

# **DEVELOPMENT PLAN GUIDELINES**

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## CHAPTER ONE – INTRODUCTION

### 1.0 OVERVIEW

The Canada-Newfoundland and Labrador Offshore Petroleum Board (the Board) is responsible for management of the petroleum<sup>1</sup> resources in the Newfoundland and Labrador Offshore Area, pursuant to the *Canada-Newfoundland Atlantic Accord Implementation Act*, and the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* (the Acts)<sup>2</sup>.

The Acts establish the requirements that proponents of offshore petroleum development projects must fulfill in order to obtain approval for a Development Application. The Development Application shall be comprised of a Benefits Plan and a Development Plan with ancillary documents.

The Development Plan describes the general approach of developing a pool or field and includes information and supporting documentation relating to the scope, purpose, location, timing and nature of the proposed development as well as production rates, costs and environmental factors. The Development Plan is the focus of these *Guidelines*.

To assist proponents in complying with these requirements, the Board has developed these *Guidelines* pursuant to section 151.1 of the Acts with the objective of providing greater:

- clarity in relation to the technical information required to be submitted by the proponent in support of the Development Plan; and,
- transparency, certainty and efficiency surrounding the review process to be followed when considering a proponent's Development Plan and Benefits Plan.

The *Guidelines* are generally applicable and are subordinate to the Acts and the corresponding regulations made thereunder. Further, each project has unique characteristics which may require additional information to be provided for consideration. In that regard, the Board has recognized that a formal Public Review may not always be the most appropriate forum for public consultation.

A Benefits Plan Approval is a prerequisite to approving the Development Plan. The Benefits Plan contains information to satisfy the Board that the provisions of section 45 of the Acts are respected. Proponents should refer to the *Canada-*

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<sup>1</sup> C-NAAIA, section 2; C-NLAAINLA, section 2.

<sup>2</sup> References are made to the federal version.

*Newfoundland and Labrador Benefits Plan Guidelines* for guidance in the preparation of the Benefits Plan.

Development projects must also undergo an environmental assessment pursuant to the *Canadian Environmental Assessment Act* (CEAA). Proponents should therefore refer to and consider these legislative requirements when preparing the Application. Ancillary documents provided in support of the Environmental Impact Statement will be released for public distribution in accordance with the CEAA requirements.

Recognizing that duplication with other agencies may arise in review of the Development Plan, where efficiencies can be achieved, the Board may enter into agreements with such agencies to create a more timely review process<sup>3</sup>.

## **1.1 PRELIMINARY CONSIDERATIONS**

### **1.1.1 Pre-Application**

Pre-Application consultation between a proponent and the Board is an essential element to efficient consideration of the proponent's Development Application. The Board encourages the proponent, from the outset, to consult with the staff of the Board and Governments so as to heighten awareness of all relevant issues and complexities associated with the submission of a Development Plan and the Benefits Plan. Such discussion may assist the Board in determining, at an early stage, the appropriate review process for the proposed development, and may reduce the period necessary for internal completeness review once the complete Application is received. These discussions should not compromise the Board or the Applicant on how either party deals with the Development Application and would be for the purposes of consultation only.

The Development Application review pursuant to the Accord Acts and the environmental assessment review pursuant to the CEAA should be concurrent, to the extent possible. To facilitate a concurrent review under both acts, the proponent should file with the Board a "Project Description" in accordance with the CEAA<sup>4</sup> as early as possible in the planning stages. The Project Description should have sufficiently detailed information to assist the Board and its regulatory advisory agencies, in determining the appropriate level of environmental assessment required.

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<sup>3</sup> C-NAAINA, section 46.

<sup>4</sup> Preparing Project Descriptions under the *Canadian Environmental Assessment Act*. *Canadian Environmental Assessment Agency*. August 2000-OPS-EPO/5 – 2000.

The proponent should provide early written notification of its intention to develop a pool or field. Once a decision has been made by the Board respecting the form and conduct of a public review, the proponent will be notified.

Formal review of a Development Application by the Board may commence only when a complete Development Application is received in accordance with these *Guidelines* and the *Canada-Newfoundland and Labrador Benefits Plan Guidelines*. It is only at that point that the Board can forward the Development Application to the Public Review Body for a hearing of the Development Application, at which time the staff of the Board will also commence its technical review. As part of pre-consultation, any design requirements will be discussed with the proponent to clarify the requirements to ensure a complete application is filed in accordance with the *Guidelines*.

## **1.2 DEVELOPMENT PLAN DOCUMENTS**

### **1.2.1 Development Plan**

The primary purpose of the Development Plan is to provide the Board with information necessary to assess the acceptability of the proponent's plan and to assist the Board to make an informed decision. A secondary purpose is to make appropriate information available for public examination. The proponent should consult with the Board on the number of hard copies of the Development Plan to be submitted for review. A digital copy of the Development Plan should be provided.

The Development Plan is to be submitted in two parts<sup>5</sup>:

**PART I** This Part of the Development Plan should describe the proponent's plans for development of the pool or field, and contain a summary of all the information used by the proponent in preparing the Development Plan, and would include, but is not limited to, the information required and outlined in Chapter Three of these *Guidelines*.

This Part should also contain a description of the proposed mode of development of the pool or field, and a discussion of the rationale for the selection of the proposed mode over other workable modes of development. Part I will be a public document available for review and comment.

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<sup>5</sup> C-NAAINA, section 139.

**PART II** This Part of the Development Plan will consist of copies of studies, reports, proposals, etc., used by the proponent in the preparation of the Development Plan and in the consideration of alternative modes of development. Subject to the confidentiality and privilege provisions outlined in the Acts<sup>6</sup>, it is the intent of the Board to make available to the public information submitted by the proponent to the Board, prior to and during the review process. The determination of the confidentiality of material will be made as part of the Board's completeness review of the Development Plan performed at the outset of this process.

Proponents are encouraged, where possible, to provide any supplemental information in a form that can be distributed to the public.

Pursuant to section 51 of the *Newfoundland Offshore Area Petroleum Production and Conservation Regulations*, approval of the Safety Plan and the Environmental Protection Plan will be required prior to the Board's issuance of a Production Operations Program Authorization. The Board acknowledges that the system designs are preliminary at the time the Development Application is submitted. Therefore, the full details of these plans generally are not available at the time of the submission of the Development Application, but once approved will become publicly accessible. However, the Environmental Impact Statement and supporting documentation will be released to the public as well as any reports respecting the CEAA follow-up programs.

Each project is assessed on its merits, and depending on the complexities of a development, the Board may require the proponent to submit as part of the Development Application, ancillary documents to ensure all aspects of the development are reviewed. When submission of such information is required, specific direction to that effect will be given in a timely manner.

A proponent is also required to submit copies of all studies, not previously filed with the Board, used to support the conclusions reached, or positions taken in documents which are submitted as part of the Development Plan. Early submission of such information will ensure a more timely identification of issues that will need to be addressed by the proponent. Except for the proprietary information in Part II of the Development Plan<sup>7</sup>, all documents submitted in support of the Development Plan will be available to the public for examination at locations to be determined by the Board.

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<sup>6</sup> C-NAAIA, section 119.

<sup>7</sup> C-NAAINA, paragraph 139(3)(b).

Any information relating to safety or environment submitted by a proponent in relation to the application for a development or by an operator once the development has been approved, may be released if it is deemed to be for the administration and enforcement of the Acts<sup>8</sup>.

### **1.2.2 Development Plan Summary**

Each Development Plan shall include a Development Plan Summary, to provide the non-specialist reader with a sufficiently comprehensive overview to reach an informed opinion concerning the proposed development. This summary should be distributed to the public and is described in Chapter Two.

## **1.3 ANCILLARY DOCUMENTS**

### **1.3.1 Safety Analysis and Commitment**

The purpose of this document is to describe how the proponent has integrated safety into the design of the proposed development, the management systems, policies and procedures, planning processes, personnel selection, training and management.

### **1.3.2 Environmental Impact Statement (EIS)**

The purpose of this document is to describe in detail the environmental setting of the proposed development project; to identify and evaluate the interactions between the project and the environment; to state the policies and procedures the proponent intends to follow to eliminate or reduce any potentially adverse environmental effects; and, to assess the significance of environmental impacts. It is intended that the EIS will also constitute the principal document supporting any environmental assessment that is required under the CEAA.

For the purpose of any review under the Acts and under the CEAA, the scope of the environmental assessment will be determined by the Board in consultation with other regulatory agencies, the proponent and the public, prior to the submission of the Application. For those projects that attract a Comprehensive Study level of review under the CEAA, the Board will likely delegate the drafting of the associated Comprehensive Study Report (CSR) to the proponent<sup>9</sup>.

### **1.3.3 Socio-Economic Impact Statement: Sustainable Development**

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<sup>8</sup> C-NAAIA, section 119.

<sup>9</sup> CEAA, subsection 17(1).

The concept of a socio-economic impact statement (SEIS) is raised in paragraph 44(2)(c) of the Acts in the context of a public review for a development. The purpose of an SEIS has been to set out a proponent's analysis of the effects the proposed project is anticipated to have on a variety of social, demographic and labour market factors, as well as on public infrastructure and other land and resource uses.

The concept of a SEIS is closely related to the concept of sustainable development. In a modern context, one would expect any socio-economic impact analysis to include a thorough assessment of sustainable development. Sustainable development has been defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>10</sup> These concepts are clearly intertwined, particularly in the context of large developments for the exploitation of a non-renewable resource in a relatively small society and economy like Newfoundland and Labrador. It is an intent of the legislation, in section 45 and elsewhere, that oil and gas developments be implemented and managed in a manner that creates a lasting economic legacy for the people of the Province.

This matter is referenced in section 3.9 of these guidelines which describes the type of analysis and information the proponent should provide to facilitate decisions by the regulator and governments concerning the alternate approaches to a development as required by paragraph 139(3)(iii) of the Acts.

Further, given the effect large oil and gas developments can have on the local economy and community, a Development Plan should describe undertakings to ensure no long-term adverse environmental consequences, and to ensure there is a lasting contribution to the society as a result of the depletion of the non-renewable resource. In other words, the Development Plan should explain how the project will contribute to the sustainable economic development of the Province.

Sustainability is achieved by adding permanent and lasting value. The proponent should describe its corporate commitment and approach for an inclusive, planned and transparent strategy whereby its activities and investment will contribute to a better quality of life for the current and future generations. The proponent should prepare a framework to address how it intends to improve the community and maintain a safe and healthy environment, together with a set of business practices, and policies that will contribute to sustainability in the long-term. Such a description should include the identification of stakeholders and their needs and how those needs can be addressed. Examples of stakeholders would include:

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<sup>10</sup> UN Department of Economic and Social Affairs – Division for Sustainable Development, <[http://www.un.org/esa/sustdev/\(January 2006\), Homepage](http://www.un.org/esa/sustdev/(January 2006), Homepage).

governments, communities, the local supply industry, local education institutions, disadvantaged individuals and groups and the fishing industry, etc.

In areas where it is a factor, special consideration should be given to effects on aboriginal communities. The proponent should show there has been adequate consultation with any affected aboriginal communities, and consider any effects the development may have on aboriginal or treaty rights or on any aboriginal agreements such as the Labrador Inuit Land Claims Agreement.

