-of-way and for the repair of pipeline failures be prepared prior to commissioning of the pipeline.
- 5. It is recommended that terms and conditions for the pipeline project spell out requirements for a revegetation and erosion control program using species, techniques and schedules shown to be adequate for the task.
- It is recommended that in developing oilspill prevention and contingency plans, IPL make special provisions for the karst terrain near Bear Rock.
- It is recommended that IPL design, plan, and construct the pipeline so as to minimize the need for extensive maintenance or unscheduled repair activities.

Water Crossings

- 8. It is recommended that river crossings be located so as to minimize overall environmental disruption.
- 9. It is recommended that the construction plans and schedules for intermediate sized crossings be re-evaluated by IPL in cooperation with the Department of Fisheries and Oceans to ensure that impacts on fish and other aguatic organisms are minimized.

Island Construction

10. It is recommended that Esso carry out a model study to fully evaluate local scour at the artificial islands in order to be certain of the structural safety of the pipelines and integrity Ì

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The study should include monitoring and remedial repair procedures. The results should be reviewed by government before the island construction is

11. It is further recommended that studies on alternatives to filter cloth protection be carried out to find a material that will ensure that no significant erosion of the islands will occur. Results should be reviewed by government before con-struction of the islands is authorized.

Fisheries and Wildlife

of the islands.

authorized.

- 12. It is recommended that the Proponents consult with the Department of Fisheries and Oceans to address any outstanding fisheries concerns and demonstrate in their construction timing and techniques that they have used the available information and addressed the concerns.
- 13. It is recommended that further site specific studies be undertaken to determine final alignment for river crossings to prevent or minimize impacts on fish and the aquatic environment.
- 14. It is recommended that IPL undertake baseline studies on hunted and trapped species to provide information aimed at both the assessment of the impact of the pipeline construction and operation on wildlife, and the development of mitigation measures.
- 15. It is recommended that construction and drilling activity on the islands stop during the peak spring waterfowl migration period that normally lasts

one to two weeks, and that helicopter access to the islands be restricted to only essential needs.

16. It is recommended that Esso develop a plan specifying the necessary equipment and procedures to keep large populations of waterfowl away from an oilspill site.

Forests and Wildfires

- 17. It is recommended that government and IPL fire control responsibilities be clarified prior to commencement of construction and operation of the pipeline. It is further recommended that the government fire control program be augmented to provide protection to the pipeline and, at the same time, that there be no decrease in protection services to other sectors, such as highways, settlements and traplines.
- 18. It is recommended that slash from the right-of-way clearing operation be piled and burned on the right-of-way during the winter.

Oilspills Prevention and Countermeasures

- 19. It is recommended that Esso undertake an accelerated research and technology development program on equipment and procedures to deal with oilspills into or under ice-covered and ice-infested river waters. This program should be in place before expanded production begins at Norman Wells.
- 20. It is recommended that Esso investi-gate, design and install a more accurate oil-leak detection system at Norman Wells, one that would be con-sistent with the detection levels of the IPL pipeline to Zama.

21. It is recommended that Esso and IPL develop, test, and evaluate contingency plans for the construction and operation of both the oilfield expansion and pipeline projects and that these plans be reviewed and approved by government prior to the start of construction.

Toxic Substances and Air Emissions

- 22. It is recommended that Esso prepare contingency plans with methods and procedures for handling, storage, transportation and disposal of all toxic and hazardous materials and that such plans be in place prior to the commencement of the project.
- 23. It is recommended that Esso commence a monitoring program for ground level concentrations of air emissions in the Norman Wells area and that this monitoring continue throughout the life of the project.

Water Use and Effluent Disposal

24. It is recommended that no drilling wastes other than mixtures of water and bentonite be allowed to enter the Mackenzie River and that land disposal and treatment sites be identified and developed.

Archaeology

25. It is recommended that the responsible Federal and GNWT agencies further review the details of IPL's proposed archaeological program, and monitor the potential impact of this project on the archaeological resources along the pipeline route.

Environmental Impact Management

26. It is recommended that, in consultation with the GNWT, the Department of Environment, DIAND or a contracted non-government agency carry out an evaluation of the impact management process in order to improve on impact evaluation and mitigation on the Norman Wells and future projects.

27. It is recommended that the GNWT and Federal Government work with the Proponents to establish an effective and ongoing public information program to respond to concerns of Mackenzie Valley residents.

ECONOMY AND SOCIETY

Effects on the Regional Economy

- 28. It is recommended that prior to project authorization the Proponents liaise with government and prepare an assessment of the predicted inflationary effects of the project.
- 29. It is recommended that planning and monitoring authorities in the GNWT work with the Proponents to conduct a study of the consequences of projectrelated wage differentials which might affect northerners already employed in the region and then prepare to deal with related employment problems.
- 30. It is recommended that the GHWT broaden its program of assistance to trappers who seek to become reestablished in trapping after a period of wage employment on the project.

Employment and Business Opportunities

- 31. It is recommended that labour recruitment take place close to the work sites.
- 32. It is recommended that Esso and IPL specify in any agreements with union

contractors that access to jobs, as a first priority, take into account the skills and interests of workers in the project area.

- 33. It is recommended that contracts for the project be tendered in portions of a size that northern businesses can compete equitably.
- 34. It is recommended that the Proponents make every effort to insure that some contracts are tendered to non-union, northern businesses.

Programs to Assist the Regional Economy

- 35. It is recommended that the GNWT and the Fort Smith Vocational and Higher Education Centre work together with the Proponents to assure that the results of project-related training efforts are maximized.
- 36. It is recommended that the on-site training programs of the Proponents become an integral part of the construction and operation phases of the project.
- 37. It is recommended that the GNWT and IPL make use of the existing or modified employment training plans such as Hire North, so that as many local workers are involved in the pipeline construction and operational activities as is practicable.
- 38. It is recommended that the GNWT and Federal Government work with the Proponents to provide effective public information on the job situation and business opportunities, in order to assist local employment and participation by local businesses.

Effects Upon Government Services

39. It is recommended that government departments seriously consider the

following options in order to meet new project-related requirements:

- (i) second staff from one level of government to the other,
- (ii) increase the public service temporarily in some cases and permanently in others,
- (iii) purchase expertise in planning, managerial and technical skills where necessary, and;
- (iv) redirect existing resources and programs into others which are related to the project.
- 40. It is recommended that, in connection with such government programs as mental health services, housing, school facilities, police services and alcohol programs, that projectrelated requirements not be allowed to displace existing government programs and responsibilities and that government agencies be provided with resources necessary to meet the demands from both the project and from existing programs.
- 41. It is recommended that realistic government financing be assured and in place so that adequate programs exist for planning and servicing the project and the needs of northern residents.

