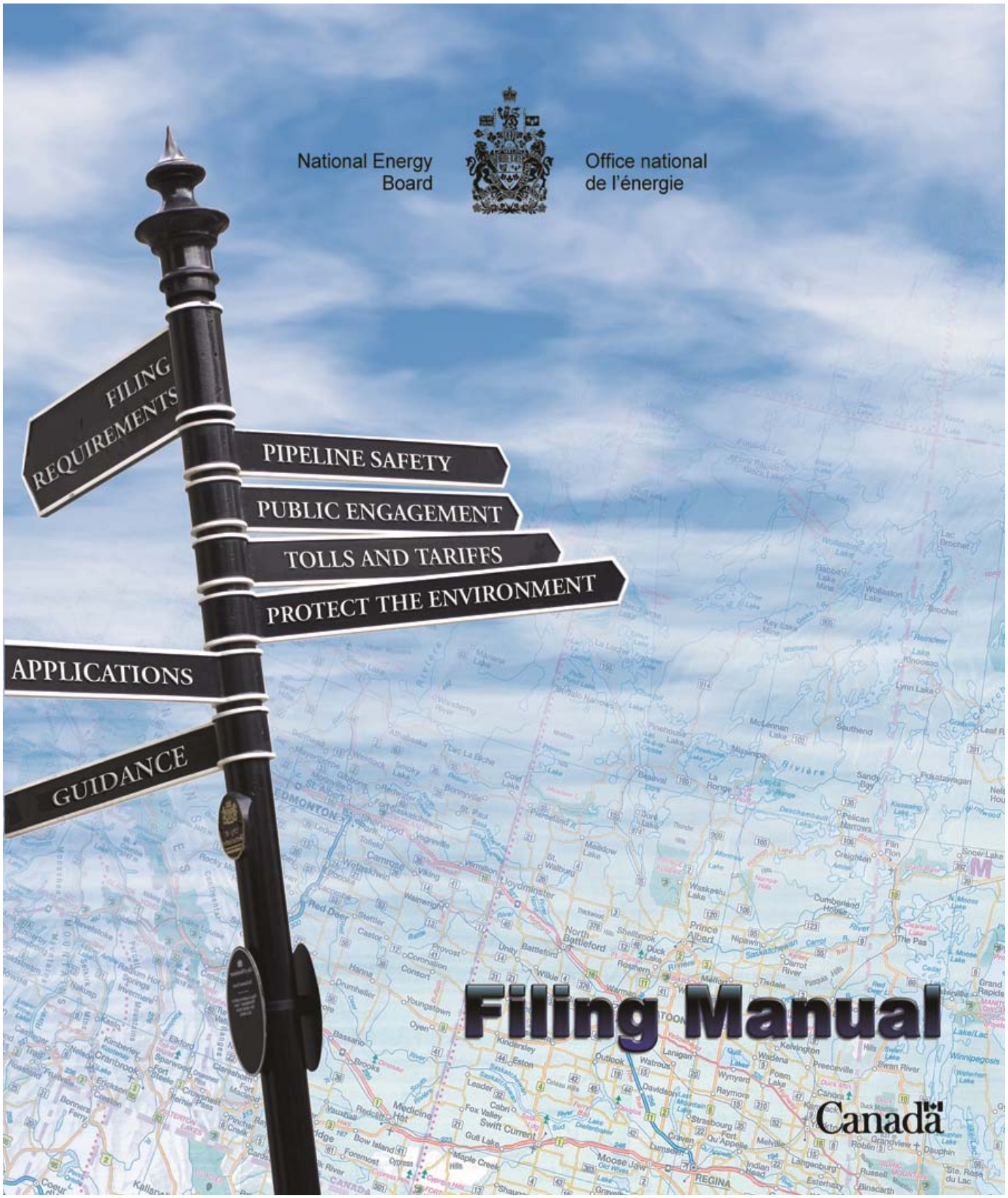
RELEASE 2017-01



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Filing Manual

Note:

With this release, the Filing Manual has been updated to:

1. Glossary of Terms
    - Update Navigable Water or Waterway footnote
2. Chapter 1 Introduction
    - Revise guidance related to the confidential filing of Emergency Procedures Manuals
3. Chapter 3 Common Information Requirements
    - Add new guidance for uncommon terms
    - Add new filing requirement and guidance for management systems and related programs
    - Add new guidance for consultations and Emergency Management consultations
4. Guide A Facilities Applications
    - Add new guidance for effects assessments and preparing for and responding to emergencies
    - Update references to CSA Z662
5. Guide R Transfer of Ownership, Lease or Amalgamation
    - Update references to CSA Z662
6. Guide T – Leave to Open
    - Add new filing requirement for pressure testing
7. Guide AA Post Certificate or Order Requirements
    - Revise filing requirement for Emergency Procedures Manuals
8. Chapter 7 Reference Documents
    - Add new orders
9. Appendix 1 Filing Manual Checklists
    - Update Chapter 3 and Guide T checklists

National Energy Board
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403-299-3561

Content Checklist

The following list of pages in the work is issued so that you may check to see that your copy is up to date.

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Chapter 6

Chapter 7

Appendix 1

Instructions to Insert and Filing Record

Remove old pages	Insert new pages
Title Page	Title Page
Update	
**File behind the title page, before the table of contents*	
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projects on federal lands. The *Canadian Environmental Assessment Act, 2012*, defines federal lands as:

(a) lands that belong to Her Majesty in right of Canada, or that Her Majesty in right of Canada has the power to dispose of, and all waters on and airspace above those lands, other than lands under the administration and control of the Commissioner of the Yukon, Northwest Territories or Nunavut;

(b) the following lands and areas:

i. the internal waters of Canada, in any area of the sea not within a province,

ii. the territorial sea of Canada, in any area of the sea not within a province,

iii. the exclusive economic zone of Canada, and

iv. the continental shelf of Canada; and

(c) reserves, surrendered lands and any other lands that are set apart for the use and benefit of a band and that are subject to the *Indian Act*, and all waters on and airspace above those reserves or lands.

Fee Simple Owner

The person or legal entity that is in the legal possession of land. Usually it is the person named on the title.

Fish

Includes (*a*) parts of fish, (*b*) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (*c*) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals [*Fisheries Act* s.2.(1)].

Fish Habitat

Spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes [*Fisheries Act* s.2.(1)].

Group 1 and Group 2 Companies

In 1985, for financial regulatory purposes, the Board divided the pipeline companies under its jurisdiction into two groups: Group 1 companies with more extensive systems; and Group 2 companies that operate smaller systems.

Heritage Resources

Cultural, historic, archaeological and paleontological resources are collectively known as heritage resources and can include pre-contact and post-contact features.

Human Health	A state of complete physical, mental and social well-being, and the ability to adapt to the stresses of daily life; it is not merely the absence of disease or infirmity.
Human Health Assessment	Considers the effect of hazardous substances, environmental factors and exposure conditions on local and regional populations. It may consist of qualitative and quantitative assessments.
Management Systems	The management system set out in sections 6.1 to 6.6 of the *National Energy Board Onshore Pipeline Regulations* [OPR s.1].
Migratory Bird	A migratory bird referred to in the convention, and includes the sperm, eggs, embryos, tissue cultures and parts of the bird. [*Migratory Birds Convention Act, 1994* s.2(1)]
Mitigation	In respect of a project, the elimination, reduction or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means.
Monitoring	Activities for resolving specific outstanding environmental issues, observing the potential environmental effects of a project, assessing the effectiveness of mitigation measures undertaken, identifying unanticipated environmental issues and determining the action required based on the result of these activities.
Navigable Water or Waterway	Includes a canal and any other body of water created or altered as a result of the construction of any work. As well, a navigable water is considered as any body of water capable, in its natural state, of being navigated by floating vessels of any description for the purpose of transportation, recreation or commerce, and may also be a human-made feature such as a canal or reservoir.[1]
Navigation	Use of a vessel for transportation, recreation, or commerce on a navigable waterway.
Owner	For the purposes of sections 86 to 107 of the *National Energy Board Act*, the 'owner' is not restricted to the fee simple owner or to freehold lands[2]. In this regard, an owner may include any

1 The changes to the NEB Act do no restrict the NEB's consideration of the impacts of a project on navigation and navigation safety to the Schedule of "navigable waters" that is included in the *Navigation Protection Act.*

2 Sections 75 and 85 of the NEB Act describe the nature of an 'owner':

FYI – *Order MO-006-2016 Compelling Publication of Emergency Procedures Manuals* required under subsection 32(1.1) of the OPR

With respect to Emergency Procedures Manuals, applicants are reminded that, subject to redaction and exemption provisions set out in *Order MO-006-2016* (Filing A79720), companies are required to publish the entirety of their emergency procedures manuals applicable to their NEB-regulated facilities on their or their affiliate's internet site for public viewing.

The Board anticipates that the version of the Emergency Procedures Manual published on a company's website would be sufficient for filing in most regulatory proceedings. Requests from regulatory proceeding participants for a version to be filed other than the version published on a company's website would be considered on an individual basis by the Board and be subject to the considerations noted above in Section 1.5 Confidential Filing.

1.6 Previously Filed Material

If an applicant wishes to refer to documents previously filed with the Board (e.g., company manuals, programs, standards or procedures) and those documents are still current, rather than resubmitting the documents, the applicant may:

- indicate when, under what circumstances and under what Board file number (if known) the information was filed;
- identify the version of the document referenced to indicate that it matches the previously filed version; and
- identify the section of the document being referenced (if applicable).

1.7 Pre-Application Meetings Guidance Notes

- Applicants may request a pre-application meeting to clarify filing requirements with the NEB. The Pre-Application Meetings Guidance Notes describe the process for requesting a meeting.
- For projects subject to a hearing, the applicant should file a Pre-Application Project Description with the Board three months before applying to the Board. The Pre-Application Project Description allows the Board to initiate its public engagement and enhanced aboriginal engagement activities, as well as its Participant Funding program if applicable. For information on what to include in a Project Description, please see the Pre-Application Project Description guidance found on the NEB website.

1.8 Public Engagement Resources

The Board has a variety of public engagement resources, including videos and online or print publications, that applicants can use to inform potentially affected persons about the NEB and its processes. On the NEB's website there is a detailed list of our publications and what each is used for. (See Guidance for Companies on NEB Publications under *Participation & Lands*.

1.9 Updates

It is the Board's intent to update this document on a scheduled basis and when updates are necessary. The Board would appreciate any comments readers might have with respect to the

content, usability or other matters associated with this document that could assist with future updates and revisions.

All comments may be directed to the Board by:

E-mail: filingmanual@neb-one.gc.ca

Facsimile: Secretary at (403) 292-5503

Mail:

Secretary
National Energy Board
517 Tenth Avenue SW
Calgary, Alberta
T2A 0A8

The Board will communicate its future revision process and schedule and any interim updates at www.neb-one.gc.ca.

1.10 Measurement, Conversion Factors and Commodity Description

Where possible, the Board would prefer that information within applications be presented in the International System of Units (SI), although it is helpful to include the imperial equivalent as well.

The following conversion factors should be used:

- millimetre (mm) = 0.0394 inches
- metre (m) = 3.28 feet
- kilometre (km) = 0.62 miles
- cubic metre (m^3) = 35.3 cf
- cubic metre = 6.29 bbl
- kilopascal (kPa) = 0.145 psi

If other conversion rates are used, indicate this fact and provide the rates used.

Gas

For gas volumes, market requirements, estimates of reserves, and productive capacity estimates will be at a temperature of 15ºC and an absolute pressure of 101.325 kPa. Gas composition should be expressed in mole percent, and the heating value of the gas should be expressed in megajoules per cubic metre (MJ/m^3). Volumes are requested to be in metric units as cubic metres (m^3) and production rates as cubic metres per day (m^3/d). The imperial equivalent would be cubic feet (cf) and cubic feet per day (cf/d) respectively.

Liquids

Descriptions of crude oil and equivalents will include, at a minimum:

- classification of the crude oil;
- specific gravity;
- sulphur content upon which the classification is based; and
- other properties when they are important to the design of the facilities or third party interests, for example:
  - viscosity or water content could be important to the design of the facilities; or
  - impurities could be of concern to third parties if more than one product is transported on the same pipeline.

Natural gas liquids (NGL) composition should be expressed as a percent and vapour pressure will be at a specified temperature.

Descriptions of refined hydrocarbons must include the type of product and any properties that might be important to the design of the facilities or third party interests.

All other liquid commodities must be described in sufficient detail for the NEB to understand the nature of the commodity and how it might affect the design of the proposed facilities or third party interests.

All liquids volumes, with the exception of NGL and cryogenic liquids, will be submitted as the volume such product would occupy at a temperature of 15ºC and an absolute pressure of 101.325 kPa, unless otherwise stated in the application. For NGL and cryogenic liquids, the temperature and pressure at which the submitted volumes are measured will be provided.

Liquid volumes are requested to be expressed as m^3 and production rates as m^3/d. The imperial equivalent would be in barrels (bbl) and barrels per day (bbl/d), respectively.

1.11 Filing with the National Energy Board

Parties who have the ability to file documents electronically are expected to file documents through the Board's electronic document repository at www.neb-one.gc.ca. Any person who has the ability to access documents through the repository must accept service of a notification that the document is in the repository rather than requiring a hard copy of the document be served.

For more information about filing electronically, please refer to the *Filers Guide to Electronic Submission* and the *Memorandum of Guidance on Electronic Filing*. Both of these documents are available on the Board's Internet site at www.neb-one.gc.ca. Please note that e-mails are not considered electronic filing and will not be accepted in a hearing.

The Board's electronic document repository will contain the full text of only those documents filed electronically (following the procedures mentioned above) and in hard copy. When documents are filed by hard copy or facsimile, the Board will undertake to file the documents on the submitters behalf. However, in some cases, the Board may choose to create an electronic placeholder for documents too large to submit electronically to the repository. In cases such as this, it will not be possible to view or search these documents. They will be made available for viewing in the Board's library.

Companies are reminded not to file their security documents electronically, although they need to be available for examination by the NEB during audits, inspections or other NEB regulatory activities. For further information please refer to the **"National Energy Board Security Advisory – NEB SA 2007-03 Security Sensitive Documents"** at the following link on the NEB website: http://www.neb-one.gc.ca/sftnvrnmnt/scrt/dvsr/2007/2007-03nb-eng.html.

If you are filing an application by hard copies, you must file 25 copies. If you file electronically, one hard copy must be subsequently filed[3]. The hard copy must have attached to it a signed copy of the Electronic Filing Receipt that the system will return to the filer upon receipt of the electronic document. Please file your completed application with the NEB and address it to:

Secretary
National Energy Board
517 Tenth Avenue SW
Calgary, AB T2R 0A8
Telephone: 403-292-4800
Facsimile: 403-292-5503

3 There is an exception to this requirement for export order applications filed in the Online Application System.

Chapter 3 Common Information Requirements

While each application is unique, the Board expects to see the following common elements:

- a description of the action being sought by the applicant;
- a description of the purpose of the application;
- how the applicant's management system and related set of programs informs the application and project design;
- details regarding consultation activities and outcomes; and
- details regarding notification made to commercial third parties.

Note that any terms used in the application that are not considered to be broadly accepted or understood by industry should be defined.

The following sections describe these common information requirements. For further details on information required in applications, see Chapter 4 and Chapter 5.

3.1 Action Sought By Applicant

Goal

The application states the request being made and what action is being requested of the Board.

Filing Requirements

Section 15 of the Rules requires the following information in an application:

15.(1) Every application shall

(*a*) contain a concise statement of the relevant facts, the provisions of the Act or any regulations made under the Act under which the application is made and the nature of, and justification for, the decision or order sought;

(*b*) contain, in addition to the information that is required by the Act and any regulations made under the Act, any other information that explains or supports the application, including information referred to in published policies and guidelines of the Board; and

(*c*) set out the name, address, telephone number and any other telecommunications numbers of the applicant and the applicant's authorized representative, if any.

(2) Every application shall be divided into consecutively numbered paragraphs, each of which shall be confined as nearly as is practicable to a distinct portion of the subject-matter of the application.

Guidance

Applicants must, in addition to looking at the *Filing Manual*, have regard to the NEB Act and regulations relevant to the filing for direction on what needs to be included.

3.2 Application or Project Purpose

Goal

The application provides clearly articulated reasons for the application.

Filing Requirement

Provide a description of the purpose of the proposed project.

Guidance

Explain the reason for the application, including a discussion of the need that would be addressed by the project.

3.3 Management Systems and Programs under the OPR

Goal

To demonstrate how an applicant's management system required under the OPR will support and achieve adequate safety and environmental protection in the context of the current project application.

Filing Requirement

An applicant must provide:

- an overview of its management system, including a description of:
    - how programs required under the OPR are coordinated within the management system to promote safety and environmental protection; and
    - the process for any necessary modifications to the management system.

Guidance

The NEB conducts ongoing reviews of company management systems and compliance with the requirements of the OPR through its auditing oversight. However, in addition to this, it is important for public transparency and clarity that applicants explain how safety and environmental protection are integrated, coordinated and controlled within their management systems and will be ensured for any proposed new facility.

A carefully-designed and well-implemented management system supports a strong culture of safety and is fundamental to keeping people safe and protecting the environment. Sections 6.1 to 6.6 of the OPR detail the required elements of a company's management system. It must be a systematic approach designed to effectively manage and reduce risk through necessary organizational structures, resources, accountabilities, policies, processes and procedures, and must include measures to evalute effectiveness and promote continual improvement.

A company's management system must also coordinate the following five programs:

- Emergency Management Program to ensure appropriate emergency preparedness and response (OPR section 32).
- Integrity Management Program to ensure the pipeline system continually operates within its design parameters (OPR section 40).
- Safety Management Program to protect workers and the public from occupational and process hazards (OPR section 47).
- Security Management Program to protect people, property and the environment from malicious damage (OPR section 47.1).
- Environmental Protection Program to avoid or reduce adverse effects on the environment (OPR section 48).

Section 6.5 of the OPR lists a number of processes and requirements that must be part of a company's management system and each of the above five programs.

Section 6.2 requires the appointment of an Accountable Officer and that their name and acceptance of responsibilties be filed with the Board. For further information on the OPR and related supporting documentation, please refer to the NEB's website.

A company's management systems applies to the entire lifecycle of a project, from planning and design, through construction and operation, to abandonment. It is therefore relevant at all stages of a project, including the application stage.

FYI – Examples…

The information to fulfill many of the requirements in this *Filing Manual* for pipeline projects should be based upon a company's management system processes. For example:

- Engineering design details required in Guide A.1 for facilities applications should be based upon implementation of processes within the Integrity Management Program, such as hazard identification, risk assessment, development of control and monitoring measures, and identification of legal requirements. Such processes will be similarly applicable to applications for abandonment (Guide B), variances related to physical activities (Guide O), leave to open (Guide T), etc. Design details may also be affected by other programs, such as the security assessment for the project conducted under the Security Management Program.
- Implementation of processes within the Environmental Protection Program will support the information requirements for the environmental and socio-economic assessment, such as in Guide A.2.6.1 (identification and analysis of effects) and Guide A.2.8 (inspection, monitoring and follow-up). Processes related to accidents and malfunctions within the Emergency, Safety and Security Management Programs can similarly contribute to these Guide requirements.

Various management system processes will also apply throughout the application stage, such as ensuring the training and competency of those involved in the development of the project design and of the application documents; quality assurance; document and record control; management of change if design details are altered; and ensuring that work performed by consultants and contractors is consistent with all obligations and responsibilities under the company's management system.

The Board expects an applicant to have applied relevant components of its management system and programs to the planning and design of the proposed project and related application

documents, and to have reviewed those components for necessary modification in the event the proposed project goes ahead.

An application that is lacking (such as containing an incomplete discussion of hazards, risks and controls) might indicate that the applicant's management system and program components are inadequate. The Board expects companies to prevent such deficiencies, correct any that are identified, avoid similar deficiencies in future applications, and to apply lessons learned as broadly as possible.

3.4 Consultation

The Board expects an applicant to have a company-wide Consultation program that establishes a systematic, comprehensive and proactive approach for the development and implementation of project-specific consultation activities. A Consultation program should be appropriately integrated into a company's overall management system to provide protection for the public, employees, property and the environment throughout the lifecycle (design, construction, operation, maintenance, abandonment) of a pipeline system.

The Board expects applicants will consider consultation for all projects. Depending on the project scope, that could mean carrying out extensive consultation activities or a simple consultation activity such as notifying a single landowner. Applicants are responsible to justify the extent of consultation carried out for each application. Applicants may also make use of the Board's publications to inform potentially affected persons about the NEB and its processes. On the NEB's website there is a detailed list of our publications and what each is used for. (See *Guidance for Companies* on NEB Publications under *Participation & Lands.*

The following information is required within the application:

- An overview of the policies and goals of the Consultation Program;
- A description of the design of the project-specific consultation activities; and
- A description of the outcomes of the project-specific consultation activities.

Each of these information requirements is discussed in further detail in the following sections.