### **1.3.4 Satellite Developments**

As the Newfoundland and Labrador Offshore Area matures, it presents opportunities for satellite and marginal field developments<sup>11</sup> by increasing the potential to access smaller reservoirs, which could not otherwise be developed on their own based upon cost. Using the existing infrastructures operating in the offshore area pursuant to approved development plans, a tie-in development may be attractive, or a marginal field may become viable.

A proponent contemplating the development of a satellite pool or field in the Newfoundland and Labrador Offshore Area, should inform the Board as early as possible of its intentions, and should arrange for its representatives, and perhaps representatives of infrastructure owners likely to be impacted, to meet with the Board. After the proponent has provided written notice to the Board of its intention to develop a pool or field, the Board will determine whether a Public Review is required, and the nature of the Public Review in accordance with Chapters 6 and 7. The Board will also decide whether a socio-economic impact/sustainable development analysis will be required.

The Board notes that it would be desirable if a proponent of the satellite development and an operator of a host facility could agree on any modification to the host facility to accommodate the satellite development prior to submitting the Development Application and that access would be provided upon reasonable terms. The proposed modification to the host facility, which could constitute an amendment to an existing development plan, should be submitted to the Board at the same time the Development Application is filed.

The Board recognizes that the scope of a satellite development is much smaller than the larger stand-alone developments. The Board will give consideration to this factor in determining the review process and information requirements.

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<sup>11</sup> Any project which involves the use of a previously assessed and approved production facility or infrastructure in operation in the Newfoundland and Labrador Offshore Area.

In addition to the documentation outlined in sections 1.1 and 1.2, the Board may require the submission of any report relating to previously conducted environmental assessments, when reviewing an Application for a satellite development. The Board may also require other ancillary documents in support of the Development Application, including any impacts on existing offshore operations which had previously been approved without contemplation of a satellite development.

#### **1.4 DECISION BY BOARD**

The Board is required by the Acts to make two specific decisions in respect of a Development Application:

- the approval of the Canada-Newfoundland and Labrador Benefits Plan; and,
- the approval of the Development Plan, a fundamental decision to be approved or rejected by both Ministers in accordance with the Acts.

In its consideration of the Development Application, the Board will take into account the findings and recommendations of the Public Review Body (if established), any screening report, comprehensive study report and/or Environmental Assessment Determination Statement issued by the Minister of Environment pursuant to the CEAA, comments and advice received from federal and provincial departments and agencies, submissions from interested parties (if a Public Review Body was not established), and the results of its own internal review.

In its Decision Report, the Board may require the proponent to submit additional information as a condition of approval. Where such information would typically be made public as part of a Public Review process respecting the Development Application, the information will be subject to public disclosure when the Board is satisfied that the condition has been satisfied.

The Board may, as a condition of approval of the Development Plan, require the proponent to provide third party access to its processing, storage and/or transportation facilities.

#### **1.5 AMENDMENT TO THE APPROVED DEVELOPMENT PLAN**

After approving a Development Plan, no change to Part I or II of the Development Plan can be made unless it is approved by the Board. An amendment to Part I of the Development Plan is a fundamental decision and any such decision must be approved by the appropriate Federal and Provincial Ministers. Section 6 of the

*Newfoundland Offshore Area Petroleum Production and Conservation Regulations* prescribes that an amendment to the Development Plan is required where:

- (a) the operator proposes to:
  - (i) make significant changes in the nature or timing of development activities of the pool or field;
  - (ii) make substantial modifications or additions to existing production facilities at the pool or field; or,
  - (iii) initiate, in the pool or field, a pilot scheme or reservoir depletion scheme that differs from the one set out in the approved development plan;
- (b) pool performance or new geological information shows that the recovery method needs to be changed to achieve maximum recovery of petroleum reserves from the pool or field; or,
- (c) increased ultimate recovery of petroleum would be economically obtainable by adopting new technology or methodology.

An application for a Development Plan Amendment should address all information requirements outlined for a Development Application. However, depending on the nature of an amendment, only selected information may be required in some cases. The applicant should consult staff of the Board prior to preparing an application for a Development Plan Amendment.

The Board notes specifically that paragraph 6 (a) (ii) of these regulations requires an operator to submit an amendment to the Development Plan where an operator proposes to make substantial modifications or additions to existing production facilities at the pool or field. The Board must first determine if the proposed modification or addition to the production facilities is *substantial*. The operator is required to notify the Board of any proposed modification or addition. This should be done early in the planning stage. To assist the Board in its determination of whether a Development Plan Amendment will be required, the operator should provide the following:

- a description of the proposed modification or addition including the estimated cost, the materials, equipment and personnel requirements and their source;
- a draft schedule to conduct the modification or addition;
- a discussion of the impact of the proposed modification or addition on the Approved Development Plan, Benefits Plan, and safety, environment and resource conservation; and,
- any other information the operator feels is relevant.

The Board will review the information and advise the operator if the proposed modification or addition constitutes an amendment to the Development Plan.

Depending on the activities associated with the proposed amendment, it may require an environmental assessment pursuant to the CEAA, and possibly may require a Benefits Plan Amendment.

## **CHAPTER TWO - DEVELOPMENT PLAN SUMMARY**

### **2.0 INTRODUCTION**

The Development Plan Summary (the Summary) is a requirement of each Development Plan and is intended for widespread public distribution. This Summary should be produced as a separate document that provides a sufficiently comprehensive overview of the Development Plan and its ancillary documents to enable the non-specialist reader to understand the various aspects of the proposed development and to reach an informed opinion concerning the proposal.

Particular care should be taken in preparing this document to recognize that most of the readers will not be specialists. The proponent is encouraged to avoid the use of overly technical language, and to include a glossary to explain those technical terms that cannot be avoided.

The Summary should be organized to parallel the more comprehensive documents which comprise the complete Development Plan. Therefore, it should describe the proposed project, including a discussion of the environmental and economic setting within which it is to be undertaken; the possible major environmental and socio-economic effects; the measures that are to be implemented to avoid or mitigate any adverse effects of the project; the significance of any residual effects; and, any programs that are planned to monitor the accuracy of the proponent's predictions, or to ensure compliance with regulatory requirements.

### **2.1 TYPICAL SUMMARY**

A typical Summary includes ancillary documents and may follow this outline:

1. Introduction
2. Development Plan
  - 2.1 Geology
  - 2.2 Reservoir Engineering
  - 2.3 Design Criteria
  - 2.4 Geotechnical Design Considerations
  - 2.5 Production and Transportation System
  - 2.6 Construction and Installation
  - 2.7 Development Drilling and Well Completions
  - 2.8 Production Operations
  - 2.9 Development Costs

3. Environmental Impacts
  - 3.1 Description of Existing Environment
  - 3.2 Effects Assessment
  - 3.3 Mitigative Measures
  - 3.4 Residual Effects
  
4. Socio-Economic Impacts
  - 4.1 Existing Social and Economic Setting
  - 4.2 Effects and Mitigative Measures
  - 4.3 Residual Effects and Benefits
  
5. Safety Analysis
  - 5.1 Concept Safety Analysis
  - 5.2 Risk Assessment Plan
  - 5.3 Quality Assurance and Control
  - 5.4 Training Plan
  - 5.5 Safety Management System and Safety Plan
  - 5.6 Security
  
6. Environmental Protection Plan Outline

## **CHAPTER THREE - DEVELOPMENT PLAN**

### **3.0 INTRODUCTION**

This chapter provides guidance for the preparation of the Development Plan and outlines the factors that will be considered by the Board in its assessment. The Development Plan should, to the level of detail which the development of the design concepts permits:

- describe the general approach to developing the pool or field;
- discuss the alternative exploitation schemes and the production and transportation systems considered, and the rationale for selecting the proposed approach;
- present pertinent technical data and a summary of technical evaluations;
- introduce data which form the basis of the Benefits Plan, and of the Environmental Impact Statement and CSR, and the Socio-Economic Impact Statement; and,
- provide sufficient information to permit a comprehensive public review of the Development Plan.

Sections 3.1 to 3.13 of this chapter provide guidance for the preparation of Part I of the Development Plan. The applicant should note that an overview is required in this section of the Plan. Detail support studies should be provided in Part II of the Development Plan. Guidance to fulfill the requirements under Part II of the Development Plan is given in section 3.14.

### **3.1 PROJECT OVERVIEW**

An overall description of the proposed project should be presented, including: purpose and scope of the project;

- a brief history of the field from discovery to date;
- the partners and their respective interests;
- unitization or pooling agreements, if any;
- maps showing location of the field and tentative positions of platforms, subsea facilities, wells, flowlines, storage facilities and loading facilities;
- a schedule showing key events and decision points for the design and procurement stages of all major elements of the project;
- the proposed approach to project management for all phases of the project;
- a listing of all reports and data used by the proponent in the preparation of the Development Plan; and,
- a brief description of facilities: design, construction, installation and abandonment.

### **3.2 GEOLOGY AND GEOPHYSICS**

A brief description of the geological setting and features of the field, and of each pool or hydrocarbon-bearing reservoir, should be presented, including:

- a brief overview of regional geology;
- the structural and stratigraphic setting;
- a depositional and post-depositional history of the reservoir units;
- any structural and/or stratigraphic traps;
- the source, generation and migration of hydrocarbons;
- a representative set of interpreted seismic sections tied to wells, with a discussion of seismic data acquisition, processing and interpretations;
- the most recently processed seismic cube (time and depth) as directed by the Board;
- any interpreted faults and fault polygons (digital) as directed by the Board;
- details of depth conversion; and,
- a description of any anomalous fluid pressures encountered or predicted from seismic information.

The above descriptions for each pool or hydrocarbon-bearing reservoir should be illustrated by structural cross-sections with stratigraphic and/or bio-stratigraphic correlations; and, for each reservoir unit, paleogeographical and structure maps. The fluid contacts should be noted on the structure maps. Each reservoir sub-unit should be illustrated by:

- isopach maps of gross and net pay;
- isoporosity map; and,
- hydrocarbon pore volume maps.

A copy of the maps should be submitted to the Board in digital form. Where a geostatistical approach has been used to construct the geologic model for the reservoir unit, the proponent should consult the Board on the information to be provided.

### **3.3 PETROPHYSICS**

A description of petrophysical data and analytical procedures should be presented, including:

- a list of cored intervals;
- the methods used to adjust core analysis data to reflect subsurface conditions; assumptions and methods used in interpreting log data, including water resistivity values, porosity and permeability relationships, cut-off criteria used

to estimate net pays, procedures to calibrate logs and to calculate porosity, permeability and water saturation;

- any comparisons between data (i.e. porosity, permeability and water saturation) derived from logs and laboratory analyses;
- the tabulation of reservoir parameters derived for each reservoir in each well, including gross and net pay, average porosity, permeability and water saturation; and,
- mineralogical analyses of core samples noting any factors which could negatively impact production performance and mitigating measures proposed.

### **3.4 RESERVOIR ENGINEERING**

As it is important for the Board to ascertain the oil production capacity for the life of the field, a description of the reservoir data for each pool is required, including:

- drill stem test results and analyses;
- reservoir fluids with a discussion of any differences between wells or intervals, potential for carbon dioxide and hydrogen sulfide corrosion, and wax deposition and scaling concerns;
- if the use of injection of fluids is proposed, details of the composition of injected fluids, compatibility studies, injectivity and/or pulse tests;
- reservoir pressures, temperatures and pressure/depth plots; and,
- results of special core analyses including a discussion of parameters ( i.e. residual oil and gas saturations, capillary pressure data, relative permeability and critical gas saturations) used in reservoir studies.