Effects on Transportation and Communication Facilities

42. It is recommended that the Proponents, and the Federal and the GNWT Departments of Public Works prepare plans to insure that the normal truck and passenger vehicle traffic are not displaced and that the quality of the road and driving conditions are preserved and even enhanced, by highway

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upgrading in some cases and paving in others.

- 43. It is recommended that the Federal and GNWT Departments of Public Works plan for the possibility of extension of the Mackenzie Highway to Norman Wells should the project increase demand.
- 44. It is recommended that the appropriate regulatory authority monitor the licensing conditions governing commercial air service to Mackenzie Valley communities so that there will not be a decrease in commercial air service to other northern residents because of project demands.
- 45. It is recommended that steps be taken to identify all project-related communication needs and to provide an adequate communications system so that there is no reduction of present services.

SOCIAL CONCERNS

The Dual Society

- 46. It is recommended that the Proponents provide an orientation program for all incoming southern workers to instil an understanding of northern working conditions and northern society and its value system.
- 47. It is recommended that detailed planning and location of main work camps and work-sites for the pipeline be determined in consultation with nearby community leaders.
- 48. It is recommended that temporary camps be operated as self-contained units with full recreational facilities. Casual visitor access to camp facilities should be denied.

- 49. It is recommended that, at Norman Wells, project-related community facilities which are to be built by Esso be planned to have lasting benefit to the community. For instance, Esso should contribute to recreational facilities new to influx of accommodate the new residents to Norman Wells.
- 50. It is recommended that all aspects of project development which affect Fort Simpson and Hay River be planned and carried out in close cooperation with local authorities in those communities.
- 51. It is recommended that the Proponents provide orientation programs for new local workers, and that the Proponents or government provide literature and advice in management of personal finances and the wage economy; such literature to be used on a voluntary basis. It is further recommended that community advisors, government departments and the Proponents collaborate in planning and monitoring these orientation programs.

The Project and Northerners Living on the Land.

52. It is recommended that the Esso rotational work arrangement be encouraged with careful monitoring of results. Esso should keep the arrangement flexible, extend the system geographically as needed, and minimize transportation delays for rotating workers.

Social Benefits and Costs

53. It is recommended that Federal and GNWT agencies responsible for social and health matters prepare an adequate data base against which project related impacts can be identified and measured, and that these agencies move promptly to minimize or remove anticipated problems by applying mitigative measures.

- 54. It is recommended that before the project begins, Federal and Territorial agencies predict the needs in social and health services by developing plans for staff increments, for improvement of existing programs and delivery, and for both preventive and mitigative action.
- 55. It is recommended that GNWT agencies and local community leaders review liquor distribution practices to determine if licensing hours, rationed buying, or other limiting conditions could be put in place as a measure to control liquor accessibility, and to determine if these or other measures are necessary and practicable.
- 56. It is recommended that the NWT public education alcohol awareness programs and other rehabilitative programs be adequately staffed and funded to meet project-related requirements.

The Need for Goals and Planning

57. It is recommended that a policy statement of socio-economic goals and objectives be prepared for the western NWT and that a comprehensive plan be prepared by the GNWT to serve as a framework for specific socio-economic and natural resource development programs associated with the project.

Government - Proponent Liaison

58. It is recommended that an on-going consultative program be established and maintained at the initiative of

the GNWT, and include such Federal agencies as may be required.

The Role of Community Advice

59. It is recommended that liaison between the communities in the project area and the Proponents should be formally organized and should begin immediately. This community consultation is necessary not only in pre-construction planning and the construction phases, but also in the first few years of the operation of the project. The GNWT should participate in this consultation as well.

NORTHWESTERN ALBERTA

- 60. It is recommended that the Department of Indian Affairs and Northern Development take the initiative in identifying the agencies to address terms and conditions raised by the Dene Tha Band, and in coordinating the responses to them.
- 61. Finally, it is recommended that because of outstanding environmental and socio-economic questions and the need for government preparation, the Norman Wells Oilfield Expansion and Pipeline Project should not be commenced with until 1982 at the earliest. The Panel believes that a start-up in 1982 could provide time for adequate safeguards and programs to be planned and installed.

CLOSING COMMENT

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Before concluding, the Panel feels obliged to comment on the unresolved land settlement of the Mackenzie Valley in relation to the Norman Wells Pipeline project. As pointed out in this report the dominant position expressed at the

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APPENDIX 2

NEB TERMS AND CONDITIONS OF CERTIFICATE

- 1. The pipeline facilities to be constructed pursuant to this certificate shall be the property of and shall be operated by Interprovincial (NW).
- 2. Interprovincial (NW) shall, unless otherwise authorized or ordered by the Board, cause the facilities in respect of which this certificate is issued to be designed, manufactured, located, constructed and installed in accordance with specifications, plans, drawings and procedures approved pursuant to the terms and conditions contained herein, and the requirements of the National Energy Board Oil Pipeline Regulations (SOR/78-746).
- 3. Prior to construction, in these terms and conditions defined as prior to any site preparation, clearing, access road construction, or borrow pit development, Interprovincial (NW) shall not, unless otherwise authorized by the Board, cause any disturbance to the terrain along the pipeline route other than that which is necessary to carry out the field studies and surveys referred to in these terms and conditions.
- 4. Interprovincial (NW) shall, unless otherwise authorized or ordered by the Board, implement or cause to be implemented all the policies, practices and procedures for the protection of the environment included in its environmental reports and as otherwise adduced in its evidence before the Board, and those detailed in the further submissions referred to in conditions 5 and 13 herein.
- 5. Interprovincial (NW) shall, within two months of the issuance of this certificate, or on such later date as may be set by the Board, submit for the approval of the Board a schedule for the filing of those environmental and socio-economic studies, programs, practices, plans and procedures it undertook to carry out or develop, including those required by these terms and

conditions, and shall proceed to submit the material in accordance with the approved schedule, unless otherwise authorized by the Board.

- Interprovincial (NW) shall, concurrently with the submission to the Board of the schedule referred to in condition 5, serve a copy of the said schedule upon every party of record in the hearing.
- 7. (1) Concurrently with the filing with the Board of each of the socio-economic submissions listed in the schedule referred to in condition 5 herein, Interprovincial (NW) shall serve notice on each of the parties of record in the hearing of the filing of the submission, and shall forthwith, on receipt of a request in writing from any of the said parties, serve a copy of the submission on that party. Interprovincial (NW) may apply to the Board for relief from the obligation of serving any of the said submissions on any or all parties, setting forth its reasons for making such application, but in such a case the notice required by this condition to be served on parties of record shall set out the reasons for the application.

(2) Parties upon whom a copy of any submission has been served pursuant to subcondition (1) may within 30 days of the receipt of the submission submit suggestions respecting the submission to Interprovincial (NW) and to the Board. Interprovincial (NW) shall, as soon as possible, submit to the Board and to the party from whom a suggestion was received, a response indicating which of that party's suggestions it is prepared to incorporate into the submission, and its reasons for not incorporating any other of that party's suggestions.