If no project-specific consultation activities are implemented, an explanation is required.

The Board also expects companies to conduct effective public consultation activities during the construction and operation phases of a project. The Board's requirements for public consultation related to operations and maintenance activities on pipelines can be found on the NEB's website in the "Operations and Maintenance Activities on Pipelines Regulated Under the *National Energy Board Act:* Requirements and Guidance Notes: (January 2013)".

3.4.1 Policies and Goals of the Consultation Program

Goal

The application outlines the corporate policy or vision with respect to consultation and the principles and goals that guide the applicant's Consultation Program.

Filing Requirements

Provide an overview of the applicant's Consultation Program, which should include, but not be limited to:

- the corporate policy or vision with respect to consultation;
- the principles and goals established for the applicant's Consultation Program; and
- a copy of the Aboriginal consultation policy, if established, along with any documented policies and principles for collecting traditional knowledge or traditional use information, if applicable.

Guidance

The Board expects an applicant to develop and implement a Consultation Program to anticipate, prevent, mitigate and manage conditions which have the potential to affect persons and groups. A Consultation Program should be based on the elements of a standard management system (for example, the management system elements described in the NEB's Onshore Pipeline Regulations). Additional guidance is provided in the NEB's Draft Expectations for Public Involvement Programs [Filing A22289].

The Board also expects applicants to consider the language needs of the potentially affected persons and/or groups and include a description of this consideration in their application. Further to s.41 of the *Official Languages Act*, the Board is committed to fostering the full recognition and use of both English and French in Canadian Society. The Board recognizes the importance of considering official languages when developing and implementing a consultation program, to result in effective communication with potentially affected persons in the official language of their choice.

3.4.2 DESIGNING PROJECT-SPECIFIC CONSULTATION ACTIVITIES

Goal

The application indicates why the design of project-specific consultation activities is appropriate for the nature of the project in alignment with the company's Consultation Program.

Filing Requirement

Provide a description of the project-specific consultation activities and the factors that influenced the design.

Guidance

When designing project-specific consultation activities, applicants should consider that the Board expects consultation activities will, at a minimum:

- be initiated as soon as possible in the planning and design phase of a project;
- provide clear, relevant and timely information to potentially affected persons or groups;
- be accessible to and inclusive of all potentially affected persons or groups;

- be responsive to the needs, inputs and concerns of potentially affected persons or groups, and demonstrate how this informed the proposed design and operation of the Project; and
- continue throughout the regulatory process, as well as the construction and operation phases of a project.

When consultation includes Aboriginal groups, applicants should consider establishing a consultation protocol in collaboration with these groups that takes into consideration their needs and cultural elements.

When relevant, applicants are also encouraged to consider establishing a consultation agreement with a municipal or regional government regarding pipeline and other energy-related developments that takes into consideration the unique needs of the municipality or regional government.

Project-Specific Consultation Activities

Describe project-specific consultation activities. At a minimum describe the:

- potentially affected persons or groups to be consulted, including:
  - local residents, landowners and land or waterway users;
  - government authorities; and
  - Aboriginal groups;
- potential information needs of the persons or groups;
- process by which potentially affected parties can comment to the Board before the Board makes its decision;
- manner in which official languages were considered, including how project information will be provided and communicated to potentially affected persons or groups in the official language of their choice to ensure effective and meaningful participation in the Board process;
- methods and timing of consultation;
- procedure for responding to issues and concerns; and
- plans for future consultation and follow-up throughout the operations phase of a project, which may include activities such as public awareness programs, continuing education and consultation with persons regarding proposed operations that may potentially affect them.

Design Factors

Consider the following factors, where appropriate, in the design of consultation activities:

- the nature, magnitude and areal extent of the project;
- the potential environmental and socio-economic effects of the project;
- effects of the project on navigation and navigation safety;
- potential broad impacts of the project that may extend beyond the project boundaries (e.g., noise and air emissions);

- all registered and non-registered interests held in the lands that may be affected by the project, which may include individuals or organizations identified through the consultation process;
- the specific or distinct needs of various potentially affected persons and groups;
- the location of Indian reserve lands, Métis settlements and traditional territories;
- existing local community concerns or sensitive issues that may be exacerbated by the project;
- the potential for malfunctions or accidents and risk associated with the project as it relates to emergency management;
- the availability of emergency services;
- the compatibility of the project with current land use and zoning;
- the proximity of the project to urban centres;
- different project routing, design and construction alternatives, and their potential impacts on persons and groups; and
- any other relevant factors not included in this list.

Consultation Methods

Communicate the project information in a format and manner that is appropriate to the audience. Determine the means of communicating project information in conjunction with the potentially affected persons or groups, if possible.

Consultation methods may include but not be limited to:

- project brochures, either mailed or hand delivered;
- periodic newsletters;
- advertisements in local newspapers;
- radio spots;
- a project web page;
- telephone calls;
- open house meetings;
- project questionnaires;
- facility tours;
- on-site meetings;
- personal visits; or
- workshops.

Identifying Aboriginal Groups

Aboriginal groups potentially affected by the project can be identified by:

- considering the location of Indian reserve lands, Métis or other Aboriginal populations, and the traditional territory that may be claimed by one or more Aboriginal groups;
- contacting regional Aboriginal organizations or government agencies familiar with local Aboriginal groups;
- requesting a preliminary list of potentially impacted Aboriginal groups from Natural Resources Canada's Major Projects Management Office or the NEB;
- consulting the Aboriginal and Treaty Rights Information System (ATRIS) of Indigenous and Northern Affairs Canada; and
- taking into consideration past experience working in the area.

Local and Traditional Knowledge

Consider augmenting the application with local and traditional knowledge and integrating the information and knowledge, where appropriate, into the design of the project. Where local and traditional knowledge is obtained, provide an opportunity for the individual who provided the information to confirm the interpretation of the information and how it was used in the project design.

Identifying Government Authorities

Ensure the appropriate government authorities (local, regional, provincial and federal) are included in the consultation process. In some cases, regulatory approval from another authority will be required. Contact that authority to determine their information requirements.

Table 3-1 (located at the end of Chapter 3) while not exhaustive, identifies federal authorities that might need to be contacted for certain projects. The list is intended for assistance and guidance only – applicants are responsible for obtaining all necessary approvals for any project. The Board accepts no responsibility for the accuracy or completeness of this list.

Consultation Regarding Emergency Management

Sections 32 to 35 of the OPR describe requirements for an Emergency Management Program which apply to a company's operations. Effective emergency response planning requires liaison and consultation with federal, provincial, and municipal governments, Aboriginal groups, and associated first responders. The Board assesses a company's Emergency Management Program throughout operations through its compliance verification activities.

For a proposed project, it may also be appropriate to initiate consultation during the application process with those agencies and organizations that may be involved in an emergency response. The need for and depth of consultation with these agencies and organizations should be informed by:

- the assessment of potential risks associated with the project;
- the level of public concern regarding emergency management planning and emergency response associated with the project; and

- the extent to which an applicant's emergency response plans would interact with, and rely on those of first responders and other agencies for initial or ongoing response activities.

Agencies consulted with may include but not be limited to:

- police;
- fire departments, including volunteer fire departments;
- emergency medical services;
- provincial emergency management organizations;
- provincial regulators and ministries of environment;
- federal departments;
- municipalities;
- Aboriginal groups;
- waste management companies; and
- spill co-operatives.

The goal of the consultation is to ensure that those agencies and organizations that may be involved in an emergency response related to a proposed project have been adequately consulted and that any concerns raised have been considered and addressed as appropriate. Applicants are reminded to refer to guidance throughout Section 3.4 Consultation when designing and implementing consultation activities related to emergency management and regarding how the applicant considered the results of its consultation.

FYI – Reminder: Consultation Regarding Emergency Management

Sections 33 to 35 of the OPR outline the requirements applicable to a company operating a pipeline for establishing and maintaining liaison with agencies that may be involved in an emergency and for developing a continuing education program for appropriate organizations and agencies.

Additional information on the NEB's expectations regarding liaison and consultation activities as they pertain to a company's Emergency Management Program can be found on the NEB's website and the OPR Guidance Notes.

3.4.3 IMPLEMENTATION AND OUTCOMES OF PROJECT-SPECIFIC CONSULTATION ACTIVITIES

Goal

The application describes the results of the consultation conducted to-date for the project, in sufficient detail to demonstrate:

- that all persons and groups potentially affected by the project are aware of: the project, the project application to the Board, and how they can contact the Board with outstanding application-related concerns;
- that those potentially affected by the project have been adequately consulted, and
- that any concerns raised have been considered, and addressed as appropriate.

Filing Requirement

Provide confirmation that the information provided to potentially affected persons and groups describes:

- the Applicant's intention to apply to the Board for approval of its project,
- how they can contact the Board with outstanding application-related concerns before the Board makes its decision on the application, and
- the actual date of filing the application with the Board, and information where to find the application and associated documents on the NEB website, including the file number.

Describe the outcomes of the consultation activities conducted for the project, including, but not limited to:

- the persons or groups consulted;
- the methods, dates and locations of consultation activities;
- the information that was distributed to persons or groups, which in most cases will include:
    - the location, starting and ending points, route and main components of the project;
    - a map or maps at appropriate scale that show all major components of the project, the routing of the project, the workspace required, the location of proposed facilities such as pump and compressor stations, and the location of any major towns, roads, water bodies or other landmarks in the area of the project;
    - the proposed timing and duration of construction;
    - the potential environmental and socio-economic effects of the project and how those effects will be addressed;
    - how public safety will be addressed;
    - the emergency response information for agencies and organizations that may be involved in an emergency response and other stakeholders;
    - how comments or concerns raised by potentially affected persons or groups will be addressed throughout the consultation process;
    - how interested persons can participate further in the consultation process;
    - company contact information;
    - the proposed timing of filing the application with the Board;
    - NEB contact information and website; and

    - the NEB pamphlet (blue colour) *Information for Proposed Pipeline or Power Line Projects that Do Not Involve a Hearing* if the project is not subject to a hearing. (For hearings, provide the NEB pamphlet (yellow colour) *Information for Proposed Pipeline or Power Line Projects that Involve a Hearing*)
- a summary of the comments and concerns expressed by potentially affected persons or groups;
- a summary of the response made regarding each of the concerns or comments, including:
    - the measures taken, or that will be taken to address those concerns or an explanation of why no further action is required to address the concerns or comments; and
    - the methods and dates that the response was made to the person(s) who raised the concern(s);
- how outstanding concerns will be addressed;
- how input from persons or groups has influenced the design, construction or operation of the project;
- details regarding discussions with Aboriginal groups, which includes each of the items listed above and:
    - the identity of all Aboriginal groups contacted, how they were identified, when and how they were contacted and who was contacted;
    - any relevant, non-confidential written documentation regarding consultations;
    - any concerns about the project raised by Aboriginal groups that you have discussed with any government department or agency, including when contact was made and with whom; and
    - if you are aware of any involvement of the Crown in consultations with the Aboriginal groups with respect to the project, describe the Crown involvement; and
- the details and results of the consultation undertaken with all persons who may be affected by any changes to the project.

Guidance

Implementation

The Applicant should provide confirmation of adequate notice by providing a description of:

- the process by which potentially affected persons and groups can contact the Board before the Board makes its decision; and
- the methods and timing of notification and consultation.

The Applicant should maintain records and be prepared to further demonstrate the adequacy of the notice that was provided to all potentially affected persons and groups.

See Guidance in 3.4.2.

For consultation activities that could involve a large number of people, it might not be practical to list all individuals that were consulted. It may be more practical to describe the main groups and why they are identified. For example, where a group has a common concern or association, describe:

- the group;
- their location;
- their common concern; and
- the authority of any representatives of the group.

Concerns

To close the loop in consultation activities and address concerns before they become complaints, the Board expects applicants to:

- seek to understand the full nature of concerns expressed by persons or groups;
- consider the feasibility of any mitigation proposed by persons or groups to address those concerns;
- respond to concerns; and
- work with persons or groups to jointly resolve concerns.

3.4.4 JUSTIFICATION FOR NOT UNDERTAKING CONSULTATION ACTIVITIES

Goal

The application provides justification of why it was not necessary to carry out a consultation activities with respect to the proposed project.

Filing Requirement

Explain why consultation activities were considered unnecessary.

Guidance

Consultation activities might not be necessary if the applicant can demonstrate that one or more of the following scenarios applies:

Equivalent Consultation Activities

In the event that the project has been the subject of an equivalent consultation process carried out under the auspices of another agency, or conducted by another company or agency:

- describe the alternative consultation activities;
- provide evidence that these activities identified the project that is being applied for and its potential impacts; and
- demonstrate that these alternative activities meets the requirements of this section of the manual.

For example, where a road widening requires that an existing NEB-regulated pipeline be relocated, the responsible transportation authorities might conduct consultation activities for the road widening that includes consultation regarding the relocation of the pipeline. The pipeline application would then include a description of these consultation activities and how it meets the requirements of this manual.

No or Negligible Environmental or Socio-economic Effects

Applicants will be conducting environmental and socio-economic assessments of the project in accordance with the requirements of the NEB Act, the CEAA 2012 and this manual (see Guide A within Chapter 4).

Through this assessment process, applicants will determine the potential adverse effects of the project. If the project's potential environmental and socio-economic effects are negligible, a public consultation activities might be unnecessary. A project with negligible effects might exist where the following conditions are met:

- the proposed project is of a small scale and is localized;
- all construction is to occur on previously disturbed land;
- there is no potential for an impact on navigation;
- the land acquisition process is complete and landowner concerns have been addressed;
- there are no residents near the proposed project;
- no other land uses or waterway uses or interests would be affected;
- there is no potential for traditional use activities to be affected by the project;
- there is no potential for cumulative environmental effects; and
- there would be negligible environmental effects associated with construction and operation of the project.

Additional information...

Be sure to demonstrate how any environmental and socio-economic effects of the project are negligible.

Facilities within Company Owned or Leased Lands

The application is a facilities application that relates to:

- work contained within the confines of land the applicant owns or leases (not including land upon which the applicant holds an easement only), except where those facilities or activities:
  - relate to an increase in the storage or disposal of toxic substances;
  - could result in increased noise emissions;
  - could result in increased emissions of air contaminants; or
  - could result in local nuisance, including the potential for increased dust or traffic.

Other Scenarios

Consultation activities may not be feasible if the project involves

- additional acquisitions are required to support the day-to-day operations of a pipeline or international power line (e.g., standby plant, or materials and supplies); or
- work performed as part of a contingency project such as emergency repairs

3.5 Notification Of Commercial Third Parties

Notification of commercial third parties is normally required when the outcome of the application will affect such matters as:

- tolls or tariffs;
- the ability of third parties to receive, transport or deliver commodities; and
- supply, transportation or sales contracts.

The Board must be assured that all commercial third parties who could be affected by the decision are aware of the application and have had the opportunity to comment should they wish to do so.

Goal

The application includes evidence that all interested commercial third parties that could be potentially affected by the outcome of the application have been advised of the application.

Filing Requirements

1. Confirm that all commercial third parties who could potentially be affected in any way by the outcome of the application have been notified and include:
   - the method used to notify those parties; and
   - when the parties were notified.
2. Provide details regarding the concerns of third parties. This might include:

- confirmation that no concerns were raised;
- confirmation that concerns raised have been resolved; or
- a list of the commercial third parties who have outstanding concerns and a discussion of their unresolved concerns.

3. List the self-identified interested third parties and confirm they have been notified.
4. Provide an explanation in the event that notification of commercial third parties was considered unnecessary.

Guidance

Identifying Commercial Third Parties

Commercial third parties include those who could be directly or indirectly commercially affected by the outcome of an application. This should include shippers and could also include

commodity suppliers, end users and other pipelines. The following are examples of when to consider certain commercial third parties to be affected by an application:

- consider all shippers to be affected parties requiring notification of all tolls and tariff applications filed pursuant to Part IV of the NEB Act and all applications that could significantly affect tolls or tariffs;
- consider all shippers, suppliers and end users to be affected parties when the outcome of the application would significantly affect service on the pipeline; and
- consider operators of competitive facilities, whether regulated by the NEB or not, to be affected commercial third parties when the outcome of the application could reasonably be expected to have a significant adverse impact on their operations.

Third parties involved in physical construction activities (e.g., contractors, material vendors, consultants) or that supply food and accommodation would not normally be considered to be affected commercial third parties.

Notification

Inform the commercial third parties that an application has been, or will be, submitted to the NEB and provide a brief description. Notification should normally be done no later than the filing date of the application with the NEB. A copy of the application may be provided with the notification, be provided upon request or may constitute notification.

When determining the level of detail in the notification, consider the:

- scope of the project;
- potential impact on commercial third parties;
- nature of any concerns raised by commercial third parties; and
- resolution of concerns raised.

In general, the greater the scope of the project and the potential impact on commercial third parties the more information would be required. Further, more detailed information would normally be required when concerns have been raised by commercial third parties and remain unresolved at the time of filing.

Where the outcome of the application could affect specific commercial third parties, notify the individual parties. However, where a group with similar interests might be affected, such as western Canada producers or a group of end users, the applicant may choose to notify a recognized organization representative of the group such as the Canadian Association of Petroleum Producers or the Industrial Gas Users Association.

Concerns

Where concerns have been raised and resolved, include a discussion of the resolution when it would assist the NEB in making a decision. When providing a list of unresolved concerns, provide any other information that would assist the NEB to understand the issues, including a discussion of any attempts to reach agreement, such as a summary of the consultative process that was used prior to filing the application.

Self-identified, Interested Third Parties

Self-identified, interested third parties refers to third parties who have indicated to the applicant that they have an interest in the application or one or more types of applications filed with the NEB.

Whether any commercial third parties could be affected by the application or not, the NEB expects that the applicant will notify all self-identified interested third parties.

When Notification is Not Required

Notification might not be required if the outcome of the application is not expected to result in any significant impacts on commercial third parties, for example:

- facilities applications for routine operational maintenance and repair where:
  - access to facilities might be temporarily interrupted during construction, but service will not be interrupted; or
  - the toll impact would be immaterial or considered to be a routine adjustment in a negotiated tolls agreement;
- applications for construction on an owner-operated pipeline where the owner is the sole shipper;
- applications concerning crossing matters, leave to open, deviation, change in class location or right of entry that would not affect tolls or the operation of the pipeline; and
- applications to change the name of a pipeline owner that does not involve the sale of the pipeline or a change in operation.

The requirements for consultation, described in Section 3.4 – Consultation, continue to apply even if it is decided there are no commercial third parties to notify of an application.

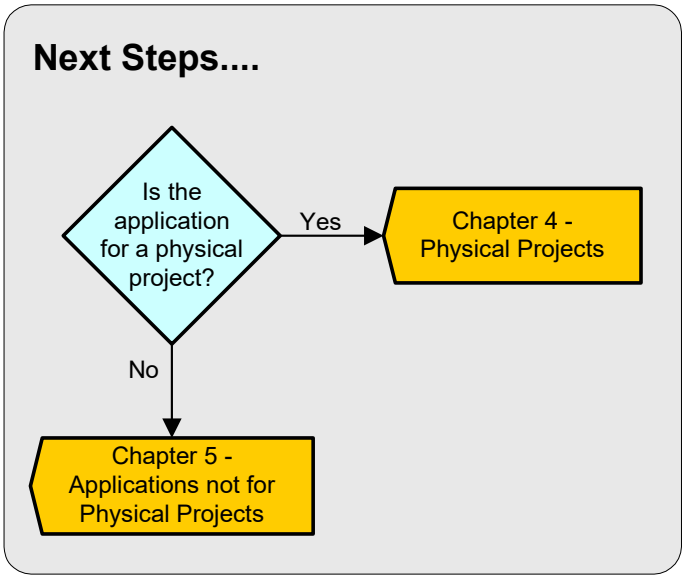


Table 3-1: Other Potential Federal Contacts

Project Considerations	Contact
Does the project occur in a National Park or National Historic Site or is it likely to affect a National Park or National Historic site?	Parks Canada
Is the project likely to take place on, involve dredge or fill operations in, draw water from or discharge water to a historic canal administered by and operated by Parks Canada?	Parks Canada Public Services and Procurement Canada
Is the project likely to affect Indian reserve lands?	Indigenous and Northern Affairs Canada
Will the project occur on lands in the Yukon or the Northwest Territories that are under the control, management and administration of Indigenous and Northern Affairs Canada and require the issuance of a Class A or Class B permit?	Indigenous and Northern Affairs Canada
Is the project likely to result in international air pollution?	Environment and Climate Change Canada
Is the project likely to result in the deposition of materials into the marine environment?	Environment and Climate Change Canada
Does the project occur in a wildlife area as defined in the *Wildlife Area Regulations*?	Environment and Climate Change Canada
Could the project affect wildlife species at risk or their critical habitat or the residences of individuals of those species?	Environment and Climate Change Canada Fisheries and Oceans Canada Parks Canada
Is the project likely to result in: • killing, capturing, taking or possessing a migratory bird or its nest or eggs; • collecting eiderdown or depositing oils or other harmful substance in areas frequented by migratory birds; • an effect on migratory bird habitat within a bird sanctuary; or • the release of a species of bird not indigenous to Canada?	Environment and Climate Change Canada
Will the project affect the natural flow of an international river (i.e., water flowing from any place in Canada to any place outside Canada) or affect the actual or potential use of that river outside Canada?	Environment and Climate Change Canada
Is the project likely to result in the release of a deleterious substance?	Environment and Climate Change Canada
Is the project likely to affect wetland function?	Environment and Climate Change Canada Parks Canada
Is the project likely to affect the operation of a railway company or property owned or leased by a railway company, or require the installation of telephone, electricity, telegraph or other wire services for a railway facility?	Canadian Transportation Agency Transport Canada if *Railway Safety Act* is involved
Will the project result in cutting timber or constructing roads in a Federal Forest Experimental Area?	Natural Resources Canada
Does the project involve producing or holding explosives in a magazine?	Natural Resources Canada
Does the project involve replacing or repairing a bridge?	Public Services and Procurement Canada

representative subset of those elements. In that way, the analysis of potential effects focuses on the components of those biophysical or socio-economic elements where project-environment interactions are more readily assessable, and on the interactions that may be of concern to the public or Aboriginal groups (often termed Valued Environmental Components [VECs] or Valued Socio-Economic Components [VSCs]). The valued components selected must:

- be indicative of predicted effects that could result from the project over time;
- have baseline data available in order to determine the significance of effects; and
- be able to reflect measurable changes that result from the project effects over time.