### **3.5 RESERVE ESTIMATES**

Estimates of reserves should be provided for each pool or hydrocarbon-bearing reservoir, and for each individual fault block and reservoir subdivision, setting out the following for each major fault block or sub-unit:

- assumptions and parameters used ( the economic cut-off criteria for estimating the reserves should be clearly stated);
- volumetric estimates of oil and gas-in-place, distinguishing between solution gas, gas-cap gas and non-associated gas. The volumetric estimate should be presented for a downside, most likely, and upside case. For pools or hydrocarbon-bearing intervals containing a gas cap or non-associated gas, an estimate of the natural gas liquids, including condensate and liquids that may be produced during processing of the gas, along with an estimate of the gas-in-place remaining once these liquids are extracted, should be provided ;
- sensitivity analysis reflecting uncertainty in the data and assumptions;

- expected recovery efficiencies with a discussion of the relative contributions of natural drive mechanisms and fluid injection plans, and sensitivities to various factors involved in exploitation of the pools; and,
- recoverable reserve estimates for each pool and/or reservoir sub-unit. This should include an estimate, where appropriate, of the condensate and the natural gas liquids expected to be recovered from gas processing.

An assessment of the impact of alternative production systems on reserves should be provided.

### **3.6 RESERVOIR EXPLOITATION**

A description of the proposed reservoir exploitation scheme is required including:

- an overview of alternative schemes considered and the rationale for choosing the proposed scheme;
- development well requirements for production, injection, observation and disposal including:
  - any plans for use of existing wells;
  - a tentative schedule and locations for drilling production, injection, disposal or observation wells;
  - typical tubing programs, including well inflow and tubing flow performance evaluation;
  - a discussion of artificial lift requirements; and,
  - a description of future well workovers and an estimate of their frequency.

Where wells may be used for waste management, pollution prevention measures, cuttings and/or produced water re-injection this should be described.

- overview of the results of studies to assess the impact of well and pool production rate on recovery;
- where a gas pool or gas cap contains condensate, an assessment of retrograde condensation and the possible need for gas cycling should be discussed;
- a discussion of the proposed activities for management of development and production of the reservoirs, including:
  - a clear statement of the principles and objectives that will be used when making field management decisions and conducting field operations, and in particular, how economic recovery of oil and gas will be maximized over the life of the field;
  - a discussion of the rationale for data acquisition programs for coring, logging, fluid sampling and analysis, testing during drilling, and production. Where unmanned or subsea facilities may impose restrictions on data gathering, these should be noted;

- the potential for work-over, re-completion, re-perforation and further drilling should be described;
- where options remain for improvement to the proposed development or for further phases of appraisal or development, the criteria and timetable for implementing these should be provided;
- for gas developments, the criteria for the installation of additional compression should be noted;
- a description of reservoir studies to be undertaken;
- forecasts of the production and/or injection of oil, gas, associated gas liquids and water, on an annual basis, for each pool and each platform. Forecast of downside, most likely, and upside volumes should be provided;
- results of any model studies carried out to evaluate possible exploitation strategies, including the assumptions used;
- discussion of enhanced recovery scheme(s);
- for each pool, a prediction of the average reservoir pressure over the pool's producing life;
- gas conservation measures, including quantities involved and methods of utilization. An estimate of the total volume of gas to be flared, used as fuel, used for gas lift, and injected, as well as an annual forecast, should be provided; and,
- an overview of the field hydraulic studies, including an assessment of the impact of the flow line sizes and production facilities location on recovery.

### **3.6.1 Deferred Development**

Where hydrocarbons have been identified in a portion of the development area for which development is not proposed, a discussion of the reasons for not proceeding with development should be included, setting forth the following information:

- potential reserves;
- factors which might lead to future development and the possible timing of such development; and,
- steps planned to obtain additional information concerning the hydrocarbon accumulation.

## **3.7 DEVELOPMENT DRILLING AND COMPLETIONS**

This section of the Development Plan should provide an overview of past drilling activities, and the proposed drilling program and typical completion designs for the development wells. The proponent is not required to submit detailed equipment designs and operating procedures in this section. These will be examined and approved through the Drilling Program Authorization process and, in the case of individual well designs, through the Approval to Drill a Well

process pursuant to the regulations governing drilling operations. Approval of the Development Plan will not grant authority to conduct drilling operations.

The following should be presented where appropriate:

- a description of drilling hazards and mitigative measures;
- typical casing programs, with design criteria, for production, injection and observation wells;
- a description of well control and safety systems for drilling;
- a description of typical completion methods and equipment;
- a description of completion and annulus fluids, including a discussion of corrosion control and fluid compatibility; and,
- a description of typical wellhead equipment.

### **3.8 DESIGN CRITERIA**

The design philosophy for the production and export systems should be described, with particular reference to any policies which have been adopted to ensure there will be due regard for safety and loss control. The manner in which this philosophy will be incorporated in design calculations should be described, identifying the rules, codes, standards and specifications to be used.

The design criteria for the production and export systems should consider their construction, transportation, installation and operation phases. The criteria for the design of the systems should be divided into environmental, functional and geotechnical categories.

#### **3.8.1 Physical Environmental Criteria**

A summary should be provided of physical environmental criteria to be used in the design of the facilities, with reference to the review required under section 5.2 of these *Guidelines*. The section also should include a summary of:

- the operating limits imposed by environmental factors on all phases of the development; and,
- the methodology that will be used to determine the design and operational environmental loading on the principal installation(s), with particular attention to any non-standard methods.

#### **3.8.2 Functional Criteria**

A description and list of the functional criteria to be used in the design of the production and export systems are required. This description should include

component characteristics, system processing requirements, well fluid properties and product specifications.

### **3.8.3 Geotechnical Criteria**

A summary should be provided of geotechnical criteria to be used in the design of the facilities, with reference to the review required under section 5.2 of these *Guidelines*. In particular, the section should focus upon those factors affecting the construction, installation, operation and abandonment or removal of project facilities, and how these factors will be incorporated into facilities design.

## **3.9 PRODUCTION AND EXPORT SYSTEMS**

The Acts require that a Development Plan contain, in Part I, a description of the “production system and any alternative production systems” that could be used for the development<sup>12</sup>. Approval of Part I of a Development Plan is a fundamental decision”, i.e., the Board’s decision to approve must be approved by Ministers in order to become effective.

The mode of development and alternatives therefore are an important part of the decision-making process. It is a given that an alternative must be technically feasible; and, the range of technically feasible alternatives to be considered in the Development Plan should be the subject of prior consultations by the proponent with governments and the Board. Within the field of technically feasible and reasonable alternatives, there are several criteria which are required as the basis of a decision. For the proponent, the criteria will clearly be maximization of recovery and overall optimization of project economics. These criteria will also be important to the decision-making process of the Board and the governments. As a consequence, these criteria should be fully examined by the proponent for each alternative in the Development Plan.

For the Board and the governments, there are further criteria which should be fully examined by the proponent for each alternative. The potential Canada-Newfoundland and Labrador benefits to the Province’s and Canada’s economy including a projection of revenue flows to governments within the context of existing tax and royalty structures, will be important criteria for the Board and governments in their assessment of each alternative. Therefore, these criteria should also be examined and described by the proponent.

The proponent should provide an economic assessment of the preferred option and alternatives. For alternatives, the assessment should present, on a project basis,

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<sup>12</sup> C-NAAIA, paragraph 139(3)(iii).

capital and operating cost information necessary to calculate each alternative's net income contribution to the Province and Canada. This would include for each alternative a presentation of:

- the project's anticipated net income;
- the project's anticipated rate of return; and,
- the project's anticipated royalty and taxes to be paid to the Government of Canada and the Government of Newfoundland and Labrador.

For the preferred development approach, a sensitivity analysis based on capital cost, operating cost, production forecasts and oil and/or gas price should be included.

### **3.9.1 Production Installation**

A description of the configuration of the production structure, supported by schematics, is required. The description should include design criteria, the type of structure, and, where appropriate:

- the marine systems of a floating structure including the general utilities and facilities for mooring, propulsion and ballast;
- the safety systems including environmental monitoring systems, alarm and shutdown systems, marine lifesaving appliances, ballast control equipment, emergency services and damage control equipment;
- the functional requirements for systems such as well conductors, J-tubes, risers, riser handling, sea water supply and discharge, shale chute, crude oil storage and utilities and produced water handling;
- a discussion of the visual inspection and instrumentation planned to monitor the integrity of the foundation and structure; and,
- a discussion on the design considerations for the effect of sea ice and icebergs on the structure.

### **3.9.2 Topside Facilities**

A description of the topside facilities, supported by schematics, is required. This should include a process flow diagram of the production facilities, which indicates the fluid analyses, operating pressures, temperatures, throughput volumes and capacities, accompanied by material balance tables. The description should include the functional design basis, as appropriate, for:

- the production facilities, including production and test separators and associated crude oil treatment system, gas processing, compression, gas lift, fuel gas and gas flaring systems, produced water system, water injection system, control system, and wellhead and production tree;
- the safety systems employed on the topside facilities including alarm and shutdown systems, fire and gas detection system, fire suppression systems, safety stations, and well control systems;
- the drilling systems or workover systems included;
- the facilities provided to deal with the discharge of substances potentially damaging to the environment;
- the facilities for the separation, collection, treatment and disposal of oily water, sewage, drilling mud and cuttings, and solid wastes;
- the conceptual approach to fluid measurement, sampling and allocation;
- consideration on sour or sweet corrosion, scaling, hydrates and produced sand; and,
- single versus multi-train gas injection consideration.

A discussion of system bottle-necks and limitations that can give rise to production constraints and contingencies available to maintain production in the event of major equipment failure(s) should be provided. A clear statement of the facilities' maximum oil, gas and water processing capacity should be included. Also, the scope and flexibility for future modification and expansion to address the potential for the proposed development, for any incremental development within the field or any satellite field development, should be noted identifying any spare capacity designed into the facilities/pipelines to allow for future development or third party tie-ins. The scope of the environmental assessment, as outlined in Chapter 5, should address the potential maximum oil, gas and produced-water rates.

### **3.9.3 Subsea Production System**

A description, supported by schematics, of the configuration of any proposed subsea components of the production system is required. The description should include:

- satellite wells, clustered wells or template wells;
- components such as well foundations, wellheads and trees, flowlines and end connections, production riser, controls, control lines and fluids, templates and manifolds, shutdown systems, materials and corrosion control;
- features incorporated in the system to minimize the risk of oil leaks and spills;
- features incorporated to handle high wax content or pour point problems; and,
- discussion of the effect of the risk of iceberg collision and potential scour depth on the choice of the subsea system.

The scope and flexibility for future modification and expansion to address any potential for upside, incremental and satellite field development, should be noted identifying any spare capacity designed into the system.

#### **3.9.4 Export System**

A description, supported by schematic drawings, of storage, loading and transportation components of the export system is required. The description should include:

- the capacity, efficiency factors and operational aspects for each component;
- the effect of sea ice and icebergs on the operating criteria for, and loads on, the export system;
- the features incorporated in any tanker loading, oil storage or support system to minimize the risk of an oil spill;
- ballast and, where appropriate, displacement water discharges from storage facilities and crude transport tankers; and,
- a description of any proposed pipelines to or from existing facilities, or for export to shore.

The scope and flexibility for future modification and expansion to address any potential for upside, incremental and satellite field development, should be noted identifying any spare capacity designed into the system to allow for future development or third party tie-ins.