(3) Where applicable, Interprovincial (NW) shall file with the Board a revised submission incorporating those suggestions of parties of record which it has agreed to incorporate pursuant to subcondition (2).

(4) The Board may issue an order signifying its satisfaction with any submission or revised submission.

8. (1) Concurrently with the filing with the Board of each of the environmental submissions listed in the schedule referred to in condition 5 herein, Interprovincial (NW) shall serve notice on each of the parties of record in the hearing of the filing of the submission, and shall forthwith, on receipt of a request in writing from any of the said parties, serve a copy of the submission on that party. Interprovincial (NW) may apply to the Board for relief from the obligation of serving any of the said submissions on any or all parties, setting forth its reasons for making such application, but in such a case the notice required by this condition to be served on parties of record shall set out the reasons for the application.

(2) Parties upon whom a copy of any submission has been served in accordance with subcondition (1) may within 30 days of the receipt of the submission send suggestions respecting the submission to Interprovincial (NW), and to the Board. (3) Interprovincial (NW) shall, in the preparation of the programs, specifications and manuals referred to in conditions 14 and 15 herein, incorporate the suggestions received from parties of record that it accepts, and where Interprovincial (NW) is unwilling to incorporate any such suggestions, it shall provide an explanation in writing to the party from whom the suggestion was received, and to the Board.

(4) Concurrent with the filing with the Board of each of the programs, specifications, and manuals required by conditions 14 and 15 herein, Interprovincial (NW) shall serve a copy of the program, specification, or manual on each of the parties from whom suggestions were received pursuant to subcondition (2). Interprovincial (NW) may apply to the Board for relief from the obligation of serving any of the said programs, specifications, or manuals on any or all parties, setting forth its reasons for making such application, but in such a case, Interprovincial (NW), shall serve a notice on each of the said parties setting forth the reasons for such application.

(5) Parties upon whom a copy of any program, specification, or manual has been served in accordance with subcondition (4) may

submit comments to the Board respecting such program, specification, or manual within a time and in a manner to be directed by the Board at the time of the filing of such program, specification, or manual, and Interprovincial (NW) may reply to such comments within a time and in a manner to be directed by the Board.

(6) The Board may issue an order signifying its approval of any program, specification, or manual.

- 9. The plans, profiles and books of reference, to be filed pursuant to Section 29 of the Act, shall be based on field surveys of the entire route and shall indicate
 - a) all permanent and temporary rights-of-way,
 - b) the locations of pumping station sites, and
 - c) the locations of any mining claims.
- 10. Interprovincial (NW) shall, prior to approval by the Board of plans, profiles and books of reference, submit to the Board
 - a) copies of all signed easement agreements, and
 - b) terrain maps, satisfactory to the Board and similar to those filed as Exhibit 19A in the hearing, covering those parts of the pipeline route including related facilities and access roads for which such maps have not already been submitted.
- 11. Interprovincial (NW) shall, prior to construction, submit
 - a) information satisfactory to the Board setting out the findings of field tests, experiments and analyses in support of the final design of the pipeline system, and
 - b) for the approval of the Board, the final design for each portion of the pipeline system.
- 12. Interprovincial (NW) shall, prior to construction, submit to the Board
 - a) documents to demonstrate to the satisfaction of the Board that the Development Plan for the Norman Wells field has received the necessary regulatory approvals, and

- b) information showing to the satisfaction of the Board that appropriate arrangements have been made for financing the pipeline.
- 13. Interprovincial (NW) shall, prior to construction, submit reports satisfactory to the Board providing
 - an environmental assessment of the development, operation, abandonment and rehabilitation of all borrow pits including the impact on terrain, wildlife and aquatic resources resulting from borrow pit activities, associated road construction and transport of borrow and associated materials,
 - b) mitigative measures based on studies of fish resources wintering in the vicinity of water crossings scheduled for winter construction,
 - c) results of studies which identify species of raptors occupying nest sites within 3.2 km (2 miles) of field construction activities, which report shall contain sitespecific mitigative measures,
 - d) the identification and assessment of areas sensitive to terrain degradation, and
 - results and supporting data from field investigations for the evaluation of
 - i) slopes which may become unstable,
 - ii) water crossings and the approaches thereto, and
 - iii) interfaces of frozen and unfrozen soil where special designs may be required.
- 14. Interprovincial (NW) shall, prior to construction, develop and submit programs satisfactory to the Board for
 - a) the environmental education of inspection and construction staff, and
 - b) construction and environmental inspection, including organization and reporting structure, and staff qualifications, training, authority, responsibilities and functions.

- 15. Interprovincial (NW) shall, prior to construction, submit for the approval of the Board
 - a) construction contract specifications which shall include at least
 - i) the program for preserving the stability of slopes,
 - ii) the design and construction methods for water crossings,
 - iii) the appropriate timing and construction methods for the crossings of the Great Bear and Mackenzie Rivers, and
 - b) an environmental procedures manual which shall include at least
 - i) monitoring procedures during construction,
 - ii) measures for mitigating terrain damage,
 - iii) revegetation programs,
 - iv) procedures for handling and storage of fuels, lubricants and toxic chemicals, and the contingency plans in the event of spills,
 - v) all other measures developed as a result of recommendations in the environmental reports submitted during the hearing and pursuant to condition 5 and 13 herein, and
 - vi) an identification of those matters listed in part (b) of this condition which will form part of the construction contract specifications.
- 16. Interprovincial (NW) shall, prior to construction, develop and submit plans and procedures satisfactory to the Board for project cost control.
- 17. Interprovincial (NW) shall submit for the approval of the Board
 - a) three to six months prior to construction, a current construction schedule, and
 - b) during construction, any revisions to the construction schedule and, where necessary, corresponding changes to the applicable environmental mitigative measures.
- 18. Interprovincial (NW) shall, during the construction period, unless otherwise authorized by the Board, submit each month

construction reports satisfactory to the Board which detail the progress and current status of the project.