The analysis should result in an understanding of where uncertainty about project-environment interactions may exist, or where information gaps necessary to predict effects may remain.

Spatial and Temporal Boundaries

The spatial and temporal boundaries must:

- be provided for each valued component, along with a rationale for selecting those boundaries;
- include the area over which effects on the valued components may occur. This area could include a population boundary, home range, airshed, watershed, Aboriginal traditional land and resource use areas, or municipal or regional planning districts;
- include the duration that each valued component may be affected;
- consider the effects of the project on the valued component and the extent to which those effects are measurable;
- include all phases of the project; and
- not be constrained by jurisdictional boundaries.

Analysis

The analysis methods must be fully disclosed and meet the study needs. In addition to meeting the requirements of other regulations (*e.g., Species at Risk Act* [SARA], *Migratory Bird Convention Act* [MBCA], *Fisheries Act,* etc.), the analysis of project effects must take into account local, regional and federal policy or management objectives (*e.g.*, recovery strategies, action plans, management plans and land use plans) and thresholds. Where there are no management objectives or thresholds, include information on the current state of knowledge on the valued component. After a review of the available literature, if the state of knowledge is incomplete or there is substantial uncertainty, identify any information gaps, and indicate if and how they will be filled. Where uncertainty exists about the project effects on a valued component, describe how the inspection and monitoring program will reduce the uncertainty.

Where there is applicable local and traditional knowledge, it must be included in the ESA. See Section 3.4 – Consultation, for further details on consulting with Aboriginal persons and groups and gathering traditional knowledge.

Effects Assessment for Accidents and Malfunctions

The prevention of any accidents and malfunctions associated with NEB-regulated projects is the NEB's goal. In the event an accident or malfunction does occur, the Board will hold its regulated companies accountable for an appropriate response under their Emergency Management Program. This program is required by section 32 of the OPR (see also Section 3.3).

The applicant's ESA must identify and assess the effects on workers, the public, and biophysical and socio-economic elements of all potential accidents and malfunctions.

Accidents and malfunctions and associated emergencies can result from numerous events, including pipeline and equipment failure, human error, natural perils such as tornadoes, hurricanes, floods, or earthquakes, and terrorism or other criminal activities. Multi-hazard emergencies, such as an earthquake, may cause pipeline breaks, fires and explosions, which result in injury and further property damage.

The level of detail provided on potential effects of accidents and malfunctions will depend on the:

- type, scale, and location of the proposed project;
- type(s) and characteristics of product(s) to be transported or processed;
- environmental and socio-economic sensitivities within potentially affected areas;
- the results of the applicant's consultation program regarding emergency management issues associated with the project; and
- extent to which an applicant's existing Emergency Management Program and other plans and manuals address the issues and concerns about the proposed project.

An applicant should describe its methodology for considering the potential effects of malfunctions and accidents associated with the project. As appropriate, information should include a description of how:

- project-specific information and circumstances informed the effects assessment;
- the applicant's existing Emergency Management Program and overall management system informed the design, planning, and proposed mitigation for the project regarding malfunctions and accidents and emergency management;
- the applicant used a risk informed approach in addressing issues related to malfunctions and accidents and emergency management. If a formal risk assessment was used, it should be described;
- consultation information has informed emergency management planning for the project;
- tools and methods were used to calculate potential release volumes including a worst-probable release volume;
- tools and methodologies such as oil trajectory and spill transport modeling, fate and behaviour modeling, ecological risk assessment, human health risk assessment, and air dispersion modeling informed the effects assessment; and
- potential product fate and behaviour informed effects assessment and response planning.

Abandonment, Deactivation, and Decommissioning

As described in Guide B (Abandonment), an application for abandonment must be filed for all NEB-regulated facilities when they have reached their end of life, including associated decommissioned facilities. A public hearing is required under the NEB Act. Pipeline deactivation and decommissioning activities may also be subject to regulatory provisions within the OPR (Refer to Guide G for Deactivation and Guide K for Decommissioning). Applicants must consult those regulations and associated guidance notes as appropriate.

In an application for proposed new facilities, the NEB typically only examines abandonment and decommissioning activities in a broad context. A separate environmental and socio-economic assessment, specific to decommissioning or abandonment activities, will be required in the future when the facilities are ready to be decommissioned or abandoned.

The level of detail provided may be constrained by the uncertainties inherent with forecasting a phase of the project that may be several decades in the future. However, an applicant is still required to provide a preliminary abandonment plan as part of its ESA to support its estimates of funds required by the NEB to be set aside during the life of the pipeline for abandonment. The plan should:

- describe what pipeline components would be removed, reused or left in place and provide the rationale for doing so. Where site specific situations require special methodology then details should be provided*;*
- provide the reclamation objectives or principles to be applied to abandonment;
- provide sufficient information to demonstrate that abandonment of the project will return the right of way to a state comparable with the surrounding environment;
- be developed in consultation with the persons or groups potentially affected;
- provide the estimated total cost to abandon, as well as the Collection Period over which revenue will be accumulated (if proposing a trust as a set-aside mechanism for abandonment funding); and
- determine the significance of any effects remaining following mitigation, including the significance of cumulative effects.

Post-Abandonment

Pursuant to subsection 48.1(1) of the NEB Act no personal shall, without the Board's leave, make contact with, alter or remove an abandoned pipeline. Please contact the Board for filing requirements for proposed contact with, alteration or removal of an abandoned pipeline.

A.2.6.2 Mitigation Measures

Filing Requirements – Mitigation Measures

1. Describe the standard and project specific mitigation measures and their adequacy for addressing the project effects, or clearly reference specific sections of company manuals that provide mitigation measures. Ensure that referenced manuals are current and filed with the NEB.

FYI – Reminder…

See Section 1.6 – Previously Filed Material, for guidelines on referring to information already filed with the Board.

- If more than one mitigation measure is proposed as a possibility for any particular effect, provide the applicable criteria for selecting the mitigation to use, or describe how measures would be combined to mitigate against a single effect.
- If new mitigation measures are to be used, provide any test results or a technically-based rationale for their use and describe how their effectiveness will be evaluated.
- Ensure mitigation measures are appropriate for the scale of impacts predicted.
- If project effects cannot be avoided, mitigation must reduce or compensate for them.
- Where an applicant hires a third party to prepare its ESA, provide a statement committing to adopting and implementing all mitigation recommendations included in the ESA. Explain any mitigation recommendations not adopted and provide alternative approaches, as appropriate.
- Identify the conditions of approvals or permits required by other regulatory bodies related to the mitigation of environmental or socio-economic effects.

2. Ensure that commitments about mitigative measures will be communicated to field staff for implementation through an Environmental Protection Plan (EP Plan). An EP Plan might be simple and concise for smaller, less complex projects but for certain projects (see guidance below), the NEB may require a comprehensive EP Plan. An EP Plan must include all environmental commitments specific to the project and include or cross-reference other plans and programs relied on. Describe any plans or programs that may be used to mitigate potential effects (*e.g.,* waste management plans, invasive species plans, horizontal directional drill contingency plans, heritage resource discovery contingency plans, etc.).

3. Describe plans and measures to address potential effects of accidents and malfunctions during construction and operation of the project (see guidance under Identification and Analysis of Effects, Accidents and Malfunctions in Subsection A.2.6). Under the OPR and associated guidance material, companies are required to have a Security Management Program and an Emergency Management Program (see Section 3.3). These programs must be submitted or referenced for each application.

Guidance – Mitigation Measures

Mitigation measures are:

- developed during a project's feasibility study;
- developed during project design;
- defined in the project plan;
- refined as the ESA progresses and the project's predicted environmental and socio-economic effects become more certain; and
- may be standard or project-specific measures.

The identification and analysis of effects and mitigation measures may be presented together.

Mitigation Options

At the application stage of the proposed project, many mitigation measures may still be tentative, subject to further detailed design and to site-specific environmental conditions. For these cases, the ESA must describe:

- the different mitigative options available and being considered; and
- the criteria that would be used for selecting the actual mitigation to be implemented.

Including the options and selection criteria for contingency measures in an EP Plan may avoid having to submit variance applications to the NEB if changes in field conditions require use of construction alternatives.

FYI – Reminder…

In some cases, the proposed route or site, route segments, facility design or construction methods may themselves be forms of environmental mitigation when compared to alternative routing, design or construction methods. This may be demonstrated in the application's discussion of alternatives (see Subsections 4.2.2 and A.2.3) by:

- identifying which design features and construction methods are considered to be mitigation;
- identifying any alternatives that were considered to these features or methods and the proposed routing; and
- providing a comparative analysis of the mitigation measures considered.

Construction Methods

An applicant must justify its proposed construction method and why this method is the best alternative. Applicants should consider construction methods that minimize environmental and socio-economic effects while allowing for safe and efficient installation of a pipeline. For example, low impact pipelining uses a narrower strip of land to excavate the trench, install the pipe, compact the subsoil and replace the topsoil all in one continuous operation. This method has been effective in minimizing adverse impact on agricultural-land, forested land and sensitive habitats, such as native prairie. When using this method, topsoil disturbance is reduced, with stripping just slightly wider than the trench. Once the pipeline is lowered into place, the subsoil is returned to the trench and mechanically compacted in layers. The topsoil is then replaced over the levelled trench and land is immediately available for production.

The applicability of low impact pipelining methods will vary according to pipe diameter, topography, and other project-specific factors. However the principles of minimizing disturbance to the land and optimizing construction efficiencies typically result in lesser environmental effects.

Additionally, avoiding instream construction across navigable waterways outside of seasonally dry and frozen conditions can result in less impact to navigation and navigation safety.

Environmental Protection Plan (EP Plan)

Although the NEB expects an EP Plan to be prepared for all projects, the size and scope of an EP Plan will vary. An EP Plan is specific to a project or activity and is a tool to communicate a company's environmental protection procedures and mitigation measures to employees, contractors, and regulators. The purpose of an EP Plan is to document and communicate all project-specific environmental commitments made by an applicant and the associated mitigation measures in a clear and user-friendly format.

The NEB may request the EP Plan to be filed during the examination of an application, or as a condition of approval to be complied with before construction. The NEB may expect a comprehensive EP Plan to be filed under the following circumstances:

- when the applicant does not have up-to-date company manuals on file with the NEB that document its environmental protection procedures;
- if site-specific or project-specific mitigation or protection measures are provided by the applicant as commitments to avoid or address predicted adverse environmental effects in the application; or
- if the application and assessment process is lengthy or complex, and environmental protection measures and commitments are contained in several different places or documents. (*e.g.*, responses to information requests).

A comprehensive EP Plans is typically required for larger facility applications under section 52 or 58 of the NEB Act. In these circumstances, the NEB encourages companies to submit a draft EP Plan containing all preliminary environmental protection and mitigation measures with their application to assist the NEB in assessing the application. Should the project be approved, the NEB often requires the company to file an updated EP Plan before starting construction.

When preparing its EP Plan, an applicant should consider:

- identifying specific goals for protecting environmental elements and addressing socio-economic elements;
- describing the environmental protection objective for each goal, and providing mitigative options to meet those objectives based on site-specific conditions; and providing decision-making criteria for choosing which measures and procedures to implement and under what circumstances for each objective.

Draft EP Plan

If a draft EP Plan is filed with the application, it should contain:

- the purpose of the EP Plan, a summary of the project with a map, and a description of how environmental compliance would be met for the project;
- the resource-specific mitigation to be applied for the project, and the general environmental protection measures for each phase of construction;
- (or reference) relevant construction specifications and drawings to execute environmental mitigation measures, and the corresponding environmental alignment sheets;

- (or cross-reference) other more detailed plans as applicable (*e.g.,* waste management plan, emergency and security management plans, contingency plans, and other element-specific management plans and programs);
- the assignment of accountabilities and responsibilities for carrying out practices and procedures, making criteria-based decisions and confirming compliance with the Environmental Protection Program (required by the OPR); and
- a table of contacts for reporting environmental incidents as required by other regulators (and the OPR).

Final EP Plan

A final comprehensive EP Plan must:

- include all items required in a draft EP Plan;
- if relevant, include an amendment or concordance table detailing changes from the draft to final version of the EP Plan;
- incorporate all environmental commitments made during the NEB application assessment process, including all requirements set out in permits, orders, certificates, or any other authorizations;
- include a copy of any NEB discussion or assessment of environmental matters as set out in or attached to the NEB certificate or order;
- include additional requirements as a result of season-specific field surveys conducted before construction;
- include the GPS locations for environmentally-sensitive areas identified in the surveys; and
- include updated environmental alignment sheets summarizing all pertinent environmental issues and the corresponding mitigation measures that will be implemented during construction.

Variances to the EP Plan

It is the responsibility of the company to apply to the Board for variances to the commitments made in the application, in the application assessment process or as required in the project approval conditions. It is therefore of benefit to the applicant to incorporate decision making criteria for choosing which measures and procedures to implement and under what circumstances. Where this is done, there may be sufficient flexibility to respond to changes that result in the field without filing a variance application.

Further information about variation applications can be obtained from the NEB Operations Project Manager assigned to the project or activity.

Waste Management Plan

A waste management plan for the control of contaminated and non-contaminated waste from the project is required. The plan must describe the purpose of the plan, the types of waste anticipated, the resulting prevention and mitigation measures to be applied to manage that waste,

and how any relevant reporting requirements will be met. The plan must also include a reporting structure, contact list and reference to other applicable legislation.

Mitigation for Potential Effects of Accidents and Malfunctions

Describe how the Company's programs, plans and manuals, required under the OPR, interact to prevent and mitigate potential accidents, malfunctions and their potential effects.

There may also be project-specific plans and commitments an applicant should consider as part of its mitigation of potential effects of accidents and malfunctions. As noted in Section 3.3, these must also be incorporated into a company's programs as appropriate.

Specifically, applicants must consider the following when preparing their application. The Board recognizes that some of this information may not be available until following regulatory approval if granted. Further, some of the following may be described on an applicant's publically available website within its Emergency Management Program discussion as required by *Order MO-002-2017 Compelling Publication of Emergency Management Program Information on Company Websites* (Filing A81701). If an applicant wants to rely on this information as part of the regulatory proceeding record, it should ensure that the information is accessible without a subscription or password, file a copy of the information with the Board, and comply with applicable rules of procedure and procedural directions for the proceeding.

As appropriate, applicants should provide a description of how the applicant has considered or will consider the following as relevant.

- relevant regulatory instruments such as *Order MO-006-2016* regarding publication of emergency procedures manuals on company websites, sections 32 to 35 of the OPR, and incident notification and reporting requirements;
- project-specific response planning measures such as geographic response plans, response times including response in difficult to access areas and in adverse weather conditions, and the use and availability of models;
- specific mitigation related to the potential fate and behaviour of the product;
- personnel and response equipment available and their capabilities and limitations;
- responder health and safety;
- public safety through notification and evacuation planning or other means;
- training and exercises to inform response planning including training or funding arrangements with first responders and other organizations;
- coordination of company emergency response plans with relevant federal, provincial, municipal and Aboriginal community emergency response plans and coordination of responding agencies within the incident management system;
- mutual aid agreements in place in the event that the incident exceeds company resources and how these resources would be cascaded in;
- volunteer management during an incident;

- development of a waste management plan as it pertains to waste generated during an emergency response; and
- financial liability and compensation mechanisms in place as required by regulation or through company commitments.

A.2.6.3 Evaluation of Significance

Filing Requirements – Evaluation of Significance

1. After taking into account any appropriate mitigation measures, identify any remaining residual effects from the project.
2. Describe the methods and criteria used to determine the significance of adverse effects, including defining the point at which any particular effect on a valued component is considered "significant".
3. Evaluate the significance of residual adverse environmental and socio-economic effects against the defined criteria.
4. Evaluate the likelihood of significant, residual adverse environmental and socio-economic effects occurring and substantiate the conclusions made.

Guidance – Applicant's Evaluation of Significance

Evaluating environmental and socio-economic effects consists of assessing:

- whether the effects are adverse;
- whether the adverse effects are significant; and
- whether the significant adverse effects are likely.

A common way for an applicant to assess project effects is to compare the quality of the existing environment with the predicted quality of the environment if the project is approved and built. The direction of change to the environment may be adverse, neutral or beneficial.

The following criteria may be useful in assessing the significance of a project's adverse effects:

- magnitude;
- duration;
- frequency;
- geographic extent;
- ecological context; and
- reversibility or degree of permanence.

In applying these criteria to each residual effect, an applicant must define each criteria and the range considered within each criteria. To help evaluate the significance of a particular effect and define the point at which it becomes "significant", consider providing rating attributes (*e.g.,* low / moderate / high) for each significance criteria and defining the range of each attribute. An

applicant must also describe how each criterion or combination of criteria was used to reach the applicant's significance conclusion.

Definitions for rating criteria are expected to be quantitative and based on standards, guidelines, objectives or other established and accepted ecological thresholds. In the absence of any such references or regulatory guidance, or where these are not quantitative (*e.g.,* it may not be appropriate to set thresholds to determine "acceptable levels of change", in relation to all socio-economic effects), then rating attribute definitions must be qualitative and based on available research literature. Applicants must also consider the level and nature of concerns raised by the public and address issues of concern to Aboriginal groups potentially affected by the project.

The significance of adverse effects could also be assessed by comparing effects to conformity requirements within approved land use plans or conducting a quantitative risk assessment.

Where professional judgement is used to determine the significance of adverse effects, the extent of reliance on professional judgement must be described and rationale for the extent of the reliance must be provided. An applicant's ESA must provide an evaluation of the likelihood and significance of any adverse environmental effects, for consideration by the NEB.

Assessing the likelihood of significant adverse effects must be based on the probability of occurrence and state the level of scientific uncertainty. If a qualitative determination of the likelihood of significant adverse effects is used, provide a clear rationale and supporting information.

A.2.7 Cumulative Effects Assessment

Goal

The application must include information about the interactions between predicted residual environmental and socio-economic effects of the project and effects from other projects or activities that have been or will be carried out. This information must provide enough detail to:

- identify and analyze predicted cumulative environmental and socio-economic effects;
- identify proposed mitigation measures to protect the environment and address socio-economic effects, and to analyze their effectiveness; and
- evaluate the significance of any predicted cumulative effects.

A.2.7.1 Scoping and Analysis of Cumulative Effects

Filing Requirements – Scoping and Analysis of Cumulative Effects

1. Identify the valued components for which residual effects are predicted, and describe and justify the methods used to predict any residual effects.

> **FYI – Additional Information…**
>
> Both significant and non-significant residual effects of a project may contribute to cumulative effects and must be considered. Residual effects are those effects remaining after implementing the applicant's mitigation measures. If the applicant can clearly demonstrate that no residual effects are predicted, further analysis of cumulative effects is not required.

2. For each valued component where residual effects have been identified, describe and justify the spatial and temporal boundaries used to assess the potential cumulative effects.

3. Identify other physical facilities or activities that have been or will be carried out within the identified spatial and temporal boundaries for the cumulative effects assessment.

4. Identify whether the effects of those physical facilities or activities that have been or will be carried out would be likely to produce effects on the valued components within the identified spatial and temporal boundaries.

5. Where other physical facilities or activities may affect the valued components for which residual effects from the applicant's proposed project are predicted, continue the cumulative effects assessment, as follows:

- Consider the various components, phases and activities associated with the applicant's project that could interact with other physical facilities or activities.

- Provide a description of the extent of the cumulative effects on valued components.