### **3.10 CONSTRUCTION AND INSTALLATION**

An overview of the construction and installation of the production and export systems is to be provided. Where appropriate, this overview should include:

- a project schedule including key events and decision points in the design, procurement and construction stages of all major elements of the development;
- the proposed approach to project management;
- temporary or permanent construction facilities including any associated port or marine terminal;
- special transportation or installation facilities and equipment;
- major construction materials and services; and,
- quantities and characteristics of any expected toxic wastes, debris, effluents and emissions, including noise associated with construction.

The proponent will be required to submit a Safety Plan with each application for any project construction, or any installation activity or group of activities, as

appropriate, which takes place within the jurisdiction of the Board. Please refer to the Board's *Safety Plan Guidelines* for further guidance in this regard.

### **3.11 OPERATIONS AND MAINTENANCE**

This section of the Development Plan should describe the production and maintenance operations associated with the project in the manner indicated below.

#### **3.11.1 Organization**

A typical organization chart is required to show the reporting relationships for personnel employed in production operations. The expected size and composition of the associated onshore and offshore workforces should be indicated for the main stages of production operations.

#### **3.11.2 Operations and Maintenance Procedures**

An overview should be provided of the scope and planned use of operations manuals. This overview should cover system descriptions, and operating, inspection and maintenance procedures, environmental monitoring, safety procedures and equipment, alert responses and contingency plans.

The proponent should indicate whether any special maintenance, inspection and repair equipment or vessels are required, and whether the intention is to acquire such vessels or to hire them on an "as needed" basis.

#### **3.11.3 Ice Management Plan**

A description of the proponent's ice management and avoidance plan is to be provided, including:

- aerial, vessel and installation-based ice surveillance;
- ice data reporting, collation, quality control and presentation systems;
- local tactical ice forecasting capability, where applicable;
- integration with other operators in nearby fields;
- methods and facilities for iceberg deflection; and,
- capabilities and limitations of the ice management plan and their implications for safety analysis and design considerations.

#### **3.11.4 Operability of the Proposed Development**

The expected overall operating efficiency and reliability of the proposed development should be discussed in terms of the effects of:

- breakdowns in central power generation on process facilities and export systems;
- equipment redundancy;
- scheduled maintenance and inspection programs;
- downtime resulting from environmental conditions such as sea ice, icebergs, seastate and reduced visibility;
- well workover requirements; and,
- any potential impact on maximizing petroleum recovery.

### **3.11.5 Logistics**

A description should be provided, highlighting the key elements of the logistics of production operations, including the onshore supply base, materials movement, personnel movement, support vessels and diving requirements. The characteristics of proposed support systems such as supply vessels, ice-clearing/shuttle tanker support vessel, standby vessel and helicopters, should be described.

### **3.11.6 Communications**

A description of the communication systems planned for the operation of the offshore installations should be included.

### **3.11.7 Contingency Plans**

An outline of the contingency plans that the proponent intends to establish to deal with major emergencies affecting the safety of personnel or the integrity of the installation is required. The outline should include a description of:

- the types of emergencies for which contingency plans will be established;
- the proposed emergency response organization, chain of command and key areas of responsibility;
- the training of personnel and response exercises;
- the estimated response time for major classes of emergencies; and,
- planned participation in initiatives to improve response capability.

A description of the requirements for contingency plans for dealing with environmental emergencies is contained in subsection 5.4.2 (Contingency Planning and Countermeasures) of these Guidelines.

### **3.11.8 Vessel Surveillance**

The surveillance equipment and procedures to be used for collision avoidance should be described in this section.

### **3.11.9 Production Safety**

A discussion of proposed measures to maintain production safety during operations is required. The discussion should include:

- proposed exclusion zones around surface production installations, subsea production facilities and export facilities;
- safety management philosophy and approach;
- the roles envisioned for the standby vessel, and other support craft, rescue equipment and the equipment installed on the production installation; and,
- an overview of safety-related facilities and equipment.

### **3.12 DECOMMISSIONING AND ABANDONMENT**

This section of the Development Plan should describe the provisions included in the design to facilitate decommissioning and abandonment of the installation at the end of its production life. An overview plan of the decommissioning and abandonment program and a discussion of the feasibility of the proposed procedures should be provided. A description of the measures that would have to be taken to leave the site in a fishable and navigable state should be included.

### **3.13 DEVELOPMENT AND OPERATING COST DATA**

This section of the Development Plan should document past expenditures and provide an estimate of development and operating costs in sufficient detail to permit comprehensive financial and economic analysis of the project in support of reservoir development and depletion throughout the life of the field. This information is necessary for monitoring and enforcement to ensure waste does not occur and to provide for maximum recovery of the oil and gas reserves. The cost data should be provided in constant dollars, accompanied by a description of the methodology, assumptions and basis for the cost estimates. A summary of the annual capital and operating costs for the major components of the proposed mode of development, and each alternative evaluated, should be provided. The following cost information is required:

- pre-project costs for seismic, exploration drilling, delineation drilling and studies;
- drilling capital expenditure;
- facilities capital expenditure for each major component;
- decommissioning expenditure;
- field operating cost, excluding tariffs; and,
- tariff operating cost.

The Development Plan should contain a provision for providing and updating this information as necessary throughout the life of the field.

### **3.14 GUIDELINES FOR DEVELOPMENT PLAN (PART II)**

Part II of the Development Plan should consist of the studies, analyses and evaluations, or other information and proposals, in support of Part I of the Plan. In accordance with the Acts, proprietary information provided in Part II will not be disclosed without the proponent's consent.

The Acts also require that petrophysical, fluid, core and well testing data, analyses and evaluations, be provided to the Board for reasons other than as part of the Development Plan submission. If the proponent wishes to rely on this material to support the Development Plan, the material should be referenced explicitly but need not be resubmitted. The confidentiality status of such information will be determined in accordance with the relevant provisions of the Acts.

The following are to be provided where applicable and when available:

- geological studies;
- geophysical studies;
- petrophysical studies;
- reservoir engineering studies, including rock and fluid data and analyses, and reservoir simulation studies;
- original oil and gas-in-place and recoverable reserves studies;
- production engineering information and studies;
- field hydraulic studies;
- production and transportation systems studies;
- environmental studies and analyses;
- plans for waste treatment and disposal;
- development cost data and economic analyses of alternatives;
- information related to matters of conservation, safety of operations and pollution prevention; and,
- any other studies that were used in support of the Development Plan.

## **CHAPTER FOUR – SAFETY ANALYSIS AND COMMITMENT**

### **4.0 INTRODUCTION**

These ancillary documents should explain how the proponent has integrated safety into the design of the proposed development. This not only includes the design of structures, facilities and equipment, but also of management systems, policies, procedures, planning processes and personnel selection, training and management.

### **4.1 CONCEPT SAFETY ANALYSIS AND TARGET LEVELS OF SAFETY**

The proponent should describe and discuss the “Concept Safety Analysis”, which is required pursuant to section 43 of the *Newfoundland Offshore Petroleum Installations Regulations*, and state the “Target Levels of Safety” the proponent has set as acceptance criteria. The discussion should cover:

- all systems that are subject to major hazards including structures, topsides, pipelines, flow-lines, sub-sea installations, loading facilities and riser, with particular attention paid to those systems that are important in mitigation;
- all major hazards that could result in loss of or serious threat to life, loss of structural integrity of an installation, equipment failure or uncontrolled or unauthorized discharges; and,
- all assumptions and measures proposed to mitigate damage or ensure the threat to life or damage to the environment will be reduced to an acceptable level, including contingency plans and monitoring procedures.

The complete analysis should be attached as an appendix to the Development Plan.

### **4.2 RISK ASSESSMENT PLAN**

This Risk Assessment Plan should contain a listing of the various specific risk and safety analyses that may be required as detailed design proceeds. It should also provide a plan for the completion of these studies and analyses and an explanation of how this process is integrated into the design process. Finally, it should provide an explanation of the methodologies to be utilized and a discussion of their validity and relevance in the overall process. A more detailed stand-alone plan may be required to support the proponent’s commitments in this regard.

### **4.3 QUALITY ASSURANCE AND QUALITY CONTROL**

This section should contain a description of the approach the proponent intends to follow for quality assurance and quality control during design, fabrication, construction, installation and operation of the proposed facility. This description should indicate how this process will be employed in connection with the Certificate of Fitness required pursuant to the legislation.

### **4.4 TRAINING PLAN**

This section should describe the proponent's plan for ensuring the training and qualifications of all personnel to be employed in association with the proposed development. It should include, in so far as is possible, a description of the training and qualifications required for each classification of production installation, transportation system, and standby vessel personnel. This description should take into account all operational and safety procedures that such persons may be required to carry out, including emergency procedures. A discussion of the approach the proponent will use to ensure that all personnel are qualified and competent, and how certificates and other training information will be tracked, should also be included.

### **4.5 SAFETY MANAGEMENT SYSTEM AND SAFETY PLAN**

These documents describe the proponent's proposed strategy for the safe management of the proposed development. It should cover such issues as whether, and to what extent, the proponent plans to utilize its Corporate Safety Management System to manage the safety of operations or develop a project-specific safety management system. This section should also explain the proponent's approach to the development of the Safety Plan required by the *Newfoundland Offshore Area Petroleum Production and Conservation Regulations*, and how the plans and analyses previously discussed in this Chapter will be utilized to form the basis for this plan. Please refer to the Board's *Safety Plan Guidelines* for further guidance in this regard.

### **4.6 SECURITY**

The proponent should acknowledge its plan for security of the proposed installation. The Government of Canada has sharpened its focus on potential threats to the integrity of energy infrastructure. In this context, security is regarded as an aspect of safety, hence the necessity for an assessment of security measures in the development application process. Guidance for the preparation of a Security Plan has been based on the International Maritime Organization (IMO) code for

security, *International Ship and Port Security (ISPS)*. Pursuant to subsection 51(3) of the *Newfoundland Offshore Area Petroleum Production and Conservation Regulations*, the proponent is required to prepare a Security Plan for the installation. The Security Plan will not be a part of any public review process. However, its review will include consultations with the federal government.

## CHAPTER FIVE - ENVIRONMENTAL IMPACT STATEMENT

### 5.0 INTRODUCTION

This chapter provides guidance for the preparation of an Environmental Impact Statement (EIS) that, to the degree generally foreseeable, will satisfy the requirements of the Acts and the CEAA. For projects requiring a comprehensive study level of assessment pursuant to the CEAA, the Board and other federal authorities with regulatory responsibilities under the CEAA, in consultation with the public and the operator, will issue a scoping document that describes the scope of the project, the factors to be assessed and the scope of these factors<sup>13</sup>. For projects referred to a CEAA/Accord panel review, the scoping document will be prepared by the CEAA agency in consultation with the Board and other federal authorities.

Under the auspices of the Atlantic Energy Roundtable, which consists of representatives from industry and governments, a Memorandum of Understanding (MOU) has been developed for a concurrent and parallel regulatory approval process. That MOU has been designed to co-ordinate all aspects of the regulatory approval process.

In preparing the EIS, the operator also should consult guidance documents and operational policies prepared by the Canadian Environmental Assessment Agency (the Agency), including as appropriate:

- *Guidance for the Preparation of a Comprehensive Study;*
- *Cumulative Effects Assessment Guidance Document; and,*
- *Operational Policy Statement: Defining a Study Area.*

The EIS and CSR must be consistent with the requirements of the CEAA, and include those factors listed in subsections 16(1) and 16(2) of the CEAA, as appropriate.