- 19. Interprovincial (NW) shall, unless otherwise authorized by the Board, within three months after the completion of the first winter of construction, submit
 - a) for the approval of the Board, a reclamation plan for the right-of-way, and
 - b) a reclamation plan satisfactory to the Board for access roads, borrow pits and construction sites.
- 20. Further to the requirements of Part VII of the Oil Pipeline Regulations (SOR/78-746), Interprovincial (NW) shall, prior to leave-to-open being granted, submit for the approval of the Board
 - a maintenance manual which shall include a section dealing with the special problems of operating and maintaining this northern pipeline system,
 - b) an emergency procedures manual, and
 - c) contingency plans for hydrocarbon loss from the pipeline and related facilities including procedures for the detection of and recovery of hydrocarbons from water bodies during periods of freeze-up and break-up.
- 21. Interprovincial (NW) shall, prior to leave-to-open being granted, submit for the approval of the Board a complete procedure and schedule for monitoring
 - a) the condition of the right-of-way with respect to thaw settlement, frost heave, and the adequacy of drainage and erosion control measures,
 - b) the radius of curvature of the pipe at sites of soil movement where critical pipe stresses may be exceeded,
 - c) the condition of the slopes along the right-of-way, and
 - d) the condition of river crossings.
- 22. Interprovincial (NW) shall, unless otherwise authorized by the Board, by 31 October of each year during the construction and

operation of the pipeline, submit a report satisfactory to the Board describing the results of monitoring

- a) the effects of pipeline construction and operation on the environment,
- b) the condition of the right-of-way and the pipeline, and
- c) the condition of river crossings and approaches, and slopes along the right-of-way.
- 23. Interprovincial (NW) shall, within twelve months after start-up of operations, or on such later date as may be set by the Board, submit for the approval of the Board a report detailing the actions taken or to be taken to mitigate long-term environmental effects of construction and operation of the pipeline system and evaluating the adequacy of the environmental policies, practices and procedures used during construction and operation.
- 24. Interprovincial (NW) shall, unless otherwise authorized by the Board, within six months following the end of the first year of operation of the pipeline system, submit a report satisfactory to the Board on the actual socio-economic impact of the project, including the development of the Norman Wells field, during the construction period and the first year of operation.
- 25. Interprovincial (NW) shall, unless otherwise authorized by the Board, at the end of the first and third years of operation of the pipeline system, submit to the Board aerial photographs of the entire route taken at a time and at a scale satisfactory to the Board, and an analysis of ground conditions on the rightof-way as shown in the photographs.
- Source: National Energy Board (1981) Reasons for Decision in the Matter of an Application under the National Energy Board Act, of Inter-Provincial Pipe Line (NW) Ltd. Minister of Supply and Services Canada.
SPECIAL INITIATIVES BY THE FEDERAL GOVERNMENT, IPL, AND ESSO Special Initiatives to be taken by the Federal Government relating to Pipeline Construction and Oilfield Expansion

- Training programs through expanded government and governmentindustry northern training initiatives under existing programs, with emphasis on the acquisition of skills by native people which will be of use in the North following the completion of the construction phase. Training opportunities for up to 250 native and other northerners for each of the four years of construction will be provided. Projected government incremental funding for training over five years: \$10.5 million.
- Offer of a source of start-up capital for a local northern business so that the Dene and Metis can enter into joint business ventures with Esso Resources in order to provide a drilling rig, a service rig and support facilities. The funds would be made available through existing government programs.
- Enhanced existing government programs to address the community and social development needs of communities along the pipeline route so that they can respond to the project as the needs are identified. Native people will be directly involved in the design of these programs and in aspects of program delivery as they relate specifically to native communities. Projected government funding over five years: \$4.25 million.
- Planning support to northern natives to enable them to take an active role in the planning and monitoring of the project and in the design and implementation of programs initiated in response to the project. Projected funding over five years: \$1.25 million.
- Assistance to the Government of the Northwest Territories to augment public services in order to maintain current levels and standards of service in areas such as health, housing, education and municipal services. Projected government funding over four years: \$3 million.

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Special Initiatives - Interprovincial Pipelines (NW) Limited

• Northern local business opportunities of \$60 million in the preparation and construction phase and \$8 million a year in operations and maintenance once the pipeline has come into use.

Opportunities include:

- 1) right-of-way clearing and restoration;
- 2) preparation of access roads, stockpile sites and construction sites;
- 3) supply and lumber and concrete weights for the pipeline;
- 4) trucking and haulage;
- 5) construction of buildings;
- 6) drilling and blasting operations.
- The recruitment and training of as many northerners as possible to form the operations and maintenance staff of 29 people.
- . The funding of community advisory committees along the pipeline route to monitor and advise IPL (NW) Ltd. on project implementation. Advisory committees will also provide advice to government through DIAND.
- An offer to northern native associations to purchase up to 20% of IPL (NW) Ltd.'s equity in the pipeline. IPL (NW) Ltd. holds 25% of the equity in the pipeline.

Special Initiatives - Esso Resources Canada Limited

 Northern local business opportunities of \$43 million during the construction phase of the oilfield expansion.

Opportunities include:

- 1) leasing of construction camp and office;
- 2) leasing of operations office and housing;
- 3) joint business ventures to supply a service rig, a drilling rig and a work camp.
- Job opportunities of 160 construction and 120 operational jobs at all skill levels, for northerners with the emphasis on long-term operational jobs.
- On-the-job training programs for northerners during construction.
- Orientation training and a local recruitement office to increase northern participation in the labour force.
- Financial support to a regional advisory council to monitor and advise Esso Resources Canada Limited on project implementation. Advisory council will also provide advice to government through DIAND.

Schedule for Filing Environmental and Socioeconomic Material

Requirement	Reference	Material Filing Date**
 *Plans, Profiles and Books of Reference to be based on field survey and to show a. permanent & temporary rights-of-way b. location of pumping stations c. locations of any mining claims 	T/C 9 P29,5.1.2	May 82
 Terrain maps a. covering those parts of the pipeline route including related facilities and access roads for which such maps have not already been submitted. 	T/C 10 P29,5.1.2 P76,7.2.2	Aug 82
A. SUCIDECONOMIC MATERIAL		
 Prepare and develop the key elements of each of the socioeconomic plans and programs which the applicant undertook to carry out Information and consultation action plan 	T/C 7 P126,8.4.4	May 82
 c. Orientation action plan d. Construction manpower delivery action plan e. Operation and maintenance training 	· .	
and employment action plan f. Medical services action plan g. Employee housing action plan h. Security action plan i. Monitoring		
 Northern Alberta a. Update the socioeconomic impact assessment 	P128,8.4.4	May 82
 Six months following end of 1st year of operation Submit report on actual socioeconomic impact of the project, including the Norman Wells field development 	T/C 24	Dec 86

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Provided for reference only Material may be filed prior to the indicated dates **