- Where professional knowledge or experience is cited, explain the extent to which professional knowledge or experience was relied upon and justify how the resulting conclusions or decisions were reached**.**

Guidance – Scoping and Analysis of Cumulative Effects

Cumulative Effects Assessment

Assessing cumulative effects typically requires the same method of analysis as described in the project-specific effects assessment. As discussed in Subsections A.2.3 to A.2.6., the baseline information, project description and project-specific mitigation measures already captured in the application must be provided in enough detail to characterize the extent of the residual effects of the project.

Subsection A.2.6 and Tables A-2 and A-3 outline the type of information required for a project-specific effects assessment. Although the tables also make specific note of information required for a cumulative effects assessment for valued components, all information requirements contained in the tables should be evaluated, as appropriate, as a guide for applicants in completing a cumulative effects assessment.

A cumulative effects assessment differs from a conventional project-specific effects assessment in that it typically includes:

- larger geographic study areas;

- longer time frames;

- environmental and socio-economic effects associated with physical facilities or activities that may not be directly related to the applied for project (e.g., upstream or downstream facilities not within the Board's jurisdiction, a proposed highway project or residential sub-division in the study area, ongoing forestry or agricultural activities); and

- spatial boundaries that are generally not constrained by jurisdictional boundaries**.**

The level of effort and scale of the cumulative effects assessment should be appropriate to:

- the nature and context of the project under assessment;
- its potential residual effects; and
- the environmental and socio-economic setting (e.g., an increased level of detail may be required when rapid or intensive development of the region has occurred or is anticipated, or particular environmental or socio-economic sensitivities or risks are involved, such as significant Aboriginal traditional use).

Applicants should also consult the CEA Agency's "*Operational Policy Statement – Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012*".

Other Physical Facilities or Activities

Provide clear reasoning, with supporting rationale, for selecting the other existing and future physical facilities or activities to be included within the cumulative effects assessment. When identifying other physical facilities or activities, include those physical facilities or activities likely to take place as opposed to those not reasonably foreseeable or hypothetical.

Consideration of other physical facilities or activities that have been or will be carried out within the defined spatial and temporal boundaries must, at minimum, include:

- existing projects and activities;
- those physical facilities or activities for which formal plans or applications have been made or are likely to occur; and
- other related project or activity development assumptions that support and are consistent with the long term economic or financial assumptions (Guide A.3) and engineering assumptions (Guide A.1) made in the application, even if formal plans or applications have not yet been made.

The Courts have said that the decisions of responsible authorities are not required to "consider fanciful projects by imagined parties producing purely hypothetical effects"[8]. However, the NEB does have discretion to consider future development scenarios if it is reasonable to anticipate that the applied for project could contribute to the potential cumulative effects resulting from such future development (i.e. if the economic feasibility of the applied for project is contingent upon the future development). The extent to which an applicant must consider the effects associated with other future physical facilities and activities and the associated depth of analysis will depend upon the relative contribution of the applied for project to the predicted cumulative effects.

Where intensive or expansive development of the region is occurring or anticipated, details regarding the flexibility of project-specific mitigation and monitoring strategies become particularly important and should also be provided with the application to demonstrate the ability of the applicant to adapt its plans in the future should the resulting cumulative effects differ from

8 Bow Valley Naturalists Society v. Canada (Minister of Canadian Heritage), [2001] F.C.J. No. 18 (F.C.A.) at para. 75

those predicted (further Filing Requirements and Guidance for project related monitoring are provided in Subsection A.2.8 below).

The Board recognizes that an applicant's depth of analysis in assessing the effects associated with other future physical facilities and activities will depend on the feasibility and practicality of assessing the effects associated with those facilities and activities. For example, future effects associated with projects not within the direct control of the applicant and for which there is limited information, or which are still in early planning stages, are inherently more challenging to assess. Despite this, an applicant should use the best available information or undertake additional work to assess these potential effects. Any uncertainties associated with the information used and any assumptions or limitations associated with the analysis must be explained.

A.2.7.2 Mitigation Measures for Cumulative Effects

Filing Requirements – Mitigation Measures for Cumulative Effects

Describe the general and specific mitigation measures, beyond project-specific mitigation already considered, that are technically and economically feasible to address any cumulative effects.

- If appropriate, provide any additional mitigation measures being considered as alternatives to the preferred cumulative effects-specific measures (e.g., adaptive or contingency measures).
- If more than one mitigation measure is available for any particular cumulative effect, then provide the criteria that would be applied to select the mitigation to use (e.g., for the application of contingency plans).
- If new or unproven mitigation measures are to be used, provide any test results or a technically-based rationale for their use and describe how their effectiveness would be evaluated.
- Indicate the likelihood of success in reducing or avoiding cumulative effects by the application of the mitigation measures identified.

Guidance – Mitigation Measures for Cumulative Effects

Mitigation of cumulative effects may include broader-scale planning measures or initiatives to reduce interactions and effects from multiple projects or activities. Potentially effective mitigation of cumulative effects may not be within the direct control of, or undertaken by, the applicant. For example, operators may have cooperation plans in place to prevent simultaneous occurrence of activities or projects, or multiple operators may cooperatively make use of existing disturbed areas to prevent new disturbances. Further, regional-level multi-stakeholder planning initiatives may also be evaluated as a means to mitigate cumulative effects. Where such measures or initiatives are in place, an applicant should clearly explain why the identified mitigation would be appropriate to mitigate any cumulative effects. If the mitigation is not within the direct control of the applicant, it should state who would implement the mitigation and how that responsible party intends to monitor implementation of the mitigation.

Various forms of compensation (e.g. habitat offsets) should also be considered as part of an applicant's proposed mitigation, as appropriate.

If monitoring or research programs are identified as a means to adaptively manage cumulative effects, the applicant should explicitly identify how those programs will be used to avoid or reduce effects (i.e., which management actions will be triggered when certain ecological or socio-economic effects are identified, or thresholds reached).

A.2.7.3 Applicant's Evaluation of Significance of Cumulative Effects

Filing Requirements – Applicant's Evaluation of Significance of Cumulative Effects

1. After taking into account any appropriate mitigation measures for cumulative effects, identify the remaining residual cumulative effects.

2. Describe the methods and criteria used to determine the significance of remaining adverse cumulative effects, including defining the point at which each identified cumulative effect on a valued component is considered "significant".

3. Evaluate the significance of adverse residual cumulative effects against the defined criteria. If the total cumulative effect on a given valued component is considered significant, describe the incremental increase in total cumulative effects caused by the project.

4. Evaluate the likelihood of significant, residual adverse cumulative environmental and socio-economic effects occurring and substantiate the conclusions made.

Guidance – Applicant's Evaluation of Significance of Cumulative Effects

Refer to Subsection A.2.6 for guidance on evaluating the likelihood and significance of adverse residual environmental and socio-economic effects on a project-specific basis. The key difference between determining the significance of project-specific effects versus cumulative effects is the consideration of other physical facilities and activities. The evaluation of significance must focus on the total cumulative effect that may be created from all physical facilities and activities considered in combination with the proposed project. The definition of significance must be clearly explained and take into account local, regional and federal policy and management objectives (*e.g.* recovery strategies, action plans, management plans and land-use plans) and thresholds.

A.2.8 Inspection, Monitoring, and Follow-up

Goal

The application describes the inspection, monitoring and follow-up plans and programs that will be in place to prevent, identify, and address potentially adverse environmental effects over the life of the project.

Filing Requirements

1. Describe inspection plans to ensure compliance with biophysical and socio-economic commitments, consistent with sections 48, 53, and 54 of the OPR. Inspection plans must be sufficiently detailed to demonstrate adequacy and effectiveness and must:

- identify those positions accountable and responsible for monitoring and ensuring environmental compliance, and confirm they are independent of the contractor, as required by Sections 53 and 54 of the OPR;
- reference inspection procedures, and describe the accountability and reporting structure for environmental inspectors; and
- describe minimum qualifications and experience, including training requirements of individuals who will be undertaking inspection and monitoring responsibilities, as required by Sections 46 and 54 of the OPR.

2. Describe the surveillance and monitoring program for the protection of the pipeline, the public and the environment as required by section 39 of the OPR. The monitoring program must be sufficiently detailed to demonstrate its adequacy and effectiveness and must:
   - include methods for:
     - identifying and tracking environmental and socio-economic issues;
     - resolving any environmental and socio-economic issues specific to the project, including any sampling programs or site-specific investigations as appropriate; and
     - monitoring the effectiveness of mitigation and reclamation, based on established reclamation criteria (see requirements of individual elements in Table A-2) as well as the applicant's performance measures and targets for each mitigation measure;
     - the frequency or schedule for implementing the procedures listed above; and
     - the criteria for assigning specific monitoring procedures to environmental and socio-economic issues;
3. Consider any particular elements in the Application that are of greater concern and evaluate the need for a more in-depth monitoring program for those elements.
4. For CEAA designated physical activities, identify which elements and monitoring procedures would constitute follow-up under the CEAA 2012.

Guidance

The NEB recognizes three categories of verification conducted by the applicant. These apply both during and upon completion of construction through the life of the facility:

- Inspections to confirm both implementation of commitments made during the application process and fulfillment of NEB-approval conditions to promote safety, security and environmental protection;
- Monitoring to confirm if mitigation objectives for a specific project, program, or the continued operation of the project have been met; and
- Identify and address any potential short term and long term issues or effects experienced, but not predicted.

A more rigorous type of monitoring program to confirm the effectiveness of an element-specific program may be appropriate when:

- the project or activity is contributing to regional issues of concern;
- the project involves new or unproven technology or is not routine in nature;
- the project involves uncertain effects;
- the project involves new or unproven mitigation measures whose effectiveness is uncertain;
- a familiar or routine project is proposed in a new or unfamiliar environmental and socio-economic setting.

A condition on the project certificate or order may be imposed to require the applicant to file post-construction monitoring reports after the completion of construction. The time period for required reporting can vary, but typically ranges from one to five years following the commencement of project operations. Projects requiring a longer period of time to reach reclamation goals (*e.g.,* work in areas difficult to revegetate, such as native prairie) or requiring an in-depth, element-specific program may be required to submit monitoring reports of greater scientific rigour or over a longer time period.

- For CEAA 2012 designated physical activities, follow-up on identified elements or issues of concern to:
  - verify the accuracy of the environmental assessment; and
  - determine the effectiveness of any measures taken to mitigate the adverse effects of the project.

Follow-up would generally be an in-depth, scientifically rigorous program.

Revisions to Applicant Plans and Programs

The NEB encourages applicants to use its current and relevant plans and programs to support the inspection, monitoring and follow-up components of its application. If these plans or programs have been previously filed with the Board, provide the document title, version number, latest revision date, date of filing and the NEB file number. Refer to Section 1.6 for more information regarding these documents. If a project is approved, applicants must file any updates required to incorporate the approved project.

Table A-2: Filing Requirements for Biophysical Elements

FYI – Reminder …

Filing Requirements for an effects assessment are described in Subsections A.2.5 and A.2.6.

Table A-1 in Subsection A.2.4 provides examples of the circumstances and interactions that lead to the need for detailed information and considers all phases of an applied for project (construction, operation, maintenance and abandonment), including the potential for accidents and malfunctions during each phase.Table A-2 was designed to assist applicants in identifying the required information specific to individual biophysical elements.The elements and circumstances described in the tables are not exhaustive.

Applicants must adapt the framework below to logically present the detail and analysis of their particular projects. Where project effects may overlap different element categories, it may be appropriate to define a more suitable or specific element or valued component. For example, where there is a risk of soil contamination reaching groundwater, then "groundwater contamination" might be an appropriate element to assess. This could more accurately focus on the issue of concern, avoid repeating information under both soils and water categories, and provide a more focused assessment.

Physical and Meteorological Environment	
Filing Requirements	**Guidance**
1. Describe the general topography of the project area and any particular physical features crossed by the project or which may affect the project. 2. Identify any areas of ground instability. 3. Identify areas of potential wind or water erosion. 4. Describe the local and regional climate. Also identify the potential for extreme weather events, such as wind, precipitation, and temperature extremes. 5. Identify any areas with potential for acid-generating rock and describe the effects if exposed as a result of the project. 6. Identify and describe any areas with permafrost conditions. 7. Describe how local or regional physical and meteorological conditions could affect the project, including how changing conditions may affect the project over the lifetime of the project.	This section provides information on factors or elements of importance that may affect project design. Give special consideration to the following components which may be either directly or indirectly affected by the project or which may impact project design: • unstable slopes or other unfavourable geotechnical conditions, including areas with the potential for landslides, mudflows, slumping, subsidence; • seismicity; • flooding, migrating watercourses and eroding banks; • extreme weather events; • seasonal and peak flow regime at stream crossings; • river ice processes and potential ice jams; • permafrost; and • areas with acid rock. Local and regional climate should be described in terms of the range of its variability and the severity (*i.e.,* frequency and duration of maximums and minimums) as well as its averages. In regions with the potential for extreme weather events, describe and assess these events in terms of: • their frequency and intensity; and how any applicable design standards reduce the potential threat (also see the Filing Requirements contained in Guide A.1.2 Engineering Design Principles). Meteorological impacts must be considered in the context of: • climate variability and trends (including changes in extreme weather events); • winter ground conditions; and • areas where warming trends may influence hydrologic conditions, such as runoff. In areas where permafrost regimes exist: • identify and quantify permafrost conditions,

	including: • discontinuous permafrost; • high ice content soils; • thaw-sensitive slopes; and • riparian areas. • develop baselines for: • near-surface ground temperatures; • active-layer conditions; • slope stability; and • movement potential on the approaches to river crossings. • describe how any changes in the permafrost regime may affect the project over its lifetime.
Soil and Soil Productivity	
Filing Requirements	**Guidance**
1. Describe general soil characteristics and the current level of disturbance associated with soils. 2. For agricultural lands or forested lands with agricultural capability, describe: • the soil classification, including the order, group, family, series and type of soil prior to construction, and quantify the soil classification; • the productivity of land and the type of agricultural resource; • the soil types in the study area highly susceptible to: i) wind and water erosion; ii) soil compaction; and iii) loss of structure and tilth; • any other soil types needing specific management or mitigation measures; and • soil conservation and protection measures. 3. Describe any contaminants of concern potentially associated with the project that may affect soil. 4. Describe the historical land use and the potential for contamination of soils or sediments. Describe any known or suspected soil contamination within the study area that could be re-suspended, released or otherwise disturbed as a result of the project. 5. If sediments or soils are contaminated, describe the applicable regulatory standards and all remediation, mitigation and monitoring measures that will be undertaken. 6. Describe the criteria for evaluating reclamation success. Explain how this evaluation would be undertaken and documented. Reclamation measures could include: • erosion control, other than re-vegetation; • soil reclamation; • drainage tile repair; • soil compaction alleviation; and	Soil profile descriptions for dominant soil types must consider: • soil horizons; • thickness of horizons; • texture; • colour; • chemical properties; and • organic content. The soils assessment and mitigative plan must consider: • soil salvage techniques (*e.g.,* soil stripping, including proposed width, grubbing, and alternative soil handling techniques); • soil separation maintenance measures; • erosion control measures, including drawings of proposed techniques, particularly at watercourse crossings; • wind erosion and wet soil shutdown procedures; and • soil compaction prevention measures. Where there is a potential for human health effects, see Table A-3. Where soil contamination may be present, consider the guidance provided in the Canadian Standards Association's (CSA) Z768-01 and Z769-00 standards for Phase I and II Environmental Site Assessments. In addition, the NEB's Remediation Process Guide (2011) may also be of value. Additional guidance: • The Canadian Soil Information Service (under Agriculture and Agri-Food Canada) provides access to soils information, including the *Canadian System of Soil Classification*, which describes current accepted standards for soil classification in Canada. • The Canadian Council of Ministers of the Environment (CCME) *Canadian Environmental*

• soil salinity reduction. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	*Quality Guidelines* (including Soil Quality).

Vegetation

Filing Requirements	Guidance
1. For lands where vegetation may be affected by the project, describe: • the pre-project diversity, relative abundance and distribution of vegetation species and communities of ecological, economic or human importance (*e.g.,* traditional use, tame pasture, native prairie, wetland or old growth); • the conservation status applicable to any particular species or communities; • the current level of disturbance associated with vegetation; and • the amount, merchantability and location of any merchantable timber to be removed during project construction. 2. Describe any weed infestations and other invasive and introduced species of concern. 3. Describe re-vegetation procedures to be implemented as part of the project, including: • re-vegetation techniques and the locations where they would be implemented; • seed mixes to be used, their application rates, and the locations for their application, or the criteria for determining these specifications, and a discussion of the use of seed certificates; • any fertilizers to be used, their application rates and locations, or the criteria for determining these specifications; and • contingency planting and seeding plans that include a description of any species of vegetation to be replanted, the locations for replanting, or the criteria for determining these specifications. 4. Describe the condition(s) to which the RoW and temporary work space will be reclaimed and maintained once construction has been completed. Explain the extent to which the ROW needs to be kept cleared or could be left to grow and provide the criteria relied on to determine this. 5. Describe the vegetation standards and controls to be implemented while constructing and operating the project. Describe any integrated vegetation management program, including: • the criteria and circumstances for applying chemical, biological or mechanical control methods; • the selection of plant species to be kept and planted to promote naturally low growing plant	The description of vegetated lands does not include industrial lands. Vegetation community descriptions must apply the most relevant and up to date ecological classification or mapping system. Reference any available provincial or territorial inventory and mapping standards and guidelines. Consultations with potentially affected Aboriginal groups may provide further information. Conservation status (provincial and COSEWIC) of ecological communities as well as plant species must be noted. Explain how communities in the study area were delineated (*i.e.,* existing mapping, remote sensing interpretation, or field mapping). Indicate the date of spatial data collection. Provide justification if field work was not carried out. The effects analysis on vegetation must consider: • change in vegetation cover caused by the project; • alternatives to clearing the entire ROW (include options and decision criteria for retaining vegetation in order to break lines of sight, control access, maintain wildlife corridors, maintain habitat connectivity, reduce fragmentation and reducing overall cumulative effects); • weed control measures (*e.g.,* prevention, treatment); • avoidance of any sensitive or rare communities and important individuals (*e.g.,* vegetation important to wildlife); and • seed mixes and replanting for re-vegetation purposes. Native and indigenous species adapted to local conditions should be used when the goal of revegetation is to naturalize or regenerate the area. Vegetation control programs, including the frequency of work, monitoring and inspection of RoW vegetation conditions, and control procedures, must consider: • the nature of the vegetation cover (*e.g.* species mix, characteristics) occurring along the RoW, and variations over different biogeographical areas; • the promotion or inhibition of different plant communities (naturally low or slow growing plant species versus predominantly tall or fast growing

communities; and • the use of herbicides, tree growth regulators or other chemicals, their application rates and protocols. 6. Describe criteria for evaluating reclamation success related to vegetation and how this evaluation would be undertaken and documented. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	species); and • the application of other integrated vegetation management practices. If herbicides or other chemicals may be used, consider: • the criteria for their use; • the concentrations, rates and methods of application; • their specificity and potential adverse environmental effects; and • referring to material safety data sheets.
Water Quality and Quantity	
Filing Requirements	**Guidance**
1. Provide a project-specific water use assessment identifying and describing the water resources and the quality of those resources potentially affected by the project, including: any need for water withdrawn from local waterbodies, the purpose, the quantities required, the waterbodies used as a supply source, the flow rate or volume of water available in the waterbody and how and where waste water would be discharged. 2. Describe any interactions between the project and groundwater. Where there is an interaction: • describe any potential changes in groundwater flows and any subsequent effects from the changes; and • identify any wells nearby, providing criteria for the spatial boundary considered, and describe the potential for well water quantity and quality to be affected. 3. Describe any contaminants potentially associated with the project that may affect water quality. 4. Describe mitigation for any potential effects on surface-, ground- or well-water quantity and quality, including the need for any specific pre- and post-construction monitoring. 5. Describe any applicable water management plans. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	The effects analysis regarding quality or quantity of ground or surface water (*e.g.,* lakes, watercourses, riparian areas, or man-made water bodies or structures) must consider: • withdrawal or discharge needs for the proposed project; and • any potential inter-basin transfers that might introduce undesirable biota. In addition to meeting the requirements of section 24 of the OPR by obtaining permits for hydrostatic testing, applicants must consider hydrostatic test water needs and management in its environmental effects assessment. Where the final details of hydrostatic testing have yet to be confirmed, applicants must still identify their expected needs, options available to them and the criteria they intend to apply to ensure protection of water resources. Applicants may identify any alternative sources of water (*e.g.*, recycled or brackish water) for the project. Also consider the potential to reuse test water from section to section for pipe testing. Project interactions with groundwater may result from crossing a shallow water table or specific project activities (*e.g.,* blasting). In these cases, consider the spatial extent and depth levels as well as water characteristics (*e.g.,* salinity). Consider and describe whether the project may affect evaporation and transpiration rates and therefore affect surface land use, especially in agricultural areas. If there is potential for contaminants affecting water resources, consider sediment or groundwater sampling for assessment of contaminants. Where there is a potential for human health effects, see Table A-3. Additional guidance: • The CCME's *Canadian Environmental Quality Guidelines* (including Water Quality). • Health Canada's *Guidelines for Canadian Drinking Water Quality*.