If a “Valued Ecosystem Component” (VEC) based approach for the environmental assessment is used, a definition and rationale for choosing the particular VEC should be provided. The temporal boundaries of the assessment should be explicitly defined and should consider all project activities, from construction through to abandonment and decommissioning. The spatial boundaries of the assessment also must be clearly defined, and a rationale for each boundary provided. Spatial or temporal boundaries may vary amongst different VECs and

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<sup>13</sup> CEAA, sections 15, 16, 21, *Species at Risk Act*, section 137.

should include a consideration of additional or expanded project activities that may reasonably be expected to take place.

An example breakdown of spatial boundaries follows:

- project area (area directly disturbed, altered, or destroyed by project activities);
- affected area (area which potentially could be affected by project activities, beyond the project area); and,
- region (area extending beyond the affected area); etc.

The environmental assessment must consider the potential effects of the proposed project activities on each VEC within the spatial and temporal boundaries that have been defined.

## **5.1 PROPOSED DEVELOPMENT**

The EIS and CSR should contain a description of all project activities associated with the construction, installation, operation, maintenance, modification, decommissioning and abandonment of the petroleum production facility, subsea facilities, drilling and workover activities, and any activities ancillary to the project (support vessels, onshore facilities, transportation of product, well site surveys, vertical seismic profiling, etc). Illustrations of major project facilities and maps indicating any proposed traffic routes for tankers and other associated vessels should be included. The spatial boundaries of the assessment also should be clearly illustrated on one or more maps.

## **5.2 DESCRIPTION OF EXISTING ENVIRONMENT**

The EIS should include a detailed description of the physical and the biological environments within the area potentially affected by the project, as it exists prior to project development, and against which the effects of the project can be identified and evaluated.

The proponent should include a discussion of the natural variability of environmental phenomena, identify knowledge gaps and discuss their implications on the reliability of any predictions of effects. The proponent is encouraged to consider and use all relevant available information, including that which may have been assembled for other projects. Original research or environmental studies of particular relevance to the proposed development performed by or for the proponent should be described, as well as plans or proposals for research or data collection to fill any identified information gaps.

The following outline is intended as a guide to the nature, scope and level of detail of information considered necessary to describe adequately the existing environment. As indicated above, the scope of the project and scope of the assessment is determined during the Scoping exercise undertaken pursuant to the CEA Act and will determine the level of information required to complete the EIS and CSR. The description of physical environmental parameters outlined below should be structured so as to facilitate an assessment of these factors on the project, and of their effects on personnel safety, integrity of production structures and the overall efficiency of the operations. The description of the physical environment contained in the EIS and CSR will be the basis for the discussion of section 3.8 (Design Criteria) of these *Guidelines*.

### **5.2.1 Geotechnical Environment**

This section should provide an overview of the seabed and subsoil conditions as they relate to the geotechnical aspects of the project. The discussion should include site investigations, foundation design, the influence of the soil and natural processes on the foundation components, and geotechnical factors affecting the construction, installation, operation and abandonment or removal of the facilities.

The discussion should also include a description, supported where appropriate by field data and interpretations, of the investigation of regional geotechnical processes that significantly affect the foundation characteristics, including:

- regional earthquake history of the project area, quantitative assessment of seismic risk, including a discussion of seismotectonic models, seismicity and the effect of local soil conditions on ground movement and the seismic design of the facility;
- location of shallow faults, slumps or marginally stable sediments;
- evidence of large-scale, long-term erosion or accretion of the seafloor, which may result in migrating bedforms such as sand waves or mega-ripples;
- depth and frequency distributions of seabottom ice scours;
- presence of gas hydrates or gas-charged sediments;
- bathymetry of the seafloor; and,
- lithology, texture, structure and distribution of surficial sediments.

A description of the proponent's investigation of the seabed at the site should also be provided and should include:

- microtopography of the seafloor;
- type, thickness, distribution and geotechnical properties of the seabed materials;

- state of equilibrium of seabed sediments with the hydraulic conditions (current, waves); and,
- presence of features and the potential for processes that may affect foundation design such as ice scours and pits, sand waves, boulder beds, slumps and slides, density or turbidity flows, mud volcanoes, gaseous sediments, paleochannels or depressions, recent faults, weak sediments and sediments susceptible to cyclic mobility.

The criteria used in the design of the foundation should be discussed, including where appropriate:

- all relevant loads anticipated during the construction, installation, operation and removal of facilities;
- consideration of loads resulting from the removal of materials from beneath the foundation, loads from accretion of materials against the foundation or structure, and load redistribution due to settlement;
- the margin of safety provided against failure or collapse from sliding, overturning, exceedance or loss of bearing capacity, active and passive failure, and exceedance of pile capacity;
- the functional ability of the structure to withstand total or differential settlements, horizontal displacements, base contact stresses, vibration and piping; and,
- an assessment of the possibility of seafloor subsidence resulting from reservoir depletion.

### **5.2.2 Atmospheric Environment**

The description of the atmospheric environment should include:

- a description of main climatic features of, or affecting, the region;
- the mean and the extreme values and, where appropriate, seasonal variability, as well as duration and probability of exceedance of air temperature, wind speed and direction, precipitation, and the rates of accretion of snow, ice and freezing spray on structures;
- the frequencies of occurrence of various classes of windchill, extreme storms, low visibility and/or low ceiling associated with fog, cloud and precipitation; and,
- the combinations of events which could affect project activities, safety and/or operational efficiency; and, an assessment of these effects on the project.

### 5.2.3 Oceanic Environment

The baseline description of the oceanic environment should include, for the region defined:

- a discussion of ocean currents describing their speeds as a function of depth, their spatial, directional and temporal variability, the magnitudes of the various current components, and the statistical probability of exceedance for current parameters;
- a description of the occurrence of oceanic features, such as gyres, upwelling areas, and oceanic fronts, which could affect the concentration and dispersion of pollutants;
- a description of spectral and other characteristics of waves and the statistical probability of exceedance for wave parameters;
- the mean and extreme sea surface and subsurface temperature profiles;
- the mean water level and expected variations due to tides, storm surges, or other effects;
- the chemical composition of the water in the project area, including its salinity, dissolved oxygen, nutrient and trace metal content, background hydrocarbon levels, suspended solids and overall water quality;
- the combinations of events which could affect project activities, safety and/or operational efficiency, and an assessment of these effects on the project; and,
- the existing level of contaminants in water and sediment quality parameters, using existing information, data from environmental effects monitoring programs, or any new data that may be collected.

### 5.2.4 Sea Ice and Icebergs

The baseline description should include statistics concerning:

- the occurrence, concentration, type, floe size and thickness of pack ice;
- the occurrence, dimensions, height, draft, mass, and scour of icebergs; and,
- the combinations of events which could affect project activities, safety and/or operational efficiency, and an assessment of these effects on the project.

### 5.2.5 Shoreline Environment

A description of geomorphic processes (e.g., shoreline and coastal processes, slumping, etc.) which could potentially be affected by oil spills from production or transportation activity, and by land-based associated activities, should be included.

### 5.2.6 Biological Environment

This section should describe the biological communities within the project area, with emphasis on ecological processes and their role in the stability, productivity, variability and resiliency of the various species or types of species within that ecosystem. The description should not be limited to the VECs identified for the environmental assessment, but provide a general description of the biological environment.

In describing species within the biological communities, key factors in their life requirements such as habitat, food, abundance, seasonal distributions and movements, and natural population-limiting mechanisms should be included. The sensitivity of the communities and species being considered, and their vulnerability to potential changes to their natural circumstances, should be discussed.

With the foregoing in mind, a description of the biological environment should include, but not be limited to, the following:

- aquatic vegetation, zooplankton and micro-organisms;
- benthos, including its susceptibility to damage from project activities, including accidental events;
- fish, including pelagic eggs and larvae, the seasonal movement of juveniles and adults, and the individual fisheries, with emphasis on seasonally important areas, abundance, migration behaviour, spawning requirements, and sensitivity to disturbance;
- commercial fish species, including a description of historical harvesting practices and current trends;
- marine mammals, including the movements of nearshore and offshore species, and the designation of areas important to any species for purposes such as nurseries, calving, migration, wintering, etc.;
- marine reptiles (i.e., sea turtles);
- marine birds (including birds of prey that frequent the marine environment), including the location and population estimates of colonies and their feeding habits, both nearshore and offshore, and the identification of the location and time of use of nesting, breeding, migration routes and overwintering areas for waterfowl;
- species at risk, identifying species that are rare, endangered, threatened, or of concern, and include a description of their critical habitat. The information provided should be consistent with the requirements under the *Species at Risk Act* (SARA);

- sensitive areas, including identification, to the extent possible, of any “sensitive areas” in the study area, such as important or critical habitat to support any of the marine resources identified;
- the different types of marine organisms anticipated to accumulate on structures in the project area, characterized with respect to rate of growth, thickness, density and degree of coverage;
- an indication of the level of contaminants in the biological environment, based on existing information, environmental effects monitoring studies, and any new data that may be collected; and,
- the capacity of biological systems to assimilate changes in the environment (pollutants, etc.) which may result from the proposed development.

### **5.3 ENVIRONMENTAL EFFECTS**

The rationale and factors determining the selection of each VEC (as described in Section 5.0) should be provided in this section. It also should systematically identify the interactions between the various project phases and the physical, biological and geological environments within the defined spatial and temporal scope of the project. The effects assessment should be consistent with the requirements of the CEAA, and the scoping document referred to in Section 5.0.

The assessment of cumulative environmental effects should be consistent with the CEAA and any related guidance that is published pursuant to it, and will include a consideration of environmental effects that are likely to result from the proposed project in combination with other projects or activities that have been or will be carried out (*i.e.*, other projects or activities for which formal plans or applications have been made).

#### **5.3.1 Effects Assessment**

The methods used to assess the significance of adverse effects and the definition of significance should be consistent with the CEAA and its associated guidance. It should be clearly described in sufficient detail to enable a determination of the appropriateness of the methodology selected, as well as to allow the non-technical reader to understand how the conclusions were derived.

Potential environmental effects should be discussed both in qualitative and quantitative terms for all phases of the project, as defined by the scoping document.

### 5.3.2 Project Effects

Reference should be made to the following items in assessing the possible environmental effects associated with each phase of the project. This list should not be considered restrictive or exhaustive.

- spatial extent of the area predicted to be affected by project activities, including accidental events (seabed disturbance, waste discharges, etc.), and the loss of commercial fishing areas as a result of the spatial extent of the project;
- the timing of sensitive life cycle phases in relation to the scheduling of proposed physical works and/or physical activities;
- the quantities, composition and methods of disposal of wastes, including drilling mud and fluids as well as formation and process water;
- the quantities and composition of atmospheric emissions, including those arising from production fluid combustion and gas flaring;
- increased noise levels in the marine and terrestrial environments; and,
- operational discharges and accidental events, with reference to effects on seabirds, marine mammals, sea turtles, species at risk, fish species, and commercial fisheries, including socio-economic effects resulting from the effects on these biological components.