Schedule for Filing Environmental and Socioeconomic Material

Requirement	Reference	Material Filing Date
B. ENVIRONMENTAL MATERIAL	•	· ·
 Provide reassessment of plans for minimizing terrain damage (literature review, fieldwork, etc.) 	P78,7.3.2 T/C 13d	June 82
 Thaw settlement, frost heave, etc. a. Evaluation of extent and incidence of frczen/unfrozen reaches (for more accurate design) 	T/C 13e iii P42,5.2.3.2.2	Dec 82
b.i Subsurface investigation data base for quantifying high, medium and low ice contents	P46,5.2.3.3.2	Dec 82
<pre>ii Settlement magnitude prediction c. Frost heave analysis (as proposed OK) Also identify rivers and streams where frost heave may be a problem and provide proper design</pre>	P48,5.2.3.4.2	Feb 83 Feb 83
 Sensitive slopes and river crossings Results and data from field investigations for evaluation of slopes which may become unstable and for water crossings and approaches 	T/D 13e i,ii P51,5.2.3.5.2 P53,5.2.3.6.2 P56,5.2.3.7.2	Dec 82
 b. Results of river crossing studies to be submitted 	P83,7.6.3	June 82
c. Drainage and erosion — final design requires the program for preserving stability of slopes	T/C 15a	Jan 83
d. Shallow seismic program for Great Bear and Mackenzie Rivers	NWT Water Board Hearings Dec 81	Aug 82
 Borrow locations and hauling routes, roads, etc. 	T/C 13a	
a. Assessment of development, operation, abandonment and rehabilitation of pits and material movements	P81,7.5.3	Jan 83
 Identify areas where high ice content or poor grade material will be disposed of 	P81,7.5.3	Feb 83
<pre>c. Environmental assessment including impact on terrain, wildlife and aquatic resources (fieldwork)</pre>	T/C 13a P81,7.5.3	Jan 83
d. Detailed rehabilitation plans		Jan 83

Schedule for Filing Environmental and Socioeconomic Material

Requi	remen	t	Reference	Material Filing Date
. 5	Aqu	atic Resources		1
	а.	mitigative measures for fish resources	1/0 130	June 82
	Ь	File site specific studies applicant	D027113	
	υ.	undertook to provide and a descrip-	F32,7.11.3	
		tion of the proposed mitigative		
		measures to be adopted		
		i. Late winter survey		April 82
		ii. Facility sites		April 82
		iii. Major River Crossings		June 82
	_			
6	. Rap	tors	T (0. 30	
	a.	Results of study to identify species		April 82
		occupying nests within 3.2 km of field	P93,7.12.2	•
		measures including endangered status of		
	1.1	neregrine falcon (note confidentiality		
		of data)		
7	. Wil	dlife		- -
	a.	Additional studies to verify mitigative	P88,7.10.2	
		measures and site specific data to		
•		reduce impacts		Amu: 1 02
		i. Wateriowi Study		April 02
	•	iii. Proposed ungulate monitoring	``	Dec 82
	b.	Revised construction timetable to	P74,7.1.2	April 82
		include specific mitigative measures,		•
· .		if required for wildlife, fish, raptors		•
~				
ช	. Awai	reness programs, procedures and inspection		
	Sid	Program for environmental education of	T/C 14a	
	u.	inspection and construction staff	P95.7.13.3	· · · · · · · · · · · · · · · · · · ·
		i. Clearing and preconstruction		Aug 82
		ii. Construction		Jan 83
	Ь.	Program for construction and environ-	T/C 14b	Dec 82
		mental inspection including organiza-	P96,7.14.3	
		tion and reporting, etc.		
	с.	Provide an environmental procedures	1/6 15D	
		i Detailed outling of FDD	194,1.13.3	April 82
		ii Environmental protection nlan		March 83
		The Enteriormanian proceeding prant		

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Schedule for Filing Environmental and Socioeconomic Material

Requirement	Reference	Material Filing Date
9. Archaeology a. Mitigative measures as recommended by Consultant	P86,7.8.2	June 82
10. Contingency Plans a. Regarding the handling and storage of fuels, lubes and toxic chemicals, forest fires and changes in construc- tion scheduling	T/C 15b P99,7.16.3	Feb 83

GOVERNMENT DEPARIMENT PARTICIPATION AT PROJECT REVIEWS

1. Federal Government

Department of Indian Affairs and Northern Development (1) Department of Energy, Mines and Resources (1) Department of Environment (1) Department of Fisheries and Oceans (1) Department of Transport (1)

2. Territorial Government

Department of Economic Development and Tourism Department of Health and Social Services (1) Department of Local Government Department of Renewable Resources

(1) denotes appeared only at EARP review.

No number means appeared at EARP review and NEB hearings.

DRAFT SUMMARY OF REGULATORY RESPONSIBILITIES FOR NORMAN WELLS OILFIELD OILFIELD EXPANSION AND PIPELINE CONSTRUCTION PROJECT

OILFIELD DEVELOPMENT - ESSO RESOURCES LIMITED

1. Artificial Islands--Construction

Regulatory Instruments

Regulatory Authority

N.I. Waters Act

License issued through the authority of the N.W.T. Water Board--Regional--Final review of license by H.Q. DIAND

Territorial Lands Act; Territorial Land Use Regulations; Territorial Lands Regulations; Quarrying Regulations

Oil and Gas Production and Conservation Act; Oil and Gas Drilling and Production Regulations

Fisheries Act

Navigable Waters Act

Artificial Islands--Operation

N.I. Waters Act

Territorial Lands Act; Territorial Lands Regulations

Oil and Gas Production and Conservation Act

Navigable Waters Act

River beds within B.L. Transfers remain Federal Crown Lands. Water Lot Leases required - issued through Regional Office - Could contain "construction" conditions. DIAND

Technical evaluation - Oil and Gas Engineering Division - Approvals issued through Chief Conservation Officer. COGLA

Must comply with the requirements of the Act; no permit required. Fisheries conditions may be included in Water License. DFO

Permit issued by DOT. Conditions can not be included in Water License. DOT

License (most likely same as above) issued by the N.W.T. Water Board. DIAND

Water Lot Lease - Regional - could incorporate long term maintenance conditions. DIAND

Headquarters, Chief Conservation Officer. COGLA

Permit - Ministry of Transport. DOT

2. Quarry Operations--Construction & Operation

Territorial Lands Act; Quarrying	Quarry is outside boundaries of Norman
Regulations; Territorial Land Use	Wells Block Land Transfer. Quarrying
Regulations	permit(s) and Land Use Permits issued
	in Regions. DIAND

3. Dock Facilities--Construction

N.I.W.A.

Territorial Lands Act; Territorial Lands Regulations

Navigable Waters Act

Permit issued by Ministry of Transport. DOT

License issued through the authority of the N.W.T. Water Board. Final

Water Lease - Regional Office. DIAND

review of license in Headquarters. DIAND

4. Production Drilling Program--Construction

Oil and Gas Production and Conservation Act; Oil and Gas Drilling and Production Regulations Drilling program approval. Headquarters, Chief Conservation Officer. COGLA Individual drilling authorities, issued through Regional Office, Oil Conservation Engineer. COGLA

N.I.W.A.

Territorial Lands Act; Territorial Lands Regulations

Northwest Territories Act. All natural land surfaces within Commissioner's Lands

5. Water Flood Program--Production

N.I.W.A.