Fish and Fish Habitat	
Filing Requirements	**Guidance**
1. Identify fish species and their life stages in the study area, as well as their contribution to local fisheries or to ecological importance. 2. Describe the seasonal ranges, seasonal sensitive periods, habitat use, movements, and general population status of fish species identified above. 3. Identify any fisheries avoidance measures, mitigation, or other measures to protect and enhance fish and fish habitat, including protected areas in and near the study area. 4. Identify the need for an Authorization under paragraph 35(2)(*b*) of the *Fisheries* Act for a serious harm to fish that are part of a commercial, recreational or aboriginal fishery, or to fish that support such a fishery and discuss any applicable DFO guidance documents. 5. Describe, in detail, sensitive areas and sensitive habitats, including wetlands and riparian habitat. 6. Where fish-bearing watercourses would not be crossed by trenchless methods, either describe and justify the watercourse-crossing techniques to be used or the criteria for determining the techniques proposed for each watercourse crossing. *7.* Describe the timing of any instream work, including restricted activity periods and windows. 8. Describe the conditions to which the watercrossings and riparian zones would be reclaimed and maintained once construction has been completed. 9. Describe criteria for evaluating success of reclamation of fish-bearing water bodies and their banks, as well as riparian areas. Describe how and when this evaluation would be undertaken and documented. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	Applicants should work with the relevant provincial or territorial fisheries authorities to identify issues and appropriate mitigative measures, and where appropriate, Aboriginal groups. Where an authorization for serious harm to fish is required from DFO, outline any appropriate offsetting and monitoring. Where effects on fish and fish habitat may affect human health, see Table A-3. DFO has several guidance documents and information pieces that could be useful in dealing with fish and fish habitat. Please refer to the DFO National website for applicable materials and guidance. The document *Pipeline Associated Watercourse Crossings (3rd Edition)* – endorsed by DFO – provides guidance on best practices and meeting regulatory requirements. This document may be obtained through the NEB, the Canadian Association of Petroleum Producers (CAPP), the Canadian Energy Pipeline Association (CEPA) or the Canadian Gas Association (CGA).
Wetlands	
Filing Requirements	**Guidance**
1. Quantify, delineate and describe wetlands in the study area in the context of: • wetland class, ecological community type and conservation status; • abundance at local, regional and provincial scales; • distribution; and • current level of disturbance. 2. Identify and describe wetland capacities to perform hydrological, water quality, habitat or other ecological functions. 3. Identify a regional study area of sufficient size to	Wetlands include bogs, fens, marshes, swamps and shallow waters as defined in the Canadian Wetland Classification System (National Wetlands Working Group, 1997). The effects analysis regarding wetlands must consider any potential loss of wetland function. A higher level of assessment may be required for provincially or territorially significant wetlands, for wetlands of significance to Aboriginal groups or for features of significance. Discuss any applicable provincial or territorial classification schemes, and protection policies and requirements.

capture effects on wetlands within the larger drainage area. Include wetlands located outside of the local study area that may be affected by hydrological changes as a result of cumulative effects. 4. Detail the efforts to be taken to avoid impacting wetlands, mitigation, monitoring and any applicable compensation measures, for potentially affected wetlands. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	Applicants should consult with Environment and Climate Change Canada regarding mitigation for wetlands. Additional guidance: Useful information sources accessible from Environment and Climate Change Canada include: • The *Federal Policy on Wetland Conservation*; • The *Federal Policy on Wetland Conservation Implementation Guide*; • *Wetland Ecological Functional Assessment: An Overview of Approaches*; and • *Wetlands Environmental Assessment Guideline*.
Wildlife and Wildlife Habitat	
Filing Requirements	**Guidance**
1. Identify wildlife species of ecological, economic or human importance in the study area. Also describe the: • diversity, distribution and location; • abundance and population status; • life cycle; • seasonal ranges (*e.g.,* migration); • habitat requirements; • movements (*e.g.,* wildlife corridors); and • sensitive periods (*e.g.,* seasonal, diurnal and nocturnal). 2. For the wildlife identified above, describe and quantify the habitat type, including its: • function; • location; • suitability; • structure; • diversity; • relative use; and • abundance as it exists prior to project construction. 3. Describe any lands in the study area that might constitute sensitive areas and habitat for wildlife, or nearby environmentally-significant areas, such as National Parks, areas of natural or scientific interest, Migratory Bird Sanctuaries or other important bird areas or sanctuaries, National Wildlife Areas, or World Biosphere Reserves. 4. Identify wildlife management areas and established or proposed sanctuaries or other areas in or near the study area. 5. Describe the levels of disturbance currently affecting wildlife and habitat, such as habitat fragmentation and the extent of human access and use. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	The identification and description of wildlife presence in the area must include, but not be limited to, resident, temporary (*e.g.,* migratory), unique species or populations, and umbrella and keystone species. Mammals, birds, amphibians, reptiles and invertebrates may be relevant. The identification and description of wildlife of human importance must also consider consumptive (e.g., hunting, harvesting) and non-consumptive (e.g., bird-watching) values, as well as species of importance to potentially affected Aboriginal groups. The identification, description and quantification of habitat must include, but not be limited to: • breeding or rutting grounds, • nesting and denning sites; • wintering grounds; • hibernation or hibernaculum sites; • moulting, migration and staging areas; • movement corridors; • mineral licks; and • trees important to wildlife (*e.g.,* bat trees). Other sensitive areas and habitats include: • wetlands (and associated upland habitats); • riparian habitat; • forest interior habitat; • old growth; and • grasslands / native prairie. The effects analysis regarding wildlife and wildlife habitat must consider factors such as: • ecosystem functions; • the timing of construction activities in relation to sensitive periods for wildlife (*e.g.,* migratory bird breeding season); • varying degrees of wildlife habitat loss; • changes in habitat quality (*e.g.,* fragmentation, edge effects); • changes in human access; • disturbance to wildlife, including sensory (light and

Further, with respect to cumulative effects:
1. Describe the cumulative disturbance footprint of proposed and future physical facilities and activities within known key habitats (*e.g.,* migration corridors, denning or calving areas, feeding areas) and distribution of that footprint, quantitatively where possible. Describe the effects on the connectivity of key habitats.
2. Describe the cumulative effects on wildlife that could occur as a result of the timing of the proposed project in combination with other physical facilities or activities.
3. Describe how cumulative changes in access would affect wildlife mortality risk or habitat quantity and quality.
4. Compare the cumulative effect on each species assessed to any available species-specific thresholds or policies, and indicate to what degree a threshold is approached or exceeded.
	noise) disturbance from operation of above-ground facilities, including on birds and nocturnal species; and,
	• direct and indirect wildlife mortality.
	
	Ensure spatial boundaries for the study area and assessment are specific to the valued component and ecologically defensible (*e.g.,* winter range boundaries, migration routes, fawning and calving areas).
	
	When calculating the disturbance footprint or linear disturbance density, remember to include the total avoidance area experienced by the valued component, which may be considerably larger than the physical footprint itself depending on the valued component.
	
	Temporal considerations are also relevant. For example, effects on wildlife from noise and sensory disturbance, water usage or divergence, or waste stream emissions to air, land or water can be exacerbated by having a number of projects taking place simultaneously (or continuously over more than one season) in a watershed, breeding area or migratory pathway.
	
	Increased access to project areas, whether temporary or permanent, affects wildlife habitat, populations, distribution and interactions. Access may include not only human access but increased ease of access by predators or competing species.
	
	Examples of tools that may be used to assess cumulative effects on valued components include scenario-based models, spatial analysis using a geographic information system, and landscape level indicators of change (*e.g.,* linear density) (see the CEA Agency's Cumulative Effects Practitioners Guide, 1999).
	
	Applicants should note the requirements of applicable provincial, territorial and federal regulations (*e.g.,* the federal *Migratory Birds Regulations)*.
	
	Additional guidance:
	
	Environment and Climate Change Canada and its Divisions (*e.g.,* Canadian Wildlife Service) are sources of relevant information on:
	• wildlife and wildlife habitat;
	• Acts and Regulations, including the *Migratory Birds Convention Act*;
	• locations of National Wildlife Areas and Migratory Bird Sanctuaries; and
	• environmental assessment guides, including:
	  • *Environmental Assessment Guideline for Forest Habitat of Migratory Birds*;
	  • *Migratory Birds Environmental Assessment Guideline*;
	  • *Wetlands Environmental Assessment Guideline*;
	  • *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada*; and
	  • relevant Canadian Wildlife Service Technical Report Series publications.

	The Important Bird Areas database may be accessed through Bird Studies Canada or Nature Canada.
Species at Risk or Species of Special Status	
Filing Requirements	**Guidance**
1. For effects related to wildlife, fish, and plant species at risk or species of special status: • identify the species and their status; • provide the appropriate references to the SARA Schedules, or Committee on the Status of Endangered Wildlife in Canada (COSEWIC), provincial or territorial listing; • identify their habitat(s), including any critical habitat(s) identified in a Recovery Strategy or an Action Plan listed on the SARA public registry; • determine whether the species, its habitat, or the residences of those species could be affected by project activities; i) if not, explain why not; ii) if yes, describe any predicted effects; iii) identify any critical timing windows (*e.g.,* denning, rutting or spawning), setback distances, or other restrictions; iv) identify if a provincial, territorial or federal (*e.g.,* SARA) permit will be required; and v) identify any proposed mitigative measures (*e.g.,* improved project design or construction timing or compensation plan). 2. Where the project may result in the destruction of any part of the critical habitat of a wildlife species listed on Schedule 1 of SARA, describe: • any discussions with the appropriate Federal Authority (Environment and Climate Change Canada, Fisheries and Oceans Canada, Parks Canada) on obtaining a permit under section 73 of the SARA; • all reasonable alternatives to the project that would avoid the effect on the species' critical habitat; and • all feasible measures that will be taken to eliminate the effect of the work or activity on the species' critical habitat. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical works or activities and expand on the matters described above as appropriate.	Many rare species (*e.g.*, endangered or threatened species under the SARA) are at risk in large part as a result of the past cumulative effects on their population or habitat. Their inclusion on official lists reflects their status as having crossed a threshold requiring special actions for their protection and recovery. Any additional residual effects have the potential to further contribute to this existing situation. Consequently, proposed projects must preferably avoid, or fully mitigate or compensate for any residual project contribution to cumulative effects. Status refers to designation under federal, provincial or territorial legislation or guidelines (*e.g.,* extirpated, endangered, threatened or of special concern). Consult the SARA public registry for Schedule 1, the List of Wildlife Species at Risk, and Schedules 2 and 3 of SARA. Consult with Environment and Climate Change Canada (Canadian Wildlife Service), Fisheries and Oceans Canada, or Parks Canada on species at risk or their critical habitat in the study area. Where critical habitat has not been defined, field studies may be necessary, as well as identifying, with federal, provincial or territorial authorities, mitigation measures that effectively avoid sensitive interaction periods or activities. Field surveys may be useful in identifying mitigation needs or locally common populations not substantially affected. For species at risk listed on Schedule 1 of SARA, the proposed mitigative measures must be consistent with any applicable Recovery Strategies and Action Plans listed on the SARA public registry. Consult with appropriate provincial or territorial authorities on species listed under those jurisdictions. For species at risk with no recovery strategy or action plan, applicants should use the best available information, such as COSEWIC status reports, draft recovery strategies or action plans, existing plans or input from the recovery team and specific advice (or management plans) from any jurisdiction that manages the species. Describe how measures to avoid, fully mitigate or compensate project effects would align with the best available information. When relying on compensation plans, describe the details of consultation with relevant experts, the options available, and criteria for selecting the options relied on, and for assessing the adequacy (sufficiency and validity) of any compensation measures or offsets. Applicants should conduct a thorough inventory of all areas potentially affected by the project that are expected to support any species at risk or species of special status. Consult federal, provincial, territorial, regional and local databases (*e.g.,* conservation data

	centres) and any other information associated with species of special status. Species data in existing databases may not be systematically collected or updated and, therefore, a database search may not be sufficient to support a conclusion about the absence of a species in the area. Additional guidance, including direction to relevant federal, provincial, territorial and other related information, is available from the COSEWIC and Environment and Climate Change Canada.
Air Emissions	
Filing Requirements	**Guidance**
1. Provide an assessment of air emissions from construction equipment and vehicular traffic. 2. For pipeline and gas plant projects that result or may result in an increase in air emissions during operations or maintenance: • describe local and regional meteorological conditions, including a description and rationale for the meteorological data used in any quantitative assessment; • describe existing background concentrations in the surrounding airshed and the methodology used to determine baseline concentrations; • describe the source characteristics (*e.g.,* point emissions, area sources, flaring and incineration emissions, and fugitive sources); • provide a quantitative assessment of any potential air emissions (*e.g.,* nitrogen dioxide, hydrogen sulphide, sulphur dioxide, ozone, volatile organic compounds, benzene, toulene, ethylbenzene and xylene (BTEX), mercaptans and particulate matter), including fugitive emissions generated by activities and systems associated with the project. Also provide a comparison to all relevant regulatory ambient air quality criteria (both provincial and federal); • identify maximum discharge limits associated with the project including assumptions, inputs and any variables associated with the maximum discharge; • describe the mitigation measures and how they would be implemented to protect the local airshed conditions; and • describe participation in national or regional air emission tracking and reporting programs, or provide rationale why participation is not required. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	The effects assessment must consider: • how volumes and modelled changes to ground-level and receptor-level concentrations during normal operations, maintenance, upsets, start-ups, shut-downs, and worst-case scenarios comply with federal, provincial and local objectives; • compliance with the CCME *National Emission Guideline for Stationary Combustion Turbines*, the CCME *Environmental Code of Practice for the Measurement and Control of Fugitive VOC [volatile organic compounds] Emissions from Equipment Leaks*, including details of the leak detection and repair program in place if fugitive VOC emissions are a concern for the project, and the CCME *Environmental Guidelines for Controlling Emissions of VOCs from Above Ground Storage Tanks*; • compliance with applicable provincial regulations on benzene emissions from processing facilities or CAPP's *Best Management Practice: Control of Benzene Emissions from Glycol Dehydrators*; • compliance with applicable provincial flaring, incinerating and venting guidelines and regulations or CAPP's *Best Management Practice: Facility Flare Reduction*; • compliance with applicable provincial smoke management / venting guidelines and smoke control regulations; and • reporting requirements to the National Pollutant Release Inventory. Where ecological and human health effects are predicted to result from the project, see Table A-3. Monitoring and follow-up must consider: • requirements under federal (CCME) as well as provincial guidelines and permit requirements; validation of predictions in the event of possible exceedences of ambient air quality objectives; • uncertainty or absence of data to model or assess air quality; and • public concerns about air quality. Where the project may result in an increase in GHG emissions during construction, operations or

	maintenance, see the GHG emissions section. Additional guidance: • Canadian National Ambient Air Quality Objectives • CCME's *Canada-wide Standards for Particulate Matter (PM) and Ozone* • CAPP Technical Report – *A National Inventory of Greenhouse Gas (GHG), Criteria Air Contaminant (CAC) and Hydrogen Sulphide (H_2S) Emissions by the Upstream Oil and Gas Industry: Volume 4, Methodology for CAC and H_2S Emissions* • CAPP's *Best Management Practice: Management of Fugitive Emissions at Upstream Oil and Gas Facilities*.
GHG Emissions	
Filing Requirements	**Guidance**
1. Provide an assessment of the construction-related GHG emissions and include a description and justification of the methods used in the assessment. 2. For projects that result or may result in an increase in GHG emissions during operations or maintenance: • describe and quantify GHG emissions. Include a description of the methods used for the quantification, rationale, and assumptions used in the estimation; • describe the sources (*e.g.,* point emissions, area sources, flaring and incineration emissions, and fugitive sources); • describe the measures to be implemented for continuous improvement of GHG emissions management; and • describe the participation in provincial/federal reporting programs or provide rationale why participation is not required.	Applicants may consider using appropriate industry-wide estimates for their assessment of construction-related GHG emissions. A quantitative assessment of construction-related GHG emissions may be relevant in certain conditions. For example, where burning of forest cover as a result of land clearing will result in an increase in GHG emissions, or where there is a public concern associated with an increase in GHG emissions from construction. The GHG emissions assessment should consider applicable provincial and federal estimating and reporting guidance. Additional guidance: • Methodology Manual – *Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System* prepared for Canadian Energy Partnership for Environmental Innovation (CEPEI) • The Natural Gas Combustion Emissions Calculator produced by CEPEI • The CEA Agency's *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* • CAPP's Guide: *Calculating Greenhouse Gas Emissions* • Environment and Climate Change Canada can provide information regarding reporting
Acoustic Environment	
Filing Requirements	**Guidance**
1. Where there is a public concern associated with an increase in noise levels during construction, provide a noise impact assessment, including an overview of the concerns. 2. For projects that result or may result in an increase in noise emissions during operations or	The effects assessment must consider: • any effects from inaudible noise (*e.g.,* low frequency noise); and • the effects of noise on wildlife. Noise management plans must consider:

maintenance (*e.g.* pump stations, compressor stations, gas plants): • describe existing ambient noise levels in the area, including the methods and data sources used to determine the ambient levels; • identify the potentially affected receptors and permissible sound levels for each receptor; • quantify noise levels at appropriate distances from the facility (*e.g.,* at edges of the RoW/facility and at the affected receptor) and describe the frequency, duration and character of noise; • provide the predicted sound levels from the project alone and predicted cumulative sound levels in combination with other existing and future physical facilities and activities in the area, including an assessment of low frequency noise; • describe consultation with regulators, stakeholders, community groups, landowners and Aboriginal communities about potential effects of the project on the acoustic environment; • identify and justify the applicable guidelines used to determine the significance of the effects of the predicted emissions associated with the project; • provide a noise management plan, including identification of noise sources, an assessment of current noise mitigation measures, performance effectiveness of noise control devices, best practices programs and continuous improvement programs; and • identify the need for a follow-up monitoring for the purposes of validation of the model or as a result of any concerns raised by the public. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	• notification and scheduling of maintenance activities, such as blowdowns and equipment venting during daylight hours; and • notification of nearby residences and local authorities of plans and procedures for preventing and managing noise. Where there is a potential for human health effects see, Table A-3. Additional guidance: • Energy Resources Conservation Board's *Directive 038: Noise Control* (ERCB Directive 038) • Alberta Utilities Commission's *Rule 012 – Noise Control (AUC Rule 012*) • British Columbia Oil and Gas Commission's *British Columbia Noise Control Best Practices Guideline* For projects in provinces with no guidelines, please refer to ERCB Directive 038 or AUC Rule 012, whichever is the most appropriate.

Table A-3: Filing Requirements for Socio-Economic Elements

FYI – Reminder …

Filing Requirements for an effects assessment are described in Subsections A.2.5 and A.2.6.

Table A-1 in Subsection A.2.4 provides examples of the circumstances and interactions that lead to the need for detailed information and considers all phases of an applied for project (construction, operation, maintenance and abandonment), including the potential for accidents and malfunctions during each phase.Table A-3 was designed to assist Applicants in identifying detailed information needs specific to individual socio-economic elements. The elements and circumstances described in the table are not exhaustive.