### 5.3.3 Accidental Events

Pursuant to the requirements of the CEAA, the environmental effects assessment of malfunctions or accidental events shall be undertaken, and include a detailed assessment of the probability and potential effects of various chemical and hydrocarbon spill scenarios. Credible worst-case scenarios, both from the viewpoint of maximum spill volume and environmental effects, should be defined and considered. The methodology for this evaluation should include, where practical, quantitative ecological risk analyses. The section should include the following:

- the probability of occurrence, the type, flow rate and duration of spill;
- the characteristics, behaviour and ultimate fate of the spilled hydrocarbon;
- the potential effects on birds, marine mammals, fish and other marine animal and plant life, species at risk, shorelines and shoreline facilities;
- the potential effects on the fishing industry associated with loss of access and potential for, or perception of, tainting of fish;
- a summary description of contingency planning measures and environmental effects monitoring plans respecting accidental events (The details of such plans are not typically known at the pre-planning stages of a development); and,
- spill trajectory analysis results.

Models used to predict trajectory and dispersion of oil should be described. The models should, where possible, be based upon actual oceanographic and meteorological data for the study area. The model predictions should include a consideration of weathering effects and the presence of sea ice, where applicable. Limitations in the model(s) and the data base(s) used to define and test the model also should be discussed. The potential for, and extent of, subsurface transport and disposition of spilled hydrocarbon should be evaluated.

## **5.4 MITIGATION AND MONITORING**

This section should describe procedures and equipment proposed to reduce or prevent potential adverse effects of all project activities on the environment, with reference to the Environmental Protection Plan (EPP) that will be submitted for approval prior to commencement of production activities. Where such equipment has been discussed in the Development Plan, a summary of the equipment type, design operating efficiencies and predicted quality of discharges should be given.

Mitigation may include compensation, including compensation that may be required pursuant to the Acts or to other legislation. The discussion of proposed mitigation measures also should include information on how financial security will be provided for the clean-up of spills and compensation for damage. Plans for surveillance and monitoring of environmental effects should also be described.

A description of the Operator's Environmental Management System and its components should be provided, including policies and procedures for evaluating and amending monitoring programs, and for any consequent modification of project operations.

The Board realizes that full details on contingency planning and monitoring programs will likely not be available at the time the EIS and/or CSR is prepared. However, the proponent will be expected to provide an overview of these plans and programs to indicate its conceptual approach to these matters.

### **5.4.1 Follow-up Monitoring**

Pursuant to subsection 38(2) of CEAA, a Follow-up Monitoring Program is mandatory for comprehensive studies, and projects assessed by a Panel or mediator. A Follow-up Program is defined<sup>14</sup> as:

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<sup>14</sup> as defined by CEAA, section 2.

*a program for (a) verifying the accuracy of the environmental assessment of a project; and, (b) determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.*

This section should include a description of proposed components of a follow-up program to determine the efficacy of mitigation measures outlined in the EIS and CSR, and any monitoring that may be required to verify impact predictions. These components may include, but not be limited to, implementation monitoring, environmental effects monitoring, compliance monitoring, and any monitoring of identified species at risk (Species at Risk) that may be required pursuant to the *Species at Risk Act*. Monitoring should focus on effects that are predicted following application of mitigation.

#### **5.4.2 Contingency Planning and Countermeasures**

This section should contain a discussion, to the limit of detail possible, of the Operator's plans for response to accidental events throughout the life of the project, with particular emphasis on countermeasures for environmental emergencies. The discussion on contingency planning related to personnel and operational safety is contained in section 3.11 (Operations and Maintenance) of these Guidelines.

The proponent's detailed Contingency Plans are submitted to the Board as part of the Environmental Protection Plan and Safety Plan, approvals of which are required prior to issuance of a Production Operations Authorization.

The conceptual discussion of environmental contingency planning and countermeasures should include consideration of the following:

- the types of environmental emergencies for which contingency plans will be in place;
- the general emergency response organization, chain of command and key areas of responsibility;
- internal and external notification and reporting procedures;
- the interface between the proponent's plans and procedures and those of government organizations and other operators;
- the training of personnel, including provisions for response exercises;
- the personnel and equipment requirements for different types of response, including logistics requirements, response timing and anticipated equipment inventory for spill surveillance and tracking, and spill containment and clean-up;
- the estimate of the capabilities and/or limitations of countermeasures equipment and techniques and their implications for effects estimation;

- the possibility of measures to increase response efficiency or capability, e.g. research and development programs;
- the capabilities, timing and logistics of relief well drilling, and alternatives to a relief well (if any);
- the capability of mounting a monitoring program in the event significant effects are anticipated; and,
- the plans for the disposal of recovered pollutants and debris.

#### **5.4.3 Compliance Monitoring**

The proponent is expected to provide a summary description of its plans to monitor compliance with applicable regulatory requirements.

#### **5.4.4 Environmental Effects Monitoring (EEM)**

This section describes the proposed characteristics of EEM programs for both routine and accidental events, including the process by which these programs will be designed. Proposed parameters for monitoring and the rationale for their choice should be provided. The section should identify any site-specific baseline information that may be required to support the effects monitoring program.

#### **5.4.5 Biological Observation Programs**

This section should describe any programs that are planned to undertake observation of seabirds, marine mammals, reptiles, and/or Species at Risk during all phases of the project.

#### **5.4.6 Physical Environmental Observation Program**

A general description of the proponent's program to gather physical environmental data during the life of the project should be provided. Specifically, the policies regarding instrumentation and procedures to be used for the collection, collation, analysis and dissemination of weather, sea state, physical oceanographic, ice data and data concerning any other environmental hazard, should be described. In addition, a description of anticipated points of interface between this program and government measurement programs should be provided.

#### **5.4.7 Forecasting Programs**

The programs which will be used for the operational prediction of environmental conditions during the project should be outlined. The description should include:

- the provision of site-specific and areal weather and sea state forecasts for both routine and emergency operations;
- the methods, including drift models, to be used for the prediction of pack ice and iceberg movement in the vicinity of operations; and,
- the anticipated points of interface between these programs and government forecasting programs.

#### **5.4.8 Post-Abandonment/Decommissioning Monitoring**

This section should provide a brief summary, to the extent possible, of the plans for abandonment and/or decommissioning of the project area and facilities following termination of production, and identify any anticipated requirements for post-abandonment monitoring.

### **5.5 RESIDUAL EFFECTS**

The nature, extent and duration of effects that are predicted to remain after mitigative measures have been incorporated should be discussed.

### **5.6 CONCLUSION**

A determination of significance of residual effects should be provided.

### **5.7 APPENDICES**

The appendices should include references cited, reports prepared in support of the EIS, and field data used to describe the environment and to undertake the impact analysis.

## CHAPTER SIX - PUBLIC REVIEW PROCESS

### 6.0 INTRODUCTION

Subsection 44(1) states:

Subject to any directives issued under subsection 42(1), the Board shall conduct a public review in relation to any potential development of a pool or field unless the Board is of the opinion that the public hearing is not required on any ground the Board considers to be in the public interest.

Therefore, it is clear that the legislation contemplates that a public review may be necessary for some developments while for other developments a public review may not be required.

This chapter describes the process for the Public Review of Development Applications for petroleum production projects in the Newfoundland and Labrador Offshore Area pursuant to the Acts. The Board recognizes that the scale of an individual project may vary from a large-scale, stand-alone development, to a small satellite tie-in to existing facilities. The scale of the Public Review, if required, and the process required, may differ accordingly.

Development projects are also subject to environmental assessment pursuant to the *Canadian Environmental Assessment Act* (CEAA), which has unique requirements for a comprehensive study assessment or panel review. A comprehensive study assessment affords at least three (3) stages of public consultation. If the project is referred to a review panel under the CEAA, the Board will pursue with appropriate departments or agencies, the development of a joint CEAA/accord panel review that will satisfy the requirements of both the Acts and the CEAA.

### 6.1 REQUIREMENT FOR PUBLIC REVIEW

The powers of the Board in relation to the Public Review are broad. The Board is required to conduct a Public Review of the Development unless the Board determines a review is not necessary in the public interest. Examples of typical Applications that may not be subject to a more formalized public review include:

- an amendment to an approved Development Plan that does not change the conclusions of the corresponding environmental assessment, or does not substantively alter the mitigative procedures that it recommends;
- an application respecting a satellite pool or field that uses one or more existing production facilities and proven technology; or,

- applications for fields that use proven production technology for an area which has been subjected to a previous public review.

The first two of these examples would likely attract a “screening” level of assessment under the CEAA, and for all other development applications, a “comprehensive study” level of assessment.

## **6.2 SCALE AND SCOPE**

The scale and scope of the Public Review should be commensurate with the scale of the development and the degree to which new and innovative techniques and approaches are proposed. The Board, where possible, will have the Public Review held concurrently with any CEAA assessment (see Appendix “A” - Concurrent Review). The form of review should not impact any technical requirements to be met in the Application. However, consideration will be given to technology that has been previously assessed by the Board and proven in the Newfoundland and Labrador offshore area when determining the form of review necessary in the public interest.

For example, if the project is in a greenfield area which has no previous development plan approvals, the scope of the Public Review may be commensurate with the appointment of a commissioner or a joint CEAA/Accord panel. On the other hand, a tie-in to an existing development which had previously been the subject of a public review, may not itself require a formal Public Review if no substantive issues are evident, additional to those previously addressed in a public forum.

## **6.3 BOARD REVIEW**

The Board will, in all cases, carry out its own evaluation of the Development Plan, including an internal technical analysis by staff of the Board concurrently with the Public Review, and will ensure public distribution of both the Development Plan and the Benefits Plan. In the event the Board determines a Public Review will not be held, it may invite written submissions from interested parties, and any such submissions will be made available to the proponent and the public. The internal technical analysis will include consultation with government departments and agencies and such other experts as may be necessary. The Board will consider analysis conducted by staff of the Board, the Public Review Body report, any recommendations from the Minister of the Environment and written submissions by interested parties in making a decision to permit a development to proceed. Such a decision would be a Fundamental Decision and subject to approval or rejection by appropriate ministers.

## **6.4 PUBLIC INFORMATION AND CONSULTATION**

Where a public review is to be conducted, the Board encourages proponents to meet with interested groups and individuals, as part of the development of its Application. Such sessions may assist the proponent to identify areas of potential concern or conflict prior to any formal regulatory process.

## **6.5 PUBLIC REVIEW BODY**

If a Public Review is conducted pursuant to the Acts, the Board will determine whether there will be a CEAA/Accord panel or commissioner(s) (“Public Review Body”). A Public Review must be conducted and completed within 270 days, or such shorter period as determined by the Board, of the receipt of the Application by the Public Review Body. The Public Review will not commence until the Board has determined that the Application submitted by the proponent is a complete submission in accordance with the requirements of these *Guidelines*, and the *Benefits Plan Guidelines*.

### **6.5.1 CEAA/Accord Panel**

If, pursuant to the CEAA, the Minister of Environment determines that a panel review is necessary, then the Board will pursue with the Canadian Environmental Assessment Agency, and other departments or agencies as appropriate, the development of a joint CEAA/Accord panel review process that will satisfy the requirements of both the Acts and the CEAA. This will be done in accordance with the Memorandum of Understanding as discussed in section 5.0.

### **6.5.2 Commissioner(s)**

Where a CEAA/ Accord Panel review is not required, the Board will appoint a commissioner or in conjunction with governments, a panel of commissioners to the Public Review Body. Where there is more than one commissioner, the Board may appoint based upon nominations from the Ministers<sup>15</sup>.

### **6.5.3 Powers of Public Review Body**

The Board will give public notice of the appointment of the Public Review Body, and immediately thereafter file with it all documents to be reviewed in the process. The Public Review process is intended to provide all interested parties with an opportunity to become informed about a proposed development, and to make their views known.