Oil and Gas Production and Conservation Act Authorization to use water and deposit wastes, Regional Office, DIAND

Water Leases - Region. DIAND

G.N.W.T. regulation of surface activities. GNWT

License issued through N.W.T. Water Board; reviewed in H.O. DIAND

Headquarters, Chief Conservation Officer. COGLA

OIL PIPELINE - INTER-PROVINCIAL PIPE LINE

1. Pipeline Right-of-Way--Construction

National Energy Board

Territorial Lands Act; Quarrying Regulations, Territorial Land Use Regulations, Territorial Lands Regulations, Timber Regulations

Forest Protection Ordinance

Pipeline Right-of-Way--Operation

Territorial Lands Act

National Energy Board

Mackenzie Development Area Regulations Certificate of Public Convenience and Necessity (OC-35). NEB

Various permits - DIAND Regional Office. DIAND

Administered by DIAND Regional Office. DIAND

Easement document. Headquarters. (May contain environmental conditions). DIAND

Certificate of Public Convenience and Necessity (OC-35). NEB

G.N.W.T. - Permits required limited applicability on Federal Crown Lands.

2. Water Crossings, Other Water Uses---Construction

N.I.W.A.

Territorial Lands Act

Navigable Waters Act

Fisheries Act

Authorizations - N.W.T. Regional Office. DIAND

Easement, river bed - Regional. DIAND

Permit issued by DOT.

No permit required; conditions may be included in the authorization.

3. Ancillary Facilities (staging & storage areas, work camps, temporary roads, pumping stations, etc.) -- Construction

Territorial Lands Act; Territorial Land Use Regulations; Quarrying Regulations

Ancillary Facilities-Operation

Territorial Lands Act; Territorial Lands Regulations; Public Lands Grant Act Land Use and Quarrying Permits - issued by N.W.T. Regional Office. DIAND

Leases; issued by N.W.T. Regional Office. DIAND

4. Production Pipelines--Construction

N.I.W.A.	Authorization for underwater crossings, Regional. DIAND
Territorial Lands Act; Territorial Lands Regulations	Easements, Regional. DIAND
Navigable Waters Act	Permit issued by DOT.
Oil & Gas Production and Conserva- tion Act; Oil & Gas Drilling and Production Regulations	Oil and Gas Engineering Division, Headquarters. COGLA
Production PipelinesProduction	
Oil & Gas Production and Conserva- tion Act & Regulations	Oil & Gas Engineering Division, Headquarters. COGLA
Territorial Lands Act; Territorial Lands Regulations	Easements, Regional. DIAND
5. Plant FacilitiesConstruction & P	roduction
Oil & Gas Production and Conserva- tion Act; Oil and Gas Drilling and Production Regulations	Oil and Gas Engineering Division, Headquarters. COGLA
N.I.W.A.	Authorizations, Regional. DIAND

Surface leases, etc. are responsibility of G.N.W.T. Plant located on Commissioner's Lands.

MEMORANDUM OF ARGUMENT FILED IN SUPPORT OF APPLICATION FOR LEAVE TO APPEAL

IN THE FEDERAL COURT OF APPEAL

IN THE MATTER OF an appeal from a decision of the National Energy Board;

AND IN THE MATTER OF the National Energy Board Act, R.S.C. 1970, c. N-6 and the Regulations made thereunder;

AND IN THE MATTER OF an application by Interprovincial Pipe Line (NW) Ltd. for a Certificate of Public Convenience and Necessity under Part III of the National Energy Board Act, and for an Order under Part IV thereof respecting rates, tolls and tariffs, filed with the Board under File No. 1755-J1-42.

BETWEEN:



COMMITTEE FOR JUSTICE AND LIBERTY FOUNDATION, CANADIAN ARCTIC RESOURCES COMMITTEE, DENE NATION, METIS ASSOCIATION OF THE NORTHWEST TERRITORIES

Applicants

- and -

INTERPROVINCIAL PIPE LINE (NW) LTD. ALBERTA CHAMBER OF RESOURCES, AMOCO CANADA PETROLEUM COMPANY LTD., CHIEFTAIN DEVELOPMENT CO. LTD., CITY OF YELLOWKNIFE, ESSO RESOURCES CANADA LIMITED, FOOTHILLS PIPE LINE (YUKON) LTD., GOVERNMENT OF THE NORTHWEST TERRITORIES, HAY RIVER AREA ECONOMIC DEVELOPMENT CORP., IMPERIAL OIL LIMITED, INUVIK AND DISTRICT CHAMBER OF COMMERCE, DENE THA' BAND, NWT GRADE STAMPING AGENCY, RAINBOW PIPE LINE COMPANY LTD., TOWN OF INUVIK and NATIONAL ENERGY BOARD

.Respondents

MEMORANDUM OF ARGUMENT FILED IN SUPPORT OF APPLICATION FOR LEAVE TO APPEAL

A. <u>FACTS</u>

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1. This is an application pursuant to s. 18 of the <u>National Energy Board</u> <u>Act</u> (the "Act") for leave to appeal to this Honourable Court the decision of the National Energy Board (the "Board") released on the 22nd day of April, 1981, granting to the Respondent, Interprovincial Pipe Line (NW) Ltd. ("Interprovincial") a Certificate of Public Convenience and Necessity to construct and operate an oil pipeline from Norman Wells in the Northwest Territories to Zama in Alberta.

2. The application for leave to appeal herein is made in writing pursuant to Rule 1107(1) of the Rules of Practice and Procedure of this Honourable Court.

3. The application of Interprovincial for a Certificate was brought pursuant to s. 44 of the Act which states as follows:

The Board may, subject to the approval of the Governor in Council, issue a certificate in respect of a pipeline or an international power line if the Board is satisfied that the line is and will be required by the present and future public convenience and necessity, and, in considering an application for a certificate, the Board shall take into account all such matters as to it appear to be relevant, and without limiting the generality of the foregoing, the Board may have regard to the following:

- (a) the availability of oil or gas to the pipeline, or power to the international power line, as the case may be;
- (b) the existence of markets, actual or potential;
- (c) the economic feasibility of the pipeline or international power line;
- (d) the financial responsibility and financial structure of the applicant, the methods of financing the line and the extent to which Canadians will have an opportunity of participating in the financing, engineering and construction of the line; and

(e) any public interest that in the Board's opinion may be affected by the granting or the refusing of the application. 112.

4. By the same application Interprovincial also applied for an Order under Part IV of the Act respecting rates, tolls and tariffs. As set out in Exhibit "A" to the Affidavit of Fred Cass filed in support of this application, numerous interested parties intervened in the Interprovincial application. The hearings of the Board commenced on October 7, 1980 and were completed on November 12, 1980, having occupied 21 hearing days.

Reference to:

Affidavit of Fred Cass, paragraph 8 and Exhibit "A".