Human Occupancy and Resource Use	
Filing Requirements	**Guidance**
1. Describe the general patterns of human occupancy and resource use in the study area.	The assessment of potential impacts on human occupancy and resource use must evaluate:

2. Describe the potential interactions of the project with local and regional human occupancy and resource development activities. Include effects the project may have on the maintenance of those activities and on the livelihood of local workers, business owners and operators. 3. Describe the goals of any applicable local or regional land use plans or local or regional development plans and the extent to which the project is aligned with such plans. 4. Identify predicted effects of the project on the quality and quantity of ground or surface water used for domestic, commercial, agricultural or recreational uses. *5.* Identify any predicted visual or other aesthetic effects of the project on existing land use in the study area. *6.* Identify any predicted effects of the project on livestock health and productivity. *7.* Describe any site specific and project wide mitigation to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	• rural and urban residential areas (includes both year-round and seasonally-occupied facilities), Indian Reserve Lands, Aboriginal communities and Aboriginal traditional territories; • agricultural areas (including specialty crops, orchards and vineyards); • health and productivity of livestock; • recreation and park areas (including local and provincial or territorial parks and recognized scenic areas); • lands under Parks Canada's jurisdiction, conservation areas, International Biological Program Sites or other ecological reserves or preserves; • industrial and commercial areas; • controlled or managed forest areas (including agreement forests and timber sales areas); • registered or recognized hunting, trapping or guiding areas and commercial and sport fishing areas; • water reserves and licences, and water supply sources or intakes for agricultural, industrial, commercial, residential and municipal users; and • transportation infrastructure, which, in addition to road and rail infrastructure, would also include navigable waterways. The project should be assessed for compatibility with local and regional land use and development plans. Where “multiple-use” is permitted, it should also be assessed for compatibility with existing uses. If there is a predicted effect on the use of traditional territory or potential or established treaty or Aboriginal rights, refer to the Traditional Land and Resource Use element within this table. If there is a predicted effect on a biophysical component (*e.g.,* Water Quality and Quantity, Acoustic Environment) that could affect Human Occupancy and Resource Use, refer to that biophysical component in Table A-2. If there is a predicted effect on visual or other aesthetic qualities, refer to the guidance under the Human Health element within this table.
Heritage Resources	
Filing Requirements	**Guidance**
1. Describe any known heritage resources in the study area. 2. Determine the potential for any undiscovered heritage resources in the study area. 3. Describe what contingency plans and field measures would be undertaken if a heritage resource is discovered during construction. 4. Provide copies of correspondence from provincial or territorial authorities responsible for heritage resources with comments on any heritage	Applicants must be aware of federal, provincial or territorial legislation or guidelines for identifying and protecting heritage resources. Applicants must consult with Aboriginal groups with concerns about heritage resources in the project area. Although lands may be previously disturbed, an archaeological and paleontological assessment may still be required. The heritage resources assessment must be completed by a qualified archaeologist or paleontologist and include

resource assessment and proposed mitigation measures. 5. Indicate whether the applicant would implement the recommendations of the provincial or territorial heritage resource authorities. 6. If a previous heritage resource assessment has been completed in the study area, a summary should be filed along with any additional mitigation measures specific to the applied for project. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	details of the field methodology used in the study. Where there is potential for discovery of heritage resources during construction or operations activities, a heritage resources contingency plan must be submitted. The plan must state, at a minimum, who would be contacted and under what conditions work would stop and resume.
Traditional Land and Resource Use	
Filing Requirements	**Guidance**
1. Describe how lands and resources in the study area are currently used by Aboriginal persons or groups for traditional purposes. 2. Identify the Aboriginal persons or groups currently carrying out traditional land and resource use activities, the spatial and temporal extent of use and how the project could impact this use. 3. Describe all reasonable alternatives considered that would avoid the impact on the Aboriginal traditional land and resource use considered during project development. 4. Describe all feasible measures that would be taken to mitigate the impact of the activity on Aboriginal traditional land and resource use. 5. Describe the methodology used to collect the Aboriginal traditional land and resource use information and provide a listing, and the rationale for the listing, of all Aboriginal persons and groups contacted. 6. Demonstrate that those Aboriginal persons and groups participating in collecting traditional use information have had the opportunity to review the information and proposed mitigation. Include any comments from the Aboriginal participants on the information and proposed mitigation. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	An assessment of impacts on current use of lands and resources for traditional purposes by Aboriginal people is required for the ESA. Aboriginal people may use lands for various traditional activities, such as hunting, fishing, trapping, berry picking and plant gathering for medicinal, cultural or household use, as well as cultural or spiritual ceremonies. In assessing the temporal aspects of traditional land and resource use, note the frequency, duration and seasonal aspects of each activity. In assessing the spatial aspects of traditional land and resource use, note that some activities could be site specific (*e.g.,* berry-picking areas) but others may not (*e.g.,* hunting may extend over a broad area and temporal considerations may be more relevant). Applicants must also refer to the assessment of the applicable biophysical element (wildlife and wildlife habitat, vegetation and fish and fish habitat) when considering traditional land and resource use. Where confidentiality of the traditional land and resource information is a concern, this information may be provided in the following manner (in order of preference): • a traditional land use study in which the information is provided using a system of data classification to protect the confidentiality of site-specific details; • a traditional land use study with site-specific information blacked out; or • a summary of the traditional land use study, including the methodology and proposed mitigation. Alternatively, applicants may ask permission to file the study confidentially, in accordance with the criteria set out in section 16.1 of the NEB Act.
Social and Cultural Well-Being	
Filing Requirements	**Guidance**
1. Describe the socio-cultural setting of the study area, indicating the: • predominant cultural and Aboriginal groups; • demographic features of the local population and workforce; and	Socio-cultural effects on local communities may arise from various sources, including: • an increase in temporary or permanent residents to an area;

• prevalent socio-cultural concerns of residents, families and workers in the study area. 2. Provide an overview of the predicted socio-cultural effects on the local community from the project. 3. Describe the predicted interactions of project construction, operations, and maintenance workforces with the local community, residents and businesses. 4. Describe any mitigative measures to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	• location of construction camps within, beside or near local communities; • a significant increase to, or uneven distribution of, personal income at the community level; and • disruptions to cultural traditions and institutions. The potential effects from the sources listed above may include: • stresses on community, family and household cohesion; • alcohol and substance abuse; or • illegal or other potentially disruptive activities. The identification and evaluation of potential effects must: • be conducted at the community level rather than the individual level to protect the privacy of individuals; and • include consultation with local, regional and Aboriginal social and cultural service providers, agencies and institutions as appropriate. The local community could include: • more than one inhabited area within the study area; and • more than one cultural group within an inhabited area.
Human Health	
Filing Requirements	**Guidance**
1. Describe and quantify: • the project-related activities, toxic components, nuisances and environmental changes that could potentially be sources of adverse human health effects; and • the potential human receptors of these effects. 2. Where the project could create air, water or noise emissions or effluent discharge levels that meet local, provincial, territorial or federal guidelines (*e.g.,* CCME Guidelines, ERCB Directive 038, AUC Rule 012), yet public concerns regarding human health effects have been raised, provide a description of the public concerns and how they would be addressed. 3. Where the project could create health effects, summarize how these effects would be mitigated. 4. Where it is reasonable to assume there could be a potentially high or significant risk to human health from the project, provide a human health risk assessment. 5. Provide a description of any predicted visual or other aesthetic effects of the project on residents or other potentially affected persons or users in the study area.	Applicants must consider the potential for effects to human health to determine the level of assessment required. For example, where the project may cause nuisance-related health concerns, applicants must summarize the effect, outline mitigation measures to minimize the effect (*e.g.,* regular road watering to reduce dust), and give appropriate details of analytical procedures used (*e.g.,* a source and release assessment, exposure assessment, dose-response assessment or risk characterization). Quantification of sources of health effects and potential human receptors must consider: • ambient conditions; • distances to edge of RoW, nearest residences, schools and other public institutions; • modelling and prediction of environmental conditions during construction and operations at the above distances; and • distance to where predicted conditions would meet any applicable standards and populations within that radius. Identifying and evaluating potential human health effects must include consultation with local, regional, Aboriginal, provincial or territorial, and federal health service providers, agencies and institutions, as appropriate. Applicants must consider the potential effects of the

Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	project on the health of susceptible groups, such as: • local residents, landowners and tenants; • the elderly and children; and • others who may regularly use the study area such as recreationalists, hunters and trappers. Applicants must also consider how the project may affect the health of those using traditional areas for hunting, trapping, fishing, berry picking, and medicinal plant collection. This consideration must be linked with the applicant's assessment of traditional land and resource use. As the definition of human health includes consideration of mental and social well-being, applicants must also consider any adverse emotional or social stressors potentially resulting from the project, including: • concern for public safety from construction or operations-related accidents or malfunctions; or • disruption of normal, daily living activities. Where a particular project emission or effluent discharge level falls below or within applicable limits, additional mitigation may not be required. However, where the change may be substantial (even if within set limits) due to local or regional circumstances or the extent of the change, the applicant must provide any other additional mitigation to minimize pollution and human health risks. A visual impact assessment must consider and describe factors such as, but not limited to: • whether landforms, vegetation cover and other landscape features screen or visually absorb the project; • how the project will compare with other nearby built features; • identification of view points and areas from which the project will be visible; • views affected by the project; and • the extent to which views are obstructed by the project. Applicants must clearly link this portion of their assessment to those sections of their assessment that consider the biophysical elements affecting human health (*e.g.,* Acoustic Environment or Water Quality and Quantity). Consult Health Canada for information on human health impact assessments and to access *The Canadian Handbook on Health Impact Assessment*. Health indicator data is available from Statistics Canada.
Infrastructure and Services	
Filing Requirements	**Guidance**
1. Describe the existing local and regional infrastructure in the study area, including: • railways; • roads, highways and their traffic usage levels and patterns; • pipelines, water mains and sewage lines; • navigable waterways;	The assessment must consider and, where possible, quantify how project construction and operation activities may affect local or regional infrastructure and services, such as: • housing; • educational facilities; • essential and emergency services (fire, police,

• existing power lines; and • any other potentially affected facilities. 2. Describe the existing local and regional services in the study area and the predicted effects on those services. Include an assessment of effects to: • accommodation, including camping facilities; • recreation; • waste disposal; • police; • fire-fighting; • ambulance; and • health care services. 3. Describe any need for government and applicant expenditures for new or expanded services or infrastructure, arising out of project-related effects. 4. Describe any mitigative measures, including applicable plans, to address identified effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	ambulance, hospital) including the standard of service provided (*e.g.,* response time); • recreational requirements; • transportation; and • utilities including water, sewer, waste disposal, electricity. Effects related to the above-noted factors must be assessed from the perspectives of both: • the project's needs for infrastructure and services (*e.g.,* to meet workers' needs for housing or transportation); and • the project's effects on local infrastructure and services, and consequent effects on local residents (*e.g.,* project effects on availability of housing for local residents or on traffic flows and delays to the local population). Applicants must consider any local and provincial or territorial guidelines regarding emergency services or requirements for heavy load vehicles and construction access permits.
Navigation and Navigation Safety	
Filing Requirements	**Guidance**
1. Provide a listing of proposed navigable waterways that the pipeline corridor will pass in, on, under, over, through or across, the proposed crossing methodology, and the contingency plans for HDD. 2. Provide a listing of ancillary project components that will be constructed in, on, under, over, through or across navigable waterways to support the pipeline project (e.g. temporary and permanent bridges, marine terminal). 3. Provide a listing of potentially affected waterway users and describe the consultation conducted with waterway users and Aboriginal groups regarding navigational use, issues raised, and how issues have been addressed. 4. Describe project effects on navigation and navigation safety. 5. Describe proposed mitigation measures to address project effects on navigation and navigation safety.	Where there are waterways which are considered navigable and there are project effects on navigation and navigation safety, Applicants must assess who navigates the affected waterways (e.g., tourism groups, guide outfitters, anglers, kayaking organizations), the type of craft, the ability to notify waterway users of impediments, the project effects/impacts on safe and reliable navigation and identify mitigation measures to minimize or eliminate project effects to navigation and navigation safety.
Employment and Economy	
Filing Requirements	**Guidance**
1. Describe the local and regional employment situation in the study area. 2. Describe any local or regional training and employment development plans. 3. Describe the ability of local and Aboriginal residents and businesses to provide labour	The assessment must include a quantitative and qualitative review of: • local and regional employment and unemployment levels; • education and skill levels; • local and regional economic conditions; and

services, equipment, supplies and other contracting needs during construction, operation and maintenance of the project. 4. Describe plans to encourage local and Aboriginal employment, procurement and contracting opportunities. 5. Describe any training programs the applicant is supporting to enhance employment opportunities for local and Aboriginal residents. 6. Provide an estimate of the anticipated levels of local and regional economic participation in the project in comparison to the total project requirements (*e.g.,* number of workers and total dollar value of contracts). 7. If the project has the potential to directly affect local, regional, provincial, territorial or federal government revenues from tax levees or other means during construction and operation, provide a quantitative assessment of the potential effects. Where residual effects have been predicted, identify whether those residual effects would be likely to act in combination with the effects of other physical facilities or activities and expand on the matters described above as appropriate.	• direct government revenues expected to be generated by the project. Construction and operations workforce numbers and contract values must be provided, where possible, on a month-to-month basis through the construction phase of the project and on a yearly basis for the operations phase of the project. For smaller projects, only an estimate of the construction workforce and the full-time operations workforce is required. The assessment must describe those situations when the project may directly or indirectly create economic hardship or the displacement of workers or businesses, including any mitigative measures to address these effects. If the applicant has prepared an economic benefits plan or has entered into specific cooperation agreements with communities or Aboriginal groups, the applicant should provide a summary of the employment, training and business commitments made.

A.3 Economics and Financing

Information on economics is required in an application when the applied-for facilities would result in one or more of the following:

- the construction of a new pipeline;
- an increase in pipeline capacity or throughput on an existing regulated pipeline; or
- a change in the type of commodity being transported on an existing regulated pipeline.

Economics information must include details on:

- supply;
- transportation;
- markets; and
- financing.

The overall purpose for filing information on facility economics is to demonstrate that the applied-for facilities will be used, will be useful, and that demand charges will be paid and that sufficient funds will be available for abandonment requirements.

A.3.1 Supply

Goal

The application includes information indicating that there is or will be adequate supply to support the use of the pipeline, taking into account all potential supply sources that could

reasonably be expected to be sourced by the applied-for facilities over their expected economic life.

Filing Requirements

Provide:

1. a description of each commodity (e.g., crude oil, natural gas or NGL);
2. a discussion of all potential supply sources;
3. a forecast of the productive capacity for each commodity over the economic life of the facilities; and
4. for pipelines with contracted capacity, a discussion of the contractual arrangements underpinning the supply.

Guidance

When determining what level of supply information to provide, be aware that the NEB must be satisfied that there is, or will be, an adequate supply available to the pipeline such that the applied-for facilities could be expected to be used at a reasonable level over their economic life and would be in the public interest.

The level of detail in the supply information would normally correspond to:

- the projected increase in capacity or throughput;
- the nature and complexity of the supply source; and
- the potential impact on the public interest, commercial or otherwise.

Generally, the greater the projected increase in capacity or throughput, the greater the amount of supply information that would be required. Additional information might be required for proposed projects that have a larger potential impact on third parties or the environment to demonstrate that the project is in the public interest.

Commodity Description

Describe each commodity that would be affected by the applied-for facilities. Adhere to the guidelines for describing commodities provided in Section 1.9 – Measurement, Conversation Factors and Commodity Description.

Resources

Describe each current and potential supply source that the applied-for facilities are relying upon, including the methodology used to derive these estimates.

Productive Capacity

Forecast the current and future production over the economic life of the project. Include forecasts from:

- the various supply sources; and

- conventional and unconventional production as well as production from other basins that could be sourced.

Clearly describe the sources for and the methodology used to derive the forecasts.

Contractual Arrangements

For pipelines with contracted capacity, include a description of any relevant contractual arrangements underpinning the supply arrangements. Also include key contractual terms such as length of contract and volumes under contract, where available.

A.3.2 Transportation Matters

Goal

The application includes information indicating that the volumes to be transported are appropriate for the applied-for facilities and that the proposed facilities are likely to be utilized at a reasonable level over their economic life.

Filing Requirements

Pipeline Capacity

1. In the case of an expansion to an existing pipeline, provide:
   - the pipeline capacity before the expansion capacity is added;
   - the added capacity of the expansion project;
   - the pipeline capacity as it would be following the expansion; and
   - a justification that the capacity of the pipeline expansion is appropriate in terms of incremental volumes to be shipped on the expanded facility.
2. In the case of a new pipeline, provide a justification that the capacity of the new pipeline will be appropriate for the productive capacity or supply that would be available to the pipeline.

Throughput

1. For pipelines with contracted capacity, provide information on contractual arrangements underpinning the projected throughput volumes.
2. For all pipelines other than pipelines with contracted capacity, provide a forecast of projected throughput volumes by commodity type, receipt location and delivery destination on an annual basis over the economic life of the applied-for facilities.
3. If the proposed project results in an increase in throughput capacity, provide:
   - the theoretical and sustainable daily, seasonal and annual capabilities of the existing and the proposed facilities versus the current and forecasted requirements, indicating any contracted interruptible quantities; and

- the flow formulae and flow calculations used to determine the daily or hourly (as appropriate) capabilities of the proposed facilities and the underlying assumptions and parameters, including a description of the gas or fluid properties.

4. Where more than one type of commodity would be transported in the same pipeline, describe the segregation of the commodities, including where applicable, potential contamination issues or cost impacts.

Guidance

Information submitted on transportation matters should:

- demonstrate that the capacity of the applied-for facilities is appropriate for the commodities and volumes that would be transported in the pipeline; and
- provide sufficient evidence to assure the Board that the applied-for facilities will be used at a reasonable level over their economic life.

Information on pipeline capacity, projected throughput or contracted volumes and, if applicable, supply available to the pipeline, could be provided in tabular format. Where it would provide clarity, a graphical representation could also be included.

Pipeline Capacity

Provide an estimate of the average annual capacity of the pipeline for the commodity or commodities transported.

Where pipeline capacity would be increased as a result of the construction of the applied-for facilities, include the pipeline capacity that would be added as well as the resultant total capacity of the pipeline.

In all cases where there will be a substantial difference between pipeline capacity and contracted volumes or projected throughput, include an explanation of the difference.

In the case where the subject pipeline is one of a number of pipelines serving a particular supply area, provide a description of the overall service for the area and the role the subject pipeline plays in serving the area relative to throughput volumes and productive capacity for the supply area.

Contractual Arrangements

Transportation agreement evidence is required when the applied-for facilities relate to the transportation of natural gas.

Describe the contracted volume and term by shipper. When possible, submit evidence of the transportation agreements, such as signed execution sheets and copies of the contracts. Contractual evidence must be of sufficient detail to assure the Board that the facilities will be used at a reasonable level and that demand charges will be paid.

Projected Throughput

A throughput forecast is required for liquids facilities (e.g., crude oil and NGL).

Also include a forecast of supply that could reasonably be expected to be available to the pipeline over the economic life of the applied-for facilities.

Describe the projected annual throughput of each commodity by source, location and delivery destination over the expected economic life of the applied-for facilities.

Commodity Integrity on Multi-Product Pipelines (where applicable)

In the case of multi-product pipelines for a new pipeline, or where the applied-for facilities could affect the integrity of any of the transported commodities, include a discussion of the methods that will be used to segregate or protect the integrity of the commodity types. Describe any potential contamination issues or cost impacts and strategies that will be used to mitigate any potential problems.

A.3.3 Markets

Goal

The application includes information indicating that adequate markets exist for the incremental volumes that would be available to the marketplace as a result of the applied-for facilities.

Filing Requirements

Provide:

1. an analysis of the market in which each commodity is expected to be used or consumed; and
2. a discussion of the physical capability of upstream and downstream facilities to accept the incremental volumes that would be received and delivered.

Guidance

Information on markets is required to assure the NEB that there is sufficient demand to absorb the incremental volumes and, where applicable, physical capability in the upstream and downstream facilities to accept the incremental volumes. Where long-term transportation and downstream arrangements are in place, the required market information will be more general in nature, but must be adequate to allow the Board to determine whether the market demand will be sufficient to support the economic feasibility of the pipeline.

The level of detail will correspond to:

- the magnitude of the incremental volumes that would be delivered into the market;
- the degree of competition from other supply areas and from other fuels in the market to be served; and
- the potential impact on the public interest, commercial or otherwise.

Generally, the greater the projected increase in volumes delivered to the marketplace, the greater the amount of market information that would be required. Proposed projects that have a larger potential impact on third parties or the environment may require filing additional information to demonstrate that the project is in the public interest.

Description of the Market

Describe the market that will receive the commodity, including, where applicable:

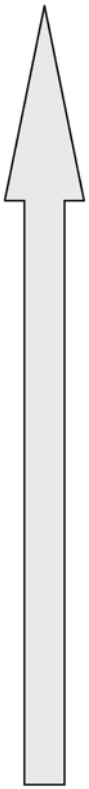
- where the commodity could be delivered (e.g., gas hub or designated refinery);
- the potential competition to serve the market or the market areas from other pipelines;
- energy sources; and
- transportation systems.

Ability of Upstream and Downstream Facilities to Accept Incremental Volumes

In cases where the applied-for facilities would be receiving a commodity or commodities from an upstream facility or delivering to a downstream facility, provide assurance that the connecting facility is physically able to accept the additional volumes being received or delivered.

In addition to the filing guidance contained above, Applicants are to note that as of 1 January 2008, the British Columbia Oil and Gas Commission (OGC) put into effect requirements for the measurement and metering of fluids on pipelines entering or leaving the Province of British Columbia as outlined in the OGC *Measurement Requirements for Upstream Oil and Gas Operations Manual – Chapter 7 – Cross Border Measurement.* Companies should determine whether any of their NEB-regulated facilities handle BC production and fall within these provincial measurement requirements for such production.