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<sup>15</sup> C-NAAIA, paragraph 44(2)(b).

The Public Review Body will be required to:

- conduct public hearings in accordance with the Terms of Reference for the Public Review as established by the Board, and in accordance with the schedule established by the Board;
- examine and review the plans and statements referred to it by the Board;
- provide to all interested parties an opportunity to be heard and/or make written submissions in accordance with suggested hearing procedures more particularly described in Appendix “B”;
- exercise those powers which may be granted to its members as commissioners under the *Public Inquiries Act*<sup>16</sup> and the *Inquiries Act*<sup>17</sup>. (It would not be typical, however, to require the swearing-in of participants or to require submissions to be made under oath);
- submit to the Board and the Energy Ministers, a report of its findings, including recommendations to the Board respecting the documents referred to it by the Board. This report must be submitted no later than two hundred and seventy (270) days following receipt by the Review Body of all such documents, or such shorter period as the Board may establish. The Review Body will be required to ensure that sufficient copies of its report for public distribution are provided to the Board within the above time frame; and,
- the Public Review Body will be given opportunity to present its report and findings to the Board.

## 6.6 PUBLIC PARTICIPATION

Public submissions will be solicited and an opportunity will be provided to make a presentation to the Public Review Body. Request for submissions shall be made between the date the notice of the Public Review Body’s appointment is published, and the commencement of the first hearing. The notice will include the following information:

- Terms of Reference for the Public Review Body, as well as the general purpose and objectives of the reviews;
- general instructions to intervenors, including procedures for submissions; and,
- the address and name of a person from whom further information may be obtained.

This notice usually will not include specific times and locations for the public hearings. The Public Review Body will publish one or more notices providing these details in a timely manner at least 10 days in advance of the first hearing.

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<sup>16</sup> R.S.N.L., 190, c. P-38.

<sup>17</sup> R.S., c. I-13.

### **6.6.1 Participants and Their Roles**

During the Public Review, the proponent will be represented by the operator, or other designated representative, who will be responsible for all submissions and representations made on behalf of the proponent within that process. Proponents should designate a contact person for liaison between the proponent and the Board, and between the proponent and the Public Review Body, for the purpose of gathering and responding to requests for further documentation, etc.

Any individual or organization wishing to express an opinion or to make a recommendation respecting the proposed development, may participate in the review process. A sample Submission Form for written comments is provided in Schedule C. It is important to note that there is no authority in the Acts for the Board to provide intervenor funding. The Board is therefore, unable to provide such funding.

### **6.6.2 Components for Presentation**

At each location, the proponent will be expected to present the Development Application in a component sequence. The order of presentation, although subject to change by the Public Review Body, will usually be as follows:

- a Development Plan;
- a Canada-Newfoundland and Labrador Benefits Plan;
- a Socio-Economic Impact Statement; and,
- an Environmental Impact Statement.

### **6.6.3 Submissions**

The submissions made by the proponent will consist of the written information filed with the Board pursuant to subsection 1.2 of these *Guidelines* and the *Benefits Plan Guidelines*, as well as the project-specific requirements, together with the oral submissions made by the proponent during the course of the Public Review.

Each participant normally will be required to file a written submission with the Public Review Body prior to the commencement of the public hearings, in accordance with the instructions to intervenors. However, the Public Review Body may waive that requirement for individuals who wish to make a personal intervention at an individual hearing.

All other written submissions filed with the Public Review Body by interested parties will be made available and accessible to the public. The Board, on behalf

of the Public Review Body, will ensure that a facility is provided in a reasonable time frame wherein any interested person may examine and obtain a copy of any submission that is filed.

The Public Review Body may require that participants file a minimum number of copies of their submissions to permit adequate distribution. In the proponent's case, the number of copies will be determined by the Board on a project-specific basis.

#### **6.6.4 Locations and Time Schedules**

The first public sitting of the Public Review Body will be held in St. John's, Newfoundland and Labrador. Further sittings may be held in other locations depending upon the public interest. The total period allowed for hearings, and time for each sitting, will depend on the number of submissions from individual areas of the Province. Notifications with respect to the specific locations and time schedules will be published by the Public Review Body.

#### **6.6.5 Conduct of Public Reviews**

The Board may provide guidance to both the proponent and prospective intervenors relating to the Public Review, which will be provided by the Board in a timely manner prior to the commencement of such proceedings. A sequential summary of a typical hearing is set out below:

- Chairperson's remarks and procedural matters;
- presentation of the proponent's submission which may, at the discretion of the review panel, include more than one component at a time;
- questions from the Public Review Body concerning the proponent's submission and the proponent's response;
- presentation of each intervenor's submission;
- questions from the proponent or Public Review Body concerning the intervenor's submission and the intervenor's response;
- proponent's reply to each intervenor's submission; and,
- closing remarks by the Chairperson.

### **6.7 PUBLIC REVIEW REPORT**

Not later than 270 days after its receipt of the information to be reviewed, or such shorter period as the Board may establish, the Public Review Body is required to make a report of its findings, including any recommendations, to the Energy Ministers and to the Board. The Public Review Body will submit its report, setting

forth its findings and recommendations, in sufficient quantity for public distribution by the Board.

## **CHAPTER SEVEN – TERMS OF REFERENCE AND SCOPE OF PUBLIC REVIEW**

### **7.0 INTRODUCTION**

Upon receipt of a complete Development Application, the Board will establish the Terms of Reference for the conduct of the Public Review by the Public Review Body. The Board recognizes that each development will have unique characteristics which may impact the scope of the review.

### **7.1 TERMS OF REFERENCE**

To ensure an efficient and effective Public Review, the Board considers the following areas to be essential to be included in the Terms of Reference:

- the mandate of the Public Review Body – that the Public Review Body undertake a critical analysis of the Application and make recommendations to the Board at the conclusion of the Public Review;
- the scope of the Public Review;
- the conduct of the Public Review;
- the advisors to the Public Review Body;
- any limitations on the mandate of the Public Review Body (as only the matters enumerated within the Terms of Reference shall be considered);
- the powers of the Public Review Body in the conduct of the Public Review; and,
- the relationship between the Public Review Body and the Board including the basis for participation of Board Staff at the Public Review.

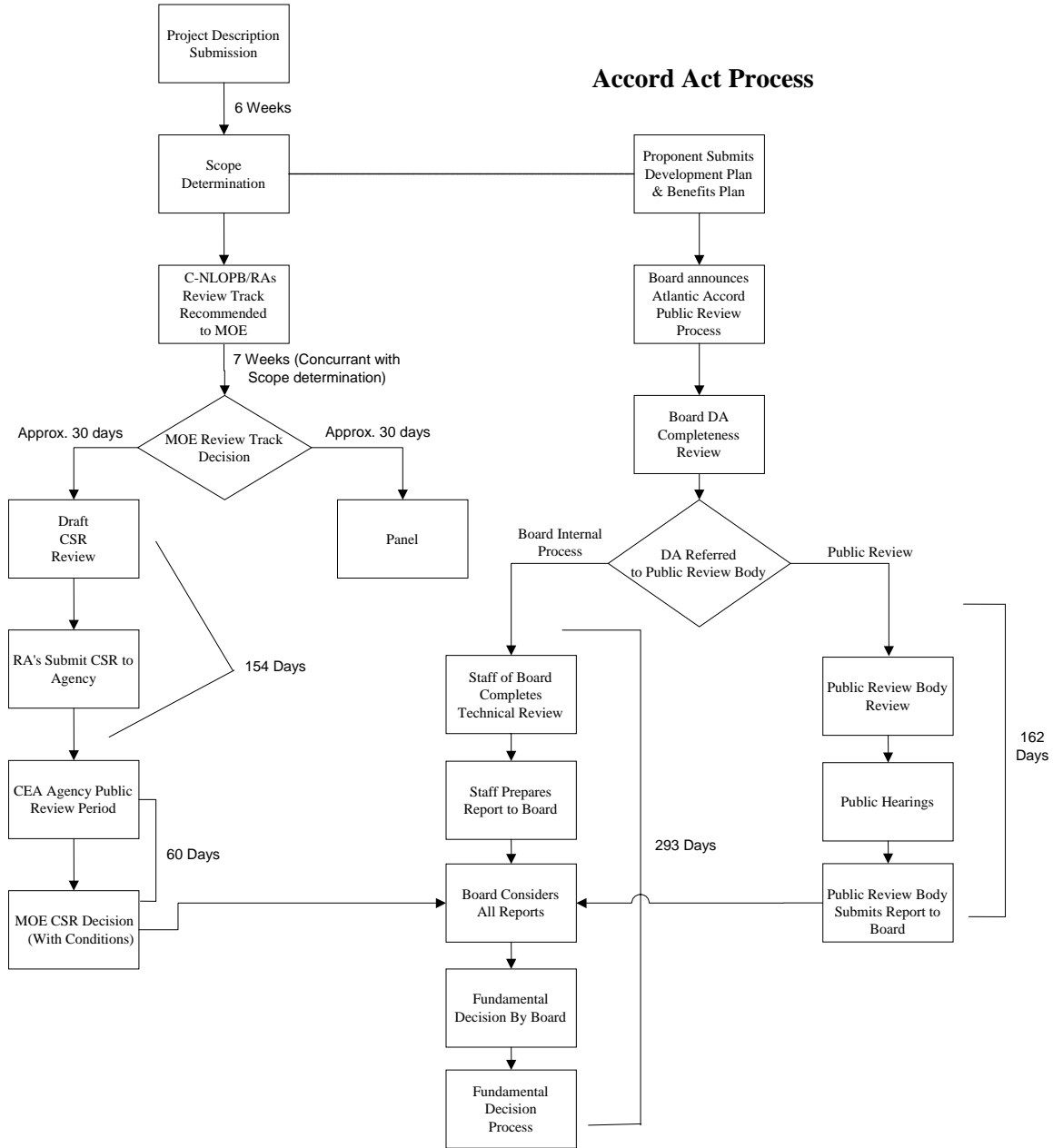
### **7.2 PROCEDURES**

To assist the Public Review Body to conduct the Public Review in a timely manner, the Board has developed Procedures for Public Reviews annexed hereto as Appendix “B” as a guide which may be followed by the Public Review Body. Once in receipt of the complete Application, the Public Review Body will have a maximum of 270 days, or lesser time as established by the Board, to make any recommendations to the Board.

Concurrent Newfoundland & Labrador Accord Acts and CEEA Review

Comprehensive Study  
Review Process

Accord Act Process



Note: Accord Act Process; Public Review Process & CEEA CSR process are presumed to occur concurrently. The timelines indicated are approximate days.

## **APPENDIX A: CONCURRENT REVIEW**

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The Comprehensive Study review process outlined on the preceding page is pursuant to the Canadian Environmental Assessment Act (CEAA), its regulations and guidance documents published by the Canadian Environmental Assessment Agency.