5. The Reasons for Decision of the Board filed with this application clearly set out those matters which the Board considered relevant in determining whether public convenience and necessity required that the certificate be granted. The said Reasons for Decision establish that the Board placed considerable importance upon pipeline design, environmental considerations and regional socio-economic impacts. Some 90 pages of the Board's decision are devoted to these issues.

6. With respect to <u>pipeline design</u>, there are numerous references in the Board's decision to its conclusion that the Applicant failed to furnish sufficient evidence with respect to this issue. For example:

- (a) at p. 33 the Board identified the need for further studies to "address the ramnifications of burying a pipeline in discontinuous permafrost";
- (b) at p. 36 the Board stated that it was concerned by the "lack of sitespecific data on loading conditions resulting from thaw settlement and frost heave...";

- (c) at p. 38 the Board referred to the "preliminary nature" of the geotechnical assessment presented by the Applicant and stated that "a complete and comprehensive terrain investigation is <u>fundamental</u> to the Applicant's <u>accurate geotechnical assessment of the proposed</u> route" (emphasis added);
- (d) at p. 42 the Board again noted the inadequacy of the Applicant's evidence with respect to traversing discontinuous permafrost zones;
- (e) at p. 48-49 the Board noted areas of lengthy permafrost sections which were as yet unidentified;
- (f) at p. 51 the Board noted that further investigation was required with respect to slope stability;
- (g) at p. 55 the Board noted that site-specific evidence with respect to river crossings was simply not available. At p. 56 the Board stated:
 "The need for further detailed, site-specific investigations of river crossings along the proposed route is obvious".

7. The lack of evidence with respect to <u>environmental matters</u> seems to have been admitted by Interprovincial. Certainly this was well recognized by the Board as confirmed by the following:

(a) in almost every section of the Board's decision on environmental matters, reference is made to the need for further studies and to the undertakings of Interprovincial to carry out such studies; 113.

- (b) at p. 77 the Board noted the Applicant's admission that <u>"major terrain problems</u> would be related to thaw settlement, slope stability and drainage and subsequent erosion in permafrost areas. <u>No work has been carried out to delineate the extent or nature of these problems</u>" (emphasis added);
- (c) at p. 78 the Board noted the absence of evidence and stated "it is the opinion of the Board that uncontrolled drainage on the right-of-way and the resulting erosion could be a <u>major environmental concern</u>" (emphasis added);
- (d) at p. 79 the Board noted that the "Applicant has pursued the 'use of existing right-of-way concept' without full examination of its environmental implications...";
- (e) at p. 81 the Board referred to borrow resources and to the fact that "the Applicant has not itself undertaken geotechnical and environmental assessments of borrow operations";
- (f) at p. 83 the Board identified its concerns about lack of evidence as to river crossings and slope stability;
- (g) at p. 87 the need for further wildlife studies was identified as was the need for further studies on aquatic habitat and fish resources referred to at p. 91-92;
- (h) at p. 94 the Board noted that the Applicant had not developed any environmental awareness material and did not know what would be contained in its manual on this subject. Nor had the Applicant filed

114.

evidence as to the details of its environmental staff (p. 96) or surveillance schedule;

- (i) it is clear that no evidence was filed on the important issue of contingency plans in the event of oil spills or the release of other contaminants (p. 99);
- (j) the Applicant recognized that additional environmental studies would have to be filed (p. 99). At p. 101 the Board stated that: "a <u>considerable number</u> of additional site specific studies are required <u>in</u> <u>many areas</u> to <u>establish environmental conditions</u>, develop mitigative measures and establish maintenance and rehabilitation procedures" (emphasis added).

It is clear from the above that the Board was of the view that Interprovincial's environmental evidence was deficient and did not adequately present the environmental conditions and difficulties which could be experienced if the pipeline was built.

8. With respect to <u>regional socio-economic impacts</u>, again it is clear that Interprovincial's evidence was completely deficient. Many such deficiencies are noted in the Board's decision, the most important of which is set out at pp. 126-127:

(If a certificate is granted the Applicant must) prepare and develop, prior to construction, the key elements of each of the socio-economic plans and programs which the Applicant undertook to carry out. These would include those dealing with information - consultation liason, cultural and traditional resource harvesting, opportunities of Northerners and northern business, effects on communities, regional effects, compensation and monitoring. These would have to respond to the Board's concerns as noted in preceding pages. Given the importance of these plans and programs to the impact area, the Board believes it necessary that these be subject to public scrutiny and approved by the Board prior to implementation (emphasis added).

. . .

9. In the case of each of the deficiencies noted above and with respect to numerous other deficiencies, the Board required that further studies and reports be submitted by Interprovincial and <u>approved</u> by the Board. Many of these studies and reports are identified in Appendix I to the Board's decision which sets out the "Terms and Conditions of the Certificate". A copy of Appendix I is annexed hereto.

10. The additional studies ordered by the Board are so extensive that it was necessary for the Board to direct that a filing schedule for these reports be submitted by Interprovincial. Clause 5 of the terms and conditions reads as follows:

Interprovincial (NW) shall, within two months of the issuance of this certificate, or on such later date as may be set by the Board, submit for the approval of the Board a schedule for the filing of those environmental and socio-economic studies, programs, practices, plans and procedures it undertook to carry out or develop, including those required by these terms and conditions, and shall proceed to submit the material in accordance with the approved schedule, unless otherwise authorized by the Board.

II. With respect to some of the studies to be filed by Interprovincial, the Board ordered that interested persons be allowed to make "suggestions" respecting these submissions. No provision was made for resumption of the hearings, crossexamination or the tendering of evidence by intervenors with respect to these reports.

12. The fundamental nature of the evidence to be submitted by Interprovincial for Board approval only and not made subject to cross-examination

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or other testing is seen by a review of clause 13 of the terms and conditions which

reads as follows:

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Interprovincial (NW) shall, prior to construction, submit reports satisfactory to the Board providing

- a) an <u>environmental assessment</u> of the development, operation, abandonment and rehabilitation of all borrow pits including the impact on terrain, wildlife and aquatic resources resulting from borrow pit activities, associated road construction and transport of borrow and associated materials,
- b) mitigative measures based on studies of <u>fish</u> resources wintering in the vicinity of water crossings scheduled for winter construction,
- c) results of studies which identify species of raptors occupying nest sites within 3.2 km (2 miles) of field construction activities, which reports shall contain site-specific mitigative measures,
- d) the identification and assessment of <u>areas</u> sensitive to terrain degradation, and
- e) results and supporting data from field investigations for the evaluation of
 - i) <u>slopes</u> which may become unstable,
 - ii) <u>water crossings</u> and the approaches thereto, and
 - iii) interfaces of frozen and unfrozen soil where special designs may be required. (emphasis added)

If environmental impact is an important consideration in the determination of public convenience and necessity, how can such a determination be made in the absence of evidence tendered at the hearing with respect to the very important issues set out in clause 13 and referred to in other provisions of the terms and conditions and in the Board's Reasons for Decision?