Table A-4: Overview of Supply, Transportation and Markets Filing Requirements

Scope of Project	Commodity Source Type	Supply	Transportation		Markets	
Major Project  Local Connection	Basin-wide supply source (e.g., a mainline)	Resources: • Table with estimates of conventional and unconventional resources. Table should include estimates of discovered and undiscovered resources. • Description of the sources and methodology used to derive the estimates. Productive Capacity: • Table and graph providing productive capacity estimates for each of the resources listed above over the life of the project. • Description of the sources and methodology used to derive these estimates. Contractual Arrangement(s): • A detailed description of the contractual arrangements.	New Pipeline (larger project)	Pipeline Capacity: • Total capacity of the pipeline. • Justification that pipeline capacity is appropriate. Contractual Arrangement(s): • Pipelines with contracted capacity: a detailed description of the transportation contract arrangements underpinning the projected throughput. • Other: forecast of projected throughput by commodity, receipt location and delivery point.	More shippers	Comprehensive market analysis with justification that incremental or new volumes will be absorbed. Evidence that downstream facilities are physically able to receive incremental volumes.
			Expansion (larger project)	Pipeline Capacity: • Before expansion. • Incremental capacity added and total capacity following expansion. • Justification that the additional capacity is appropriate. Contractual Arrangement(s): • Pipelines with contracted capacity: a detailed description of the transportation contract arrangements underpinning the projected throughput. • Other: forecast of projected throughput by commodity, receipt location and delivery point.	Fewer shippers	Comprehensive market description and assurance of demand for incremental volumes. Assurance that downstream facilities are physically able to receive incremental volumes.
	Localized supply source (e.g., part of a gathering system)	Resources: • Table with estimates of discovered and undiscovered resources. • Description of the sources and methodology used to derive the estimates. Productive Capacity: • Table and graph providing productive capacity estimates for each of the resources listed for the economic life of the project. • Description of the sources and methodology used to derive these estimates. Contractual Arrangement(s): • A description of any relevant supply arrangements.	New Pipeline (smaller project)	Pipeline Capacity: • Total capacity of the pipeline. • Justification that the pipeline capacity is appropriate. Contractual Arrangement(s): • Pipelines with contracted capacity: evidence of the transportation contract arrangements underpinning the projected throughput. • Other: forecast of projected throughput by commodity, receipt location and delivery point.	Fewer shippers	Market description and assurance of demand for incremental volumes. Assurance that downstream facilities are physically able to receive incremental volumes.
			Expansion (smaller project)	Pipeline Capacity: • Before expansion • Incremental capacity added and total capacity following expansion. • Justification that the additional capacity is appropriate. Contractual Arrangement(s): • Pipelines with contracted capcity: evidence of the transportation contract arrangements underpinning the projected throughput. • Other: forecast of projected throughput by commodity, receipt location and delivery point.	No third party shippers	Assurance of demand for incremental volumes.
	Change in commodity	Supply information is appropriate to the scope of the project, as above.	When more than one commodity: Discussion pertaining to segregation of commodities and potential contamination issues or costs.		Market information is appropriate to scope of the project, as above.	

A.3.4 Financing and Financial Resources

Goals

The application provides a discussion of the following points:

- the applicant's ability to finance the proposed facilities;
- the method of financing the facilities and the potential costs associated with the risks and liabilities that arise during the construction and operation of the Project, including a significant incident (see the NEB's Event Reporting Guidelines for a definition of "significant incident");
- any changes to the financial risk of the company associated with its intended method of financing the facilities;
- the impact of the proposed facilities on the applicant's abandonment cost estimate and the collection of these costs; and
- the toll impact of the proposed facilities including the extent of any cross-subsidization.

Filing Requirements

Additional information...

All applications submitted pursuant to either section 52 or 58 of the NEB Act must include the information stated in requirements 1 through 4.

In addition, applications with significant toll impacts must also include the information stated in requirement 5.

1. Provide evidence of the ability to finance the proposed facilities.
2. Provide evidence that the applicant can manage the potential costs associated with the risks and liabilities that arise during the construction and operation of the Project, including a significant incident involving a product release.
3. Indicate the estimated toll impact for the first full year that the facilities are expected to be in service.
4. Confirm shippers have been apprised of the project and associated toll impact. Provide a summary of their concerns, if any, and the plans to address these concerns.
5. Provide a discussion on how the applicant will address the impact of the proposed facilities on funding for abandonment;
6. For applications with significant toll impacts, provide additional toll details for:
   - existing facilities;
   - the aggregate of existing and proposed facilities; and
   - the first five years that the proposed facilities are forecast to be in service.

Guidance

The NEB needs sufficient information to allow it and interested parties to understand the application and the impacts on third parties, and to make a decision. The information provided

should demonstrate that the applied-for project is financially sound given the approved toll methodology and that it is not being cross-subsidized in an inappropriate manner.

While the NEB would find the information identified in the filing requirements to be satisfactory in most instances, it may be necessary to provide further information. In general, more detailed information should be provided for projects that are greater in complexity and scope. Examples of factors that could affect the complexity and scope of a project include the:

- toll impact of the proposed facilities;
- proposed toll design methodology;
- level of market power held by the applicant, including its affiliates;
- number of shippers on the system;
- number of third parties that could be affected by the proposed facilities and the level of effect on these parties; and
- the financial risk assumed by the applicant.

Determine the level of information to include for each filing requirement based on the factors described above, and provide any additional information that would be pertinent.

Finance Information

Evidence that the applicant has the ability to finance the proposed facilities should include, but not be limited to:

- a description of the intended methods and sources of financing the proposed facilities;
- a description of any financing already in place; and
- a description of any restrictive provisions concerning future financing, any changes in capital structure, the impact on interest coverage ratios and other factors that could affect the financing of the proposed facilities.

Ownership Structure

The applicant should describe the corporate structure, including at a minimum:

a) The corporate structure chart showing the applicant, its subsidiaries, owning entities and affiliates; and

b) A description summarizing each entity's ownership and the operating relationships with each other.

This chart in a) and the description in b) must show, but need not be restricted to:

i. the ownership of each entity and their jurisdiction of incorporation or registration; and

Where limited partnerships are involved, a description of

ii. the general and limited partners in each limited partnership; and

iii. the respective roles and responsibilities of each of these entities in managing the limited partnerships, and operating the pipeline and related facilities.

Financial Resources

Oil pipeline projects with a capacity of 250,000 bbl per day or more are expected to provide information on how the applicant can sustain management of the potential costs associated with the risks and liabilities that arise during the construction and operation of the Project, including a significant incident involving a product release:

a) A description of the applicant's various types and amounts of financial resources, including the applicant's readily accessible financial resources;

b) Key features with respect to third party liability insurance coverage plus description of whether the coverage is for the applicant or project alone or part of an umbrella coverage policy;

c) The basis for determining the amount of the financial resources required, taking into account the risk assessment for the Project, the costs of accidents and malfunctions, and any and all threats;

d) With respect to the costs of a hydrocarbon spill, identification of different cost categories (e.g.: clean up and remediation versus compensation) and location variables that would influence total costs;

e) Evidence of how the risk assessment results have been applied to anticipate, prevent, manage, and mitigate potential hazards during the design and operation of the project to minimize the quantity of hydrocarbons in the event of a spill;

f) An overview of plans for operating practices to avoid human error; and

g) An overview of how the applicant has factored its Emergency Prevention, Preparedness and Response Plan into its estimates of spill quantities and costs of an accident or malfunction.

(Additional information would be expected where marine shipping is involved.)

For the meaning of "risk assessment" and "risk assessment results" see CSA Z662, Clause 3, and Annex B, Guidelines for Risk Assessment of Pipeline Systems.

Toll Details

Toll details will include:

- the annual toll impact;
- where tolls are cost-based, the cost of service and rate base by main elements;
- where tolls are not cost-based, the revenues from and costs of providing service by main elements;
- the method and rates of depreciation by plant accounts, if different from those approved by the NEB; and
- if not already filed with the NEB, copies of the relevant additional tariffs, transportation contracts or operating agreements associated with the new facilities.

Abandonment Funding Information

In 2008 the National Energy Board identified the following issue: What is the optimal way to ensure that funds are available when abandonment costs are incurred?

The Board determined, in the RH-2-2008 Reasons for Decision, that abandonment costs are a legitimate cost of providing service and are recoverable upon Board approval from users of the system. The Board also stated that landowners will not be liable for costs of pipeline abandonment.

All pipeline companies regulated under the *National Energy Board Act* are required to comply with the Board's decisions regarding abandonment funding.

Applicants with existing NEB-regulated facilities must use their Board-approved Abandonment Cost Estimate to calculate the annual amount to be set aside. Each Applicant must use the specific methodology that was approved for it by the Board in the MH-001-2013 Reasons for Decision.

For Group 1 companies, calculate the change in Abandonment Cost Estimate relative to the total Board-approved Abandonment Cost Estimate for this system.

For Group 2 companies, calculate the change in Abandonment Cost Estimate relative to the total Abandonment Cost Estimate for all your NEB regulated pipelines.

Information on abandonment funding should include the following:

- Current Board-approved Abandonment Cost Estimate.
- Change these proposed facilities will have on the Board-approved Abandonment Cost Estimate.
- Description on how you intend to address the change in your Abandonment Cost Estimate (i.e. how will this impact your set aside mechanism, collection mechanism, tolls or tariffs).

Applicants new to the Board's regulation require approval of the Abandonment Cost Estimate for the proposed facilities, as well as a process and mechanism for setting-aside abandonment funds. Information on abandonment funding should include the following:

- Proposed Abandonment Cost Estimate for the facilities.
- Description on how you intend to set-aside funds (either a trust, letter of credit, or surety bond) and a draft copy of the proposed set-aside mechanism;
    - If using a trust, a proposed trustee for the trust, and a description of whether or not the trustee is regulated under the *Trust and Loan Companies Act*; and
- Description on how you intend to collect the funds.

A.3.5 Non-NEB Regulatory Facility Approvals

Goal

The application includes information on other regulatory processes that are being undertaken with respect to the project.

Filing Requirements

Confirm that all non-NEB regulatory approvals required to allow the applicant to meet its construction schedule, planned in-service date and to allow the facilities to be used and useful are or will be in place.

If any of the approvals referred to in #1 may be delayed, describe the status of those approval(s) and provide an estimation of when the approval is anticipated.

Guidance

The NEB requires information regarding the status of all required federal, provincial and municipal approvals or authorizations to be reasonably assured that there are no issues before other regulators that would prevent or delay either the construction or use of the applied-for facilities. Updates on status may also be provided after an application has been submitted.

A.4 Lands Information

Goals

The application includes accurate documentation on land areas, land rights, the service of notice, the land acquisition process, and includes sample agreements and notices.

A.4.1 Filing Requirements – Land Areas

Ensure the land documentation includes the following:

- the width of the RoW including the locations where the width varies;
- the locations and dimensions of known temporary work space required for the project or, if locations are not known, a drawing showing the typical dimensions of the temporary work space required for road, watercourse and other crossings, storage areas and camps; and
- the locations and dimensions of any new lands required for all associated facilities.

Guidance – Land Areas

A description of the requirements and rationale for both temporary and permanent lands allows the Board to assess the appropriateness of the land areas. The description should include the dimensions of the:

- RoW;
- temporary working space;
- valve sites;
- cathodic beds;

- pole lines;
- access roads;
- meter stations; and
- facilities such as compressor or pumping stations.

Describe the location and distance of any changes to RoW width and the reasons for the change.

Where new lands under any type of agreement are not required for the project, this should be clearly stated in the application and no further land area information needs to be filed.

A.4.2 Filing Requirements – Land Rights

1. Provide a description of the type of land rights proposed to be acquired for the project and related facilities.
2. Provide a description of the nature and relative proportions of land ownership along the proposed route (i.e., freehold, Crown or public lands).
3. Where no new land rights are required, provide a description of the existing land rights that allow for the project.

Guidance – Land Rights

The description of the land rights will inform the Board and landowners of the different types of land rights needed for the project (e.g., option, easement, fee simple, statutory RoW, temporary work space, permit or licence, etc.) and the areas where existing land rights allow for the project.

A description of the land ownership informs the Board of the land acquisition areas and agreements required for the project.

Appropriate Dispute Resolution (ADR)

The Board fosters open and respectful discussion between parties affected by NEB regulated projects to settle issues that may arise between parties throughout the project lifecycle. The Board recognizes that a range of inters-based dispute resolution techniques, appropriate to the circumstance, are available and may be effective in dealing with such issues and disagreements. Interest-based techniques should be considered as alternative or complementary to traditional regulatory or litigated processes, such as the Detailed Route Hearing, and at the earliest opportunity for best results.

Parties are encouraged to consider ADR in their project planning and as soon as possible to resolve issues and manage conflict. Board staff with ADR specialization are available to assist stakeholders identify and design dispute resolution processes appropriate to their unique needs at any stage of the project.

A.4.3 Filing Requirements – Lands Acquisition Process

1. Provide a description of the proposed process for acquiring the lands required for the project.
2. Provide the timing of acquisition and the current status of acquisition.

3. Provide the status of service of notices on all owners of lands to be acquired pursuant to subsection 87(1) of the NEB Act.

Guidance – Lands Acquisition Process

A description of the land acquisition process to be implemented will allow the Board to assess the process and to be aware of the timing of acquisition.

The land acquisition information should describe the:

- numbers of landowners and tenants;
- numbers of option or easement agreements signed;
- numbers of notices served; and
- timing of service of remaining notices.

This information may be provided in a table form.

A.4.4 Filing Requirements – Land Acquisition Agreements

1. Provide a sample copy of each form of land acquisition agreement proposed to be used (includes option and easement). The agreement shall be in the form required by subsection 86(2) of the NEB Act:

   86. (2) A company may not acquire lands for a pipeline under a land acquisition agreement unless the agreement includes provision for

   (a) compensation for the acquisition of lands to be made, at the option of the owner of the lands, by one lump sum payment or by annual or periodic payments of equal or different amounts over a period of time;

   (b) review every five years of the amount of any compensation payable in respect of which annual or other periodic payments have been selected;

   (c) compensation for all damages suffered as a result of the operations of the company;

   (d) indemnification from all liabilities, damages, claims, suits and actions arising out of the operations of the company other than liabilities, damages, claims, suits and actions resulting from gross negligence or willful misconduct of the owner of the lands;

   (e) restricting the use of the lands to the line of pipe or other facility for which the lands are, by the agreement, specified to be required unless the owner of the lands consents to any proposed additional use at the time of the proposed additional use; and

   (f) such additional matters as are, at the time the agreement is entered into, required to be included in a land acquisition agreement by any regulations made under paragraph 107(*a*).

2. Provide a sample copy of any proposed agreements for:
   - fee simple ownership;

- temporary work space;
- an access road; or
- other agreements for the lands required for the project.

Guidance – Lands Acquisition Agreements

A sample copy of the acquisition agreement(s) enables the Board to verify that the agreement complies with the requirements of subsection 86(2) of the NEB Act and that landowner's rights are protected.

Additional information...

Where lands will not be acquired pursuant to the above filing requirements, it is not necessary to file the respective sample copy of agreement.

A.4.5 Filing Requirements – Section 87 Notices

1. Provide a sample copy of the notice proposed to be served on all owners of land pursuant to subsection 87(1) of the NEB Act:

   87. (1) When a company has determined the lands that may be required for the purposes of a section or part of a pipeline, the company shall serve a notice on all owners of the lands, in so far as they can be ascertained, which notice shall set out or be accompanied by

   (a) a description of the lands of the owner that are required by the company for that section or part;

   (b) details of the compensation offered by the company for the lands required;

   (c) a detailed statement made by the company of the value of the lands required in respect of which compensation is offered;

   (d) a description of the procedure for approval of the detailed route of the pipeline; and

   (e) a description of the procedure available for negotiation and arbitration under this Part in the event that the owner of the lands and the company are unable to agree on any matter respecting the compensation payable.

   In addition, where an application will be filed pursuant to section 58 of the NEB Act the notice should describe:

   - the process for approval of the detailed route of the pipeline, and
   - a statement that sections 34 to 39 of the NEB Act will not apply in respect of the procedure for approval of the detailed route of the project.

2. Confirm that all notices served or proposed to be served on owners of land pursuant to the requirements of subsection 87(1) of the NEB Act include a copy of the Board publication titled: *NEB Landowner Guide*.[9]

Guidance – Section 87 Notices

Notice

Viewing a sample copy of the notice assists the Board in verifying that the notice complies with the requirements of subsection 87(1) of the NEB Act and that landowners and others persons are adequately notified.

Exemption from Section 33 of the NEB Act

Where an application is filed pursuant to section 58 of the NEB Act, the procedure for approval of the detailed route of the pipeline, as described in sections 34 to 39 of the NEB Act, may not apply. In this situation, the subsection 87(1) notice will describe the procedure for approval of the detailed route of the pipeline and will also include a statement that sections 34 to 39 of the NEB Act will not apply in respect to the procedure for approval of the detailed route of the pipeline.

Section 58 Application Conditions

In the event the Board grants an order approving the section 58 application, it may condition the order such that prior to commencement of construction of the project on those lands where new land rights are required, the applicant will demonstrate in writing to the Board that either:

- those lands have been acquired; or
- where any required lands have not been acquired, the rights, as prescribed by the NEB Act, of those landowners will not be prejudiced by the construction of the project.

Lands not Acquired

In the event that a section 52 certificate is issued, the applicant would file the plans, profiles and books of reference (PPBoR) for the pipeline and serve notices pursuant to the requirements of subsection 34(1) of the NEB Act on those landowners from which land rights have not been acquired. The Board may allow construction of the project for those portions where the lands have been acquired, with the exception of a buffer zone near the lands not yet acquired pending the applicant demonstrating to the Board that either the lands have been acquired, or the rights of the landowners have not been prejudiced.

Landowners' Guide

The Board's publication *NEB Landowner Guide*[10] is available on the Board's website (www.neb-one.gc.ca) and copies are available from the NEB Library.

[9] Previously titled: *Pipeline Regulation in Canada: A Guide for Landowners and the Public*

[10] Previously titled *Pipeline Regulation in Canada: A Guide for Landowners and the Public*

Filing Requirements – Section 58 Application to Address a Complaint

1. Where a section 58 application proposes work or construction to address a landowner or public complaint that has been filed with the Board, the application should include:
   - a statement that the purpose of the work or construction proposed by the application is in response to a complaint that has been filed with the Board;
   - the name and location of the complainant;
   - the nature and date of the complaint; and
   - how the activities proposed within the section 58 application will address the complaint.

FYI – Reminder: See Section A.4.2.4

The Board encourages ADR interest-based approaches as alternative or complementary to traditional regulatory or litigated dispute resolution processes.

- For best results consider interest-based techniques to resolve issues at earliest opportunity
- Board ADR specialists are available to assist parties identify and design processes appropriate to their situation and unique circumstances.

Next Steps....

File the completed application. Applicants are encouraged to include the completed relevant checklists from Appendix I.

Guide R – TRANSFER OF OWNERSHIP, LEASE OR AMALGAMATION (NEB ACT PARAGRAPH 74(1)(*a*),(*b*) AND (*c*))

An application filed pursuant to paragraph 74(1)(*a*), (*b*), or (*c*) is usually followed by one or more of the following applications:

- review or amend an NEB decision, pursuant to section 21 of the NEB Act;
- leave to open, pursuant to section 47 of the NEB Act;
- addition to or modification of facilities, pursuant to sections 52 or 58 of the NEB Act; or
- tolls and tariffs, pursuant to Part IV of the NEB Act.

Leave of the Board is required under paragraphs 74(1)(*a*) and/or (*b*) of the NEB Act if a company intends to sell, purchase, transfer or lease pipeline facilities or assets that **are** regulated by the Board, or that **would be regulated** by the Board after the transaction.

The word "company" as defined in section 2 of the NEB Act encompasses entities incorporated (or continued and not discontinued) under provincial corporate legislation.

The information that is required for this portion of the application will be made available to the Board from two sources:

- the company divesting the facilities; and
- the company acquiring the facilities.

Goal

The application includes information describing:

- the nature of the transaction that invokes section 74 of the NEB Act and the facilities involved;
- the new owner and operator; and
- the intended use of the facilities as well as any changes in the conditions of service offered.

Filing Requirements

The company divesting of the facilities must provide the following information:

1. Describe the nature of the transaction (i.e., is the transaction a transfer of ownership, lease or amalgamation).
2. Provide a map or maps of the pipeline and the relevant upstream and downstream facilities, and identify any pipeline facility that could become stranded as a result of the transaction.
3. Provide a confirmation that a copy of the records set out in section 10.4 of CSA Z662 and section 56(*e*) to 56(*g*) of the OPR have been provided to the new owner of the facilities.
4. The estimated cost to abandon the facilities.

The company acquiring the new facilities must provide the following information.

1. Identify the new owner and operator of the pipeline including the appropriate contact information.
2. The original cost of the asset, depreciation and net book value.
3. The purchase price of the asset.
4. Describe the intended long-term use of the facilities.
5. Describe any changes in the conditions of service offered on the pipeline, including the estimated toll impact.
6. If the records set out in section 10.4 of CSA Z662 and section 56(*e*) to 56(*g*) of OPR do not exist, the applicant is to provide a plan detailing how it will acquire the information/records necessary to maintain and operate the facilities safely.

Guidance

Circumstances of Application

NEB Regulated to NEB Regulated

When the pipeline is already regulated by the Board, an Order or a Certificate of Public Convenience and Necessity would have been issued once the Board had determined that the facilities:

- would be constructed and operated in a safe and an environmentally sound manner; and
- were required for the present and future public convenience and necessity.