Terms used in the flowchart:

CSR	–	Comprehensive Study Review Process
CEA Agency	-	Canadian Environmental Assessment Agency
DA	–	Development Application
MOE	–	Minister of Environment (Canada)
RA	–	Responsible Authority, as defined by the Canadian Environmental Assessment Act

## **APPENDIX B: SUGGESTED GUIDANCE FOR THE CONDUCT OF THE PUBLIC REVIEW**

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### **1. Definitions**

In these Procedures,

- a) “Accord Acts” means the *Canada-Newfoundland Atlantic Accord Implementation Act* and the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act*;
- b) “Board” means The Canada-Newfoundland and Labrador Offshore Petroleum Board;
- c) “Benefit Plan Guidelines” means the *Canada-Newfoundland and Labrador Benefits Plan Guidelines* as published by the Board and available at the Board’s website ([www.cnlopb.nl.ca](http://www.cnlopb.nl.ca)) under “Publications”;
- d) “Canada-Newfoundland and Labrador Benefits Plan” has the meaning set out in section 45 of the Accord Acts;
- e) “Public Review Body” means the individual(s) appointed pursuant to paragraph 44(2)(b) of the Accord Acts;
- f) “Development Application” means all documentation provided to the Board by the Proponent for the purpose of paragraph 44 (2)(c) of the Accord Acts, to support approval of the Project and shall include but not be limited to, an Environmental Impact Statement, a Socio-Economic Impact Statement, a Development Plan and a Canada-Newfoundland and Labrador Benefits Plan;
- g) “Development Plan Guidelines” means the Development Plan Guidelines as published by the Board and available at the Board’s website ([www.cnlopb.nl.ca](http://www.cnlopb.nl.ca)) under “Publications”;
- h) “Development Plan” has the meaning set out in section 2 of the Accord Acts;

- i) “Participant” means a person other than the Proponent, who makes an oral presentation or files a written submission to the Public Review Body pursuant to paragraphs 4 and 5 below;
- j) “Project” means the proposed development;
- k) “Proponent” means the entity which files the Development Application;
- l) “Secretariat” means the Public Review Body’s support staff obtained pursuant to paragraph 13 of the Terms of Reference.

## **2. Introduction**

- a) This document outlines procedures for the Public Review to be conducted by the Public Review Body appointed to review the proposed Project. Subject to the requirements of these Terms of Reference and the Accord Acts, the review will include all relevant aspects of the proposed development;
- b) The Public Review will provide opportunities for individuals, organizations, and the general public to provide their views and opinions, and to present information on the effects of the Project. The Proponent may also actively participate in the hearing of the Development Application. These submissions will assist the Public Review Body in reaching informed and objective conclusions with regard to the Project, which will form the basis for its recommendations. These recommendations will be submitted to the Board, the federal Minister of Natural Resources, and the Minister of Natural Resources for the Government of Newfoundland and Labrador;
- c) A large number of Participants may wish to be present and be heard during the Public Review sessions. These procedures are intended to ensure that the review takes place in a fair and equitable manner, with maximum co-operation and courtesy. The Public Review Body will maintain order and efficiency in a structured but informal atmosphere. As the Public Review Body’s conclusions and recommendations will not have legal force but will be advisory, the review will not be governed by the strict rules of procedure and evidence required by a court. However, the Public Review Body will conduct the review in a manner which will require accountability for statements made by the Proponent and Participants;

- d) The Public Review Body may request a modification to these procedures. Such requests would be considered by the Board where there are reasons why the objectives of the Public Review can better be achieved by taking a different approach. However, the Public Review Body does not have the discretion to conduct the review outside of the scope of the Terms of Reference but may seek a change to the Terms of Reference or request further information outside the Development Application. The Board will consider such requests on a case-by-case basis. The Board will then decide whether to grant such requests.
- e) Any submission made relating to the CEAA will be placed on the registry maintained by the Canadian Environmental Assessment Agency and will be posted once received.

### **3. Public Sessions – Location and Scheduling**

- a) The Public Review will provide the opportunity for all interested persons to make presentations to the Public Review Body on both technical and non-technical subjects. Sessions will be held in St. John's and any other locations in the Province as may be determined by the Public Review Body. Priority will be given to people wishing to participate in the session held in their area;
- b) Specific topics which form an integral part of the Development Application may be the focus of certain sessions in St. John's. If so, these topics will be announced before the public sessions begin;
- c) The Public Review Body may exercise discretion to include or limit presentations on other technical or non-technical matters, as time allows;
- d) Notice of the specific sessions will be published by the Public Review Body no later than 10 days before the sessions are to commence. The notice will specify the dates, locations and focus of review. This and any other relevant information may also be made available by contacting the Public Review Body's office pursuant to paragraph 11.

#### 4. Oral Presentations

Persons may present their views or information orally, in written form, or both. The following guidelines are provided for persons who may wish to make oral presentations during the sessions:

- a) Anyone wishing to make a presentation at any session should register as a Participant by notifying the Public Review Body's office at least five (5) days prior to the commencement of the public review session. Any person providing timely notice will be included as a Participant and will be given priority to speak. When registering, Participants should provide the information set out in paragraphs 5 b) i) to iv) below, unless such information will be included as part of a written presentation pursuant to paragraph 5 b);
- b) A schedule listing the order of presentations by Participants will be available at the beginning of each session;
- c) Persons wishing to make a presentation at any session and who are not pre-registered as a Participant, may register prior to the start of a session or during intermission. However, the opportunity to present will depend upon the time remaining after the pre-registered Participants have been heard;
- d) A Participant, including any other individual, group, organization or entity on whose behalf it is acting, will be allowed to make one presentation to the Public Review Body per session;
- e) A Participant, including any other individual, group, organization or entity on whose behalf it is acting, may make a presentation to the Public Review Body at more than one session, provided the Participant has registered to do so and presentations are not repetitious in substance;
- f) Participants shall prepare presentations so that they can be concluded within 15 minutes. A longer period may be granted at the discretion of the Public Review Body if such a request for more time is provided to the Public Review Body's office at the time of registration;
- g) More than one individual may participate in a presentation by a Participant. When a presentation is made on behalf of a Participant by several persons, the collective presentation should take place within the time period assigned for that Participant;

- h) Any oral presentation which refers to written material, including journal articles, studies, reports or a written submission under paragraph 5 below should be limited to highlighting essential features of the material or responding to questions on it;
- i) Use of audio-visual materials to complement oral presentations is encouraged. If audio-visual equipment is required for a presentation, the Participant should inform the Public Review Body's office at the time of registration;
- j) Persons registered to make oral presentations of a general nature who intend to refer to reports, studies, texts or notes are requested to file with the Public Review Body's office at least five (5) days prior to the commencement of the public review session, twenty (20) copies of the texts or notes from which they plan to speak, or bring such copies of the texts with them to the public sessions;
- k) Any Participant wishing to make an oral presentation which will include detailed matters (e.g. scientific, technical, project financing, etc.), should file a written submission with the Public Review Body's office at least five (5) days prior to the commencement of the public review session. This allows the Public Review Body, Proponent and Participants the opportunity to review the information and prepare any questions. The form of submission can be found in Appendix C to the Development Plan Guidelines.

## **5. Written Submissions**

- a) Anyone wishing to register a written submission with the Public Review Body's office should do so by filing twenty (20) copies of the entire submission at least five (5) days prior to the commencement of the public review session;
- b) All written submissions should include:
  - i) the name and address of the Participant;
  - ii) the names of all individuals, groups, organizations, or entities on whose behalf the Participant is acting;
  - iii) the name of the person(s) who will present the Participant's submission at the public review sessions;
  - iv) the particular location at which the Participant wishes to make its submission;

- v) complete citations of all studies, reports or other documents used in support of the Participant's submission;
  - vi) the Participant's position and recommendations with respect to the Project;
- c) All written submissions received in accordance with this paragraph will be reviewed by the Public Review Body and reproduced and made available at the Public Review Body's office and at the public sessions;
- d) The Public Review Body will not accept any information following the completion of the public sessions.
- e) The Proponent will be afforded the opportunity to publicly respond to any of the submissions.

## **6. Order of Presentations**

The order of presentations to the Public Review Body during public review sessions will be as follows:

- a) The Proponent will make a presentation on the opening day of each session to explain the proposed Project. The Proponent will be allotted 30 minutes to make its presentation. Each presentation by the Proponent will be followed by a question and answer period;
- b) Participants who have pre-registered to make an oral presentation will be next to address the Public Review Body, followed by Participants who have not pre-registered, if time permits. Each Participant's presentation will be expected to conform with the time allotted and will be followed by a similar question and answer period;
- c) The Public Review Body will allow a reasonable opportunity for the Proponent to present a reply to any oral presentation or written submission.

## **7. Questioning During Public Review Sessions**

- a) Persons making presentations may be subject to detailed questioning by the Public Review Body, the Proponent and by other Participants at the discretion of the Chair;

- b) The Proponent and Participants should pose their questions in a tone and style that are courteous to, and respectful of, others. Clarity and brevity are encouraged. Questions should be asked in a non-confrontational manner for the purpose of obtaining further information or explanations;
- c) Each presenter may be questioned immediately following his or her presentation. The order of questioning will be determined by the Public Review Body, but typically will be by the Public Review Body and the Proponent or Participants as appropriate. Should time permit, the Public Review Body may also invite members of the general public who have not registered as Participants, to ask questions. The Public Review Body may ask questions at anytime during the session;
- d) The following points provide general guidelines for questioning during public sessions:
  - i) Questions should be directed to the Public Review Body which may invite the appropriate person(s) to respond to the question;
  - ii) The Public Review Body may limit or exclude questions or comments which, in the Public Review Body's opinion, fall outside the mandate of the Public Review Body, are needlessly repetitive, irrelevant, confrontational, or immaterial;
  - iii) The Public Review Body may limit discussion that exceeds the time limit allocated.

## **8. Transcripts**

Written transcripts will be made of all sessions, and will be made available for purchase by the public within a reasonable period of time by application to the Public Review Body's office. To facilitate the making of transcripts, speakers should identify themselves when addressing the Public Review Body.

## **9. Representation by Agent**

Participants who wish to make an oral presentation are encouraged to speak on their own behalf and ask their own questions at the public sessions, although representation by an agent such as legal counsel, or technical professionals, will be allowed. The sessions generally will be informal in nature and will not have the formality, tone or procedures of a courtroom.

## **10. Interpretation**

Public sessions will be conducted in English. Where appropriate, the Public Review Body's Office will make every effort to accommodate requests for translation at a public session, provided the request is received by the Public Review Body in a timely manner as directed by the Public Review Body, and where translation is required for the proper conduct of the session.

**APPENDIX C:  
FORM FOR PUBLIC COMMENTS**

**Development Project Name:** \_\_\_\_\_

**Name of Organization (if applicable):** \_\_\_\_\_

**Date of Submission:** \_\_\_\_\_

**Nature of Comments (Please tick Box applicable to topic area)**

- Environmental Impact Statement**
- Socio-Economic Impact/Sustainable Development**
- Safety**
- Mode of Development**
- Other (please describe)** \_\_\_\_\_

**Attach Executive Summary, Comments and any supporting documentation as Schedule A to this Form.**

***Privacy Notice***

*The Canada-Newfoundland and Labrador Offshore Petroleum Board is collecting this information for the following purpose: for staff of the Board, Review Panel or Commissioner to contact you regarding your comments on the Public Review conducted in accordance with the Atlantic Accord Legislation.*

*Any personal information you provide is collected in compliance with the Access to Information and Privacy Act SNL c.A-1.1 and the Privacy Act RSC c. P-21 as amended. You have a right to access your personal information and request changes to incorrect any inaccuracies. Please direct any questions about the collection of this information to our Information and Privacy Coordinator at (709)778-1464.*

**Name:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_

**Province:** \_\_\_\_\_

**Postal Code:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Facsimile:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

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St. John's, NL  
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