THE ISSUES

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13. It is respectfully submitted that leave to appeal should be granted for the following reasons:

- (a) in the absence of the important pipeline design, environmental and socio-economic evidence referred to above, it was simply not possible for the Board to conclude that public convenience and necessity required that the certificate issue. At the very least the Board should have adjourned the hearings and ordered Interprovincial to file the evidence set out in the Board's terms and conditions and then reconvened the hearings for cross-examination thereon, further evidence and argument. As a matter of law, the Board cannot make a decision which is subject to the filing of additional important evidence. A tribunal exercising a quasi-judicial jurisdiction must act on the basis of evidence tendered at a hearing. It cannot base its decision upon its assumptions as to the adequacy of evidence to be subsequently filed;
- (b) by requiring Interprovincial to file further extensive and important evidence but denying further cross-examination, evidence and argument the Board failed to afford the Applicants an opportunity to be heard and thereby breached the rules of natural justice;
- (c) in any event, the Board had no jurisdiction to impose, in the guise of "terms and conditions", a requirement that fundamental and important evidence on the central issue be tendered by Interprovincial for administrative review only. The Board's power to

impose terms and conditions must relate to the implementation of the Board's decision. It does not include the power to require, as a term and condition, the tendering of evidence on the very issue the Board must decide before it issues a certificate;

(d) the Board erred in failing to take into account or give due weight to important aspects of the "public interest" within the meaning of that term in s. 44(e) of the Act. The settlement of native claims, compliance with the National Energy Program and the 1972 Pipeline Guidelines and the ownership of the oil for the pipeline, inter alia, were all issues of great importance to the determination of public interest. The Board erred by failing to give appropriate consideration to these and other aspects of the public interest.

C. ARGUMENT

14. Section 10(1) of the Act provides that the National Energy Board is a court of record. It was therefore obliged to provide a full hearing into the Interprovincial application and to comply with the rules of natural justice.

Reference to:

Attorney General of Manitoba v. National Energy Board, [1974] 2 F.C. 501 per Cattanach, J. at p. 525:

Because the <u>National Energy Board Act</u> has bestowed upon the Board the attributes of a court and because the statute and the regulations contemplate the panoply of a full adversary hearing it follows that the word "hearing" in section 20 of the Act must have attributed to it the same meaning as it has in a court of law.

In that sense, a "hearing" before the Board is analogous to and imports a "trial" before a court of law. That being so the applicant for a licence and the opponents thereto must be treated on an equal footing with no discriminatory advantage being bestowed on one side or the other.

15. In its decision, the Board recognized that pipeline design, environmental considerations and socio-economic impacts were all relevant to the issue of public convenience and necessity. It is respectfully submitted that the Board could not then itemize the numerous deficiencies in Interprovincial's application but go on to conclude that the pipeline should be built. In essence, the Board has assumed that the evidence which Interprovincial has been ordered to produce will be satisfactory to the Board. However, the Board's jurisdiction must be to decide issues of public convenience and necessity on the basis of evidence tendered at a hearing and not on the basis of the Board's belief that evidence filed at a later date will be satisfactory to it.

Reference to:

16.57

Reasons for Decision of the National Energy Board dated January, 1980 in regard to an application for a certificate of public convenience and necessity by TransMountain Pipe Line Company Ltd. and Foothills Oil Pipe Line Ltd.

16. By failing to provide the intervenors with an opportunity to crossexamine and test the evidence to be produced in accordance with the terms and conditions annexed to the certificate, the Board has breached the rules of natural justice and has failed to afford the applicants an opportunity to be heard with respect to Interprovincial's application. Further, the Board has failed to decide the issue on the basis of the evidence.

Reference to:

Haisbury's Laws of England, 4th ed., p. 93:

A person or body determining a justiciable controversy between parties must give each party a fair opportunity to put his own case and to correct or contradict any relevant statement prejudicial to his view.

de Smith, Judicial Review of Administrative Action, 4th ed., p. 203:

A party must have an adequate opportunity of knowing the case he has to meet, of answering it and putting his own case.

If relevant evidential material is not disclosed at all to a party who is potentially prejudiced by it, there is prima facie a breach of natural justice, irrespective of whether the material in question arose before, during or after the hearing (emphasis added).

Board of Education v. Rice, [1911] A.C. 179 per Lord Loreburn at p. 182:

...I need not add that in doing either they must act in good faith and fairly listen to both sides, for that is a duty lying upon everyone who decides anything...they can obtain information in any way they think best, always giving a fair opportunity to those who are parties in the controversy for correcting or contradicting any relevant statement prejudicial to their views.

Errington et al v. Minister of Health, [1934] All E.R. 154 (Court of Appeal)

Toronto Newspaper Guild v. Globe Printing Company, [1953] S.C.R. 18

Attorney General of Manitoba v. National Energy Board, supra, per Cattanach, J. at p. 523-524:

Section 17(1) of the Rules of Practice of Procedure (of the Board), which has been quoted above, contemplates generally that witnesses shall be called at a 'hearing' of any application and shall be examined viva voce and it seems to me that the words 'shall be examined viva voce' of necessity includes viva voce cross-examination by opponents to the application or their counsel and it is not restricted to examination and cross-examination by members of the Board and counsel to the Board. The converse is also the right of the applicant or its counsel with respect to witnesses called by opponents.

17. With reference to the extensive terms and conditions annexed to the

Board's certificate, s. 46 of the Act states as follows:

46. (1) The Board may issue a certificate subject to such terms and conditions as it considers necessary or desirable in order to give effect to the purposes and provisions of this Act.

(2) Without limiting the generality of subsection (1), the Board may, upon such terms and conditions as it considers proper, expressed in a certificate or otherwise, direct a company to take such steps as may be necessary during and after the construction of its pipeline to

(a) recondition or restore any land through which its pipeline passes, and

(b) separate, save and, after construction of its pipeline, replace the topsoil or any land through which the pipeline passes.

It is respectfully submitted that the "terms and conditions" contemplated by s. 46 may only be added to the certificate for the purposes of implementing the Board's order. The "terms and conditions" are to be added only when the Board has concluded that the pipeline is in the public interest; such terms and conditions cannot be added to provide evidence or to satisfy the Board on the very issue of public interest.

18. In considering the "public interest" under s. 44(e) of the Act, it is incumbent upon the Board to take into consideration and give appropriate weight to the public policy expressed by the federal government. The Board was therefore obliged to give due consideration to the federal National Energy Program, particularly with respect to the resolution of native claims. By the same token, the Board ought to have complied with the 1972 Pipeline Guidelines; no explanation was given by the Board for exempting Interprovincial from these Guidelines.