As a result, when a transaction involving the sale, conveyance, lease, purchase or amalgamation of an NEB-regulated pipeline is to occur, the Board needs assurance that, notwithstanding any changes in operation or configuration that are expected to occur, it would continue to be in the public interest to operate the facilities.

Both companies involved in the transaction are required to apply to the Board for leave to proceed with the transaction. It is strongly suggested that the companies jointly make the application. Subsequent to receiving leave from the Board to effect the transaction, the companies must notify the Board when the transaction has been completed. At this time, the company acquiring the facilities must apply under section 21 of the NEB Act (see Guide O) to have the existing Order or Certificate amended to reflect the transaction.

If the operation of the pipeline is to be changed, the acquiring company must also meet the requirements of the relevant section(s) of the OPR or PPR and possibly either section 52 or section 58 of the NEB Act.

Guide T – LEAVE TO OPEN (NEB ACT S.47)

In accordance with the NEB Act, a company requires permission from the Board before opening a pipeline or a section of pipeline for the transmission of hydrocarbons or any other commodity.

The Board may grant leave under section 47 of the NEB Act if satisfied that the pipeline can be safely opened for transmission.

Additional information...

Pursuant to subsection 58(1) of the NEB Act, the Board may make orders exempting certain facilities from the provisions of section 47.

Goal

An application for leave to open will include information detailing the facilities for which leave is being sought as well as certain test information.

Filing Requirements

1. For leave to open applications for line pipe or a section of line pipe (including new piping for storage tanks), provide:
   - the Board certificate or order number under which the work was carried out;
   - a list of standards, specifications and procedures to and under which the facilities were designed, constructed and tested;
   - a description of the pressure-tested facilities including:
     - the MOP;
     - the location;
     - the piping specifications, including the pipe manufacturer;
     - a schematic of the pressure-tested facilities; and
     - where applicable, the elevation profile of the test section, including the high, low and test point elevations;
   - a summary of continuous pressure and temperature readings over the test period, including:
     - the date of the test;
     - the test medium; and
     - the minimum and maximum allowable test pressures (where applicable, reconcile any significant pressure deviations);
   - a summary of all piping, welds, and valves not subjected to a pressure test following installation (eg. pre-tested pipe and assemblies) with justification for not pressure testing following installation;
   - a statement that all control and safety devices were or will be inspected and tested for functionality;

- confirmation that all field joints were non-destructively examined;
- confirmation that any permits required for the use and disposal of water were obtained;
- test equipment calibration certificates;
- confirmation that pressure testing was performed under the direct supervision of a company representative;
- all logs, test charts and other test records, signed and dated by the company representative;
- confirmation that the test pressure did not fall below 97.5 percent of the minimum strength test pressure; and
- details regarding any unsuccessful pressure tests, including the cause of the test failure.

2. For a leave to open application for a tank, provide:
   - the Board certificate or order under which the work was carried out;
   - a list of standards, specifications and procedures to and under which the facilities were designed, constructed and tested;
   - a statement confirming that post-weld vacuum tests were conducted and deemed acceptable;
   - a statement that hydrostatic testing was completed and found acceptable;
   - a confirmation of the water source and a copy of any permits required for the use and disposal of water, if applicable;
   - a statement confirming that the fire protection facilities were constructed and tested in accordance with CSA Z662;
   - a statement confirming that the containment area or system was built to meet the requirements of CSA Z662;
   - a statement confirming that non-destructive examination of the welds was conducted and found to be acceptable; and
   - a statement that all control and safety devices (e.g., overflow alarms) have been inspected and tested for functionality.

Guidance

Section AA.1 in Guide AA outlines when the Board expects leave to open applications and pressure testing programs to be filed.

It is recommended that the application contain a signed statement from a professional engineer, indicating the application has been assessed and reviewed.

Next Steps....

File the completed application. Applicants are encouraged to include the completed relevant checklists from Appendix I.

Guide AA – Post Certificate or Order Requirements

Goal

Information is provided to validate the applicant's approach to the proposed facility and to facilitate the Board's audit and inspection processes.

AA.1 Filing Requirements – Engineering and Technical

Pipe Joining Program

1. Two weeks prior to the start of construction, provide a pipe joining program if the proposed project involves:
   - pipe, other than auxiliary systems pipe, carrying any substance other than sweet natural gas, oil or refined products;
   - the joining of any non-routine material;
   - non-routine joining procedures; or
   - a pipe grade higher than 483 Mpa.

Pressure Testing and Leave to Open

2. Two weeks prior to pressure testing, provide a pressure testing program if exemption has not been granted from section 47 of the NEB Act (i.e., leave to open).

3. One week prior to the start of operations, make an application for leave to open if exemption from section 47 of the NEB Act has not been granted (see Guide T for details).

Construction Safety Manual

4. Four weeks prior to the start of construction, submit a construction safety manual pursuant to OPR subsection 20(1) and PPR subsection 27(1). Refer to section 1.6 if this manual has been previously filed with the Board.

Emergency Procedures Manual

5. Two weeks prior to the start of operations, submit an emergency procedures manual and any updates that are made to it pursuant to OPR subsection 32(2) or PPR paragraph 35(*b*) and (*c*).
   - Refer to section 1.6 if this manual has been previously filed with the Board. File any updates required to incorporate the current project.

Gas Processing, Sulphur or LNG Plant Facilities

6. If the proposed project involves gas processing, sulphur or LNG plant facilities, submit a program for the design, operation and abandonment of pressure vessels and pressure piping at the processing plant pursuant to PPR section 9. Also include provisions for document handling and record retention.

AA.2 Filing Requirements – Post Construction Environmental Monitoring Reports

1. Provide reference information including:
   - the NEB order or certificate and condition number under which the report is being filed;
   - the year of reporting (e.g., 6 month, 1 year);
   - pipeline specifications (e.g., outside diameter of pipe, length of pipe, and product being transported); and
   - a map of the region displaying the location of the pipeline as it was built in relation to provincial, territorial or national boundaries, and the nearest town.
2. Identify on a map, or with reference to a map, the locations of the following, as appropriate, in relation to the location of the pipeline as constructed:
   - sites requiring ongoing monitoring (e.g., steep slopes, erosion-affected areas, areas that have weed problems, specific wildlife habitat, trees, rare plant transplant and donor sites or riparian areas);
   - watercourse crossings, as well as any locations in which offsetting has been completed as required under a *Fisheries Act* Authorization. These locations are also to be provided in an electronic spreadsheet format and should include the name of the pipeline, name of the watercourse, type of watercourse, fish presence, the UTM location including zone in NAD83 datum and the crossing methodology implemented for each crossing;
   - wetlands;
   - access control features;
   - temporary work space boundaries and access roads;
   - planted tree bands;
   - areas of identified landowner concerns such as subsidence or soils issues; and
   - other project-specific sites of importance or interest.
3. Provide a discussion of the effectiveness of mitigation, reclamation, or compensation measures that were committed to and implemented. If measures were not successful, provide a description of what type of remedial measures were applied to accomplish the goals of mitigation or reclamation.
4. Identify the outstanding environmental issues, the plans for their resolution and any discussions held with interested parties regarding the issues.
5. Provide contact names and phone numbers of company representatives should there be questions from NEB staff about the report or future inspections by NEB staff that need to be arranged.

Additional information...

It is only necessary to address outstanding issues in subsequent reporting years. Once an issue has been reported as being resolved, it no longer needs to be addressed in subsequent reports unless the issue redevelops. Each issue should be demonstrated as being resolved in a report prior to being removed from the list in a subsequent report.

Guidance

Report Content

These information requirements are intended to guide companies in developing post-construction environmental monitoring reports (post-construction report). Companies are encouraged to submit the listed information in an appropriate format such as:

- text;
- tables;
- diagrams; or
- photographs.

The initial post-construction report, also known as the as-built report, should be the most detailed post-construction report. The as-built report should focus on the issues from construction, and should be used as a building block upon which additional post-construction reports are based. The subsequent post-construction reports should focus on the applied-measures and status of issues since the last post-construction report filing.

Photos can be used throughout the report to give the reader a better understanding of the issues, the state of the RoW, and the comparison between pre- and post-construction conditions.

The locations of specific environmental features and issues should be identified so that NEB or company employees can easily locate areas on the ground. The locations may be marked on the map or may be identified in a list with reference to a map (e.g., alignment sheets). Locators such as latitude and longitude or Universal Transverse Mercator (UTM) coordinates should be used, and may be used in combination with kilometre- or mile-posts for use in flyovers.

The as-built report should discuss the mitigation implemented during construction and reclamation, and should include specific detail on unique or novel mitigation applied. Subsequent post-construction reports should discuss measures implemented since the submission of the previous post-construction report and update the status of issues and the effectiveness of mitigation, as appropriate.

Biophysical and Socio-Economic Elements

Guidance for specific information that could be provided for biophysical and socio-economic elements is provided in Table AA-1. To determine which biophysical elements should be addressed, refer to Table A-1 in Guide A, section A.2.

Highlight any new or innovative mitigation used and provide an evaluation of its success.

Table AA-1: Specific Information for Biophysical and Socio-Economic Elements

Biophysical and Socio-Economic Element	Information
Physical environment	• Confirm the mitigation that was applied for issues related to topography, permafrost, or acid-generating rock. • Discuss the results of any monitoring related to these issues.
Soil and soil productivity	• Identify areas where substantial admixing, erosion or compaction has occurred and discuss the mitigation applied. • Discuss any wind and water erosion control measures that were undertaken. • Identify and discuss any contamination encountered, and any proposed remediation.
Vegetation	• Discuss the methods of re-vegetation (e.g., natural recovery or seeding) and where the methods were applied along the RoW. • Evaluate the success of re-vegetation (e.g., percent cover achieved, species diversity and survival of rare plant transplants). • Provide labelled photos including location, date and direction of photo comparing the RoW to surrounding vegetation. Random permanent photo reference points representative of the different habitats and re-vegetation methods along the RoW could be used. • Discuss whether any weeds have been identified, their type and locations, and proposed control measures. • Identify the seed mix(es) used and in which location, and provide copies of seed certificates. • Discuss and compare agricultural productivity on and off the RoW. • Identify areas where remedial seeding is required and discuss plans for this seeding.
Water quality and quantity	• Identify watercourse crossing construction method(s) used in the field. • Provide locations of temporary structures and confirm temporary structures have been removed (e.g., bridges or sediment fences). • Provide labelled photos for sensitive crossings, such as fish bearing streams, or those streams that may affect public health such as community watershed crossings. Photos should include upstream, downstream, left-bank, right-bank, pre-construction and post-construction views if possible. • Discuss the results of any water quality or quantity monitoring that occurred during the project.
Fish and fish habitat	• Further to the information provided for “Water Quality and Quantity”, describe mitigation that was applied at each fish bearing watercourse as well as any *Fisheries Act* Authorization offsetting measures implemented. • Identify the location of sensitive sites identified during construction (e.g., spawning sites) and discuss the mitigation used at these sites as well as the residual effects.
Wetlands	• Identify and discuss the specific crossing method and mitigation measures applied at each wetland. • Discuss the removal or maintenance of permanent or semi-permanent access structures to ensure proper drainage and flow through the wetlands.
Wildlife and wildlife habitat	• Identify the location of sensitive sites identified during construction or through the application process (e.g., denning sites or evidence of nesting). • Discuss the impacts to these sites that occur from construction and associated mitigation measures.
Species at Risk or Species of Special Status	• Identify and discuss any Species at Risk or Species of Special Status observed in the project area during project activities. • Describe the mitigation that was applied with respect to Species at Risk or Species of Special Status.
Air quality	• Confirm the mitigation that was applied with respect to air quality. • Discuss the results of any monitoring related to air quality.

Biophysical and Socio-Economic Element	Information
Acoustic environment	• Confirm the mitigation that was applied with respect to noise. • Discuss the results of any monitoring related to noise.
Heritage resources	• Discuss heritage sites that were previously known sites or identified during construction and the mitigation applied during construction to protect them.
Navigation and navigation safety	• Discuss any project effects on navigation and navigation safety along the right-of-way and the mitigation which has been implemented.

Summary Tables – Examples

Table AA-2 is an example of a summary table of outstanding issues. Table AA-3 is an example of a summary table of discussions with interested parties about outstanding issues.

Table AA-2: Example of a Summary Table of Outstanding Issues

Biophysical Element	Location	Outstanding Issue	Potential Adverse Environmental Effect	Proposed Action and Schedule
Watercourse	Big Hill Creek (latitude and longitude, UTM)	Creek bank erosion	Input of fine sediments to water column affecting fish reproduction	Install silt fence, June 20XX
Vegetation	John Doe's Farm (legal land location, and latitude and longitude or UTM)	Soil compaction	Poor root penetration resulting in poor growth	Deep rip the land, June 20XX

Table AA-3: Example of a Summary Table of Discussions Regarding Outstanding Issues

Biophysical Element	Location	Contact Information and Results of Discussion
Watercourse	Big Hill Creek (latitude and longitude, UTM)	Contacted Jane Smith from Alberta Environment (phone xxx xxx-xxxx) on 15 March 20xx. Ms. Smith was satisfied with the proposed action to address the creek bank erosion.
Vegetation	John Doe's Farm (legal land location, and latitude and longitude or UTM)	Met with John Doe on 24 November 20xx to discuss compaction. Mr. Doe was not entirely convinced of the effectiveness of the mitigation approach suggested, but agreed that it is a good first step. He would like to see the results of the change in compaction of the soil prior to determining whether he will be satisfied with the approach.

Chapter 7 Referenced Documents

- *National Energy Board Act*
- *National Energy Board Rules of Practice and Procedure, 1995*
- *National Energy Board Onshore Pipeline Regulations*
- *National Energy Board Processing Plant Regulations*
- *National Energy Board Act Part VI (Oil and Gas) Regulations*
- *National Energy Board Substituted Service Regulations*
- *National Energy Board Export and Import Reporting Regulations*
- *National Energy Board Damage Prevention Regulations – Authorizations*
- *National Energy Board Cost Recovery Regulations*
- *Section 58 Streamlining Order XG/XO-100-2012*, dated 1 August 2012
- Order MO-002-2017 – Compelling Publication of Emergency Management Program Information on Company Websites (Filing A81701)
- Order MO-006-2016 – Compelling Publication of Emergency Procedures Manuals (Filing A79720)
- Order MO-CO-3-96 – Exemption of Commodity Pipelines from the OPR
- Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs, dated 12 June 2002
- National Energy Board Pre-Application Meetings Guidance Notes, dated 4December 2008
- Electronic Filing – Memorandum of Guidance, dated 21 March 2002
- *Filers Guide to Electronic Submission*
- Investigative Digs and Related Pipeline Repairs/Replacements, dated 2 December 2002
- Security and Emergency Preparedness and Response Programs, Appendix II to Guidance Notes for the *National Energy Board Processing Plant Regulations*, dated 24 April 2002
- Upstream Jurisdictional Issues, dated 17 September 1999
- *In the Matter of an Application under the National Energy Board Act of Review of Natural Gas Surplus Determination Procedures* (July 1987), No. GHR-1-87 (NEB)
- *In the Matter of an Application under the National Energy Board Act of Proposed Changes to the Application of the Market-Based Procedure* (May 1992), No. GHW-1-91 (NEB)
- NEB *Information for Proposed Pipeline or Power Line Projects that Do Not Involve a Hearing*

- NEB *Information for Proposed Pipeline of Power Line Projects that Involve a Hearing*
- NEB *Landowner Guide,* (previously Pipeline Regulations in Canada: A Guide for Landowners and the Public)
- Pipeline Abandonment, A Discussion Paper on Technical and Environmental Issues, dated November 1996
- *Canadian Environmental Assessment Act, 2012* (go to the web site at www.ceaa-acee.gc.ca for access to guidance documents)
- *Official Languages Act*
- Canadian Standards Association Standard Z662, *Oil and Gas Pipeline Systems*

Abandonment Funding and Planning

- May 2009, Reasons for Decision RH-002-2008, Land Matter Consultation Initiative Stream 3 Pipeline Abandonment – Financial Issues (A21835, English A1J9R9) / français A1J9S0) Contains relevant principles, a preliminary Base Case and the 5-year Action Plan
- 4 March 2010, Base Case Revisions Revisions to Preliminary Base Case Assumptions (A24600, English A1S0C1 / français A1S0C2) Contains further detail on cost definitions and on collection periods and expected earnings on set-aside funds. Also contains details on filing formats
- 21 December 2010, Unit Costs A27778 (Letter: English A1W9T1 / français A1W9T2) (Amended Table A-3: English A1W9T3 / français A1W9T4) Contains estimates of individual cost components derived through discussions with industry
- 7 March 2011, Letter in response to CEPA (English A1W9T1 / français A1Y0H4) The letter amended one deadline for Group 1 pipeline companies, to allow more time for consultation with landowners
- 1 June 2012, Letter to All Parties – RH-2-2008 Five Year Action Plan – Timelines for Remaining Steps (English A2T8C7 / français A2T8C8)
- February 2013, Reasons for Decision MH-001-2012, *Applications filed in November 2011 for approval of preliminary cost estimates for abandonment cost funding* (English A3F4F3 / français A3F4F4)
- 14 February 2013 Board Letter to Group 2 Companies on Abandonment Cost Estimates (English A3F4F6 / français A3F4F7)
- May 2014, Reasons for Decision MH-001-2013, *Applications for approval of set-aside and collection mechanisms for abandonment cost funding,* (English A3X4G5/ français A3X4G4) Contains Model Trust Agreement, Model Letter of Credit, and Model Surety Bond
- National Energy Board Decisions on Compliance with Reasons for Decision MH-001-2013 – Companies filing Trusts (Filings ID:A64904)

Appendix 1 Filing Manual Checklists

The filing requirements included in this manual have been summarized in the following checklists. The Board encourages applicants to complete all the relevant checklists and include them as part of the application. The Board may consider making the inclusion of the checklists mandatory in the future.

Using these checklists alone does not constitute a complete application

Chapter 3 – Common Information Requirements

Filing #	Filing Requirement	In Application? References	Not in Application? Explanation
3.1 Action Sought by Applicant			
1.	Requirements of s.15 of the Rules.		
3.2 Application or Project Purpose			
1.	Purpose of the proposed project.		
3.3 Management Systems and Programs under the OPR			
1.	An overview of its management systems, including a description of: • How programs required under the OPR are coordinated within the management system to promote safety and environmental protection; and • The process for any necessary modifications to the management system.		
3.4 Consultation			
3.4.1 Policies and Goals of Consultation			
1.	The corporate policy or vision.		
2.	The principles and goals of consultation for the project.		
3.	A copy of the Aboriginal consultation policy and copies of policies and principles for collecting traditional use information, if available.		
3.4.2 Designing Project-Specific Consultation Activities			
1.	The description of the consultation activities and the factors that influenced the design.		
3.4.3 Implementation and Outcomes of Project-Specific Consultation Activities			
1.	The outcomes of the consultation program for the project.		
3.4.4 Justification for Not Undertaking Consultation Activities			
1.	The application provides justification for why the applicant has determined that consultation activities were not required for the project.		
3.5 Notification of Commercial Third Parties			
1.	Confirm that third parties were notified.		
2.	Details regarding the concerns of third parties.		
3.	List the self-identified interested third parties and confirm they have been notified.		
4.	If notification of third parties is considered unnecessary, an explanation to this effect.		

Guide S – Access on a Pipeline

Filing #	Filing Requirement	In Application? References	Not in Application? Explanation
1.	Provide a detailed summary of the circumstances leading to the application.		
2.	Provide copies of all relevant correspondence between the applicant, the operator of the subject facility and any other parties that may be involved with the application.		
3.	For applications for an exemption from subsection 71(1), provide evidence that: • an open season was held offering all of the capacity to be contracted to anyone interested in shipping; and • allowing the exemption is in the public interest		
4.	In the case of an application pursuant to subsection 71(3), the applicant should provide a description of the facilities that the pipeline company would need to install, including a cost estimate		

Guide T – Leave to Open

Filing #	Filing Requirement	In Application? References	Not in Application? Explanation
For a Pipeline or a Pipeline Section:			

	• Board certificate or order under which work was carried out
	• List of standards, specifications and procedures
	• Description of the pressure tested facilities
	• Summary of continuous pressure and temperature readings
	• Summary of all piping, welds, and valves not subjected to a pressure test following installation, with justification for not pressure testing
	• Statement that all control and safety devices were or will be tested for functionality
	• Confirmation that:
	  • required tests were taken and met requirements
	  • all permits were acquired when necessary
	• Test equipment calibration certificates
	• All logs, test charts, etc. are signed and dated by company representative
	• Details regarding unsuccessful pressure tests, including the cause of failure		

For a Tank			

	• Board certificate or order under which work was carried out
	• Standards, specifications and procedures
	• Confirmation that:
	  • required tests were taken and met requirements
	  • all permits were acquired when necessary
	• Statement that all control and safety devices were inspected and tested for functionality		