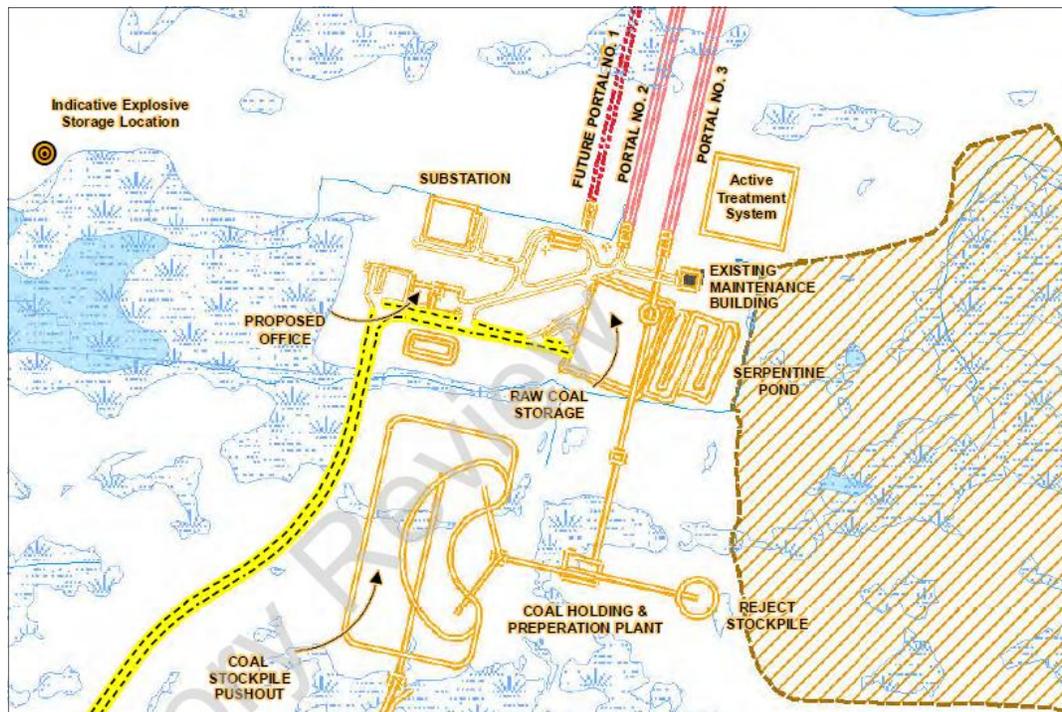


A User's Guide to the 'One Window' Process: Mineral Development in Nova Scotia

Mineral Development and Policy Section

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Proposed Donkin coal mine development.



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Nova Scotia Department of Natural Resources*

Preface

The Government of Nova Scotia offers a 'One Window' process for reviewing, permitting and monitoring mineral development projects in the province. Under this process, all government departments involved with mineral development activities act collectively to streamline government oversight of these projects.

The 'One Window' process provides an informed, timely and consistent review of new and existing mining projects in the province. Government departments involved in this process include the Nova Scotia Department of Natural Resources, Nova Scotia Environment, Nova Scotia Labour and Advanced Education, and the Nova Scotia Office of Aboriginal Affairs, plus other provincial, federal and municipal government agencies as may be determined on a project-by-project basis. The 'One Window' function is managed within government by a Standing Committee, consisting of representatives from Natural Resources, Environment, and Labour and Advanced Education. The committee acts as liaison between a project proponent and the various government agencies that have responsibilities for mineral development in Nova Scotia.

This guide has been prepared by the Nova Scotia Department of Natural Resources to offer interested parties a general overview of the relevant legislation, and the process for approving mineral development projects in Nova Scotia. However, proponents should familiarize themselves with the actual legislation and regulations affecting their projects. This guide has been written for a 'typical' mineral development project and does not cover every possibility that may be encountered.

The guide contains information on environmental approvals, occupational health and safety standards, Aboriginal consultation, site reclamation requirements, and fee structures associated with the filing and review of documents required for regulatory monitoring over the life of a project. The guide focuses on the early stages of project screening and emphasizes the fact that thorough planning provides the strongest likelihood of a successful mining venture in Nova Scotia.

Presented here is a description of the process and the roles of key government departments. The Environmental Assessment process is described as it applies to mineral development projects, including details of its intent and an overview of the various stages. A description of the necessary licences, leases, and approvals is supplied, together with the information requirements for each, as well as a list of government contacts.

Many mineral development projects will involve consultation with local communities and the Mi'kmaq people of Nova Scotia. While the 'One Window' process may make mention of these activities, participation in the process does not, in itself, constitute third party consultation.

The Government of Nova Scotia believes that mineral development is important to the economic future of the province. This guide is intended to assist proponents and regulators alike in the approval process for mineral development projects.

This guide to the 'One Window' process was written as a convenient reference for government review of mineral development projects. Proponents are also referred to the *Mineral Resources Act and Regulations*, the *Environment Act* and its *Regulations* and the *Occupational Health and Safety Act* and its *Regulations* for more detailed information. The *Acts* and *Regulations* take precedence should there be any discrepancies that occur with the information contained in this guide.

The guide has been prepared by staff of the Environmental Monitoring and Compliance Division and the Environmental Assessment Branch of Nova Scotia Environment, the Occupational Health and Safety Division of the Department of Labour and Advanced Education, the Office of Aboriginal Affairs, the Mineral Development and Policy Section and the Registry of Mineral and Petroleum Rights of the Department of Natural Resources, who are all members of the One Window Standing Committee. Their contributions to this guide are gratefully acknowledged.

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1. The 'One Window' Process

1.1 Introduction

The mineral industry is a major contributor to the economy of Nova Scotia. In the interest of encouraging future mineral development, the provincial government seeks to make the process of review and approval as streamlined and efficient as possible, free of unnecessary procedures that may unduly hinder progress of a development project.

Mining projects must respect environmental and occupational health and safety standards. Mining projects in Nova Scotia are subject to a variety of statutes, which are administered by several government departments. In 1994, the Province of Nova Scotia initiated a 'One Window' process for reviewing, approval and monitoring of mineral development and mine closure projects. The overall goal is to simplify the review process for both the mining industry and the government. The 'One Window' process facilitates interaction among various government departments and the mineral development proponent, making the review process more consistent and expedient for all. The three government departments at the forefront of the 'One Window' process are:

- Nova Scotia Environment,
- Nova Scotia Labour and Advanced Education, and
- Nova Scotia Department of Natural Resources.

Other government representatives, both provincial and federal, may become involved depending on the nature of the project. The Nova Scotia Department of Economic and Rural Development and Tourism, Nova Scotia Department of Transportation and Infrastructure Renewal, Nova Scotia Office of Aboriginal Affairs, Environment Canada, Fisheries and Oceans Canada, and the Canadian Environmental Assessment Agency are examples.

In general terms, the 'One Window' process includes the following steps (see Fig. 1):

- initial meetings with government representatives and the mineral development proponent;
- registration and completion of the Environmental Assessment process;
- application for the required leases and approvals from the various departments;
- regulatory monitoring and inspection over the life of the project; and
- regulatory monitoring and inspection during closure and reclamation.

1.2 Objectives of the 'One Window' Process

The 'One Window' process is designed to facilitate cooperation between government departments, improve efficiency and reduce jurisdictional overlap. It facilitates communication between industry proponents and government. At the same time, the process helps to ensure that no significant issues are overlooked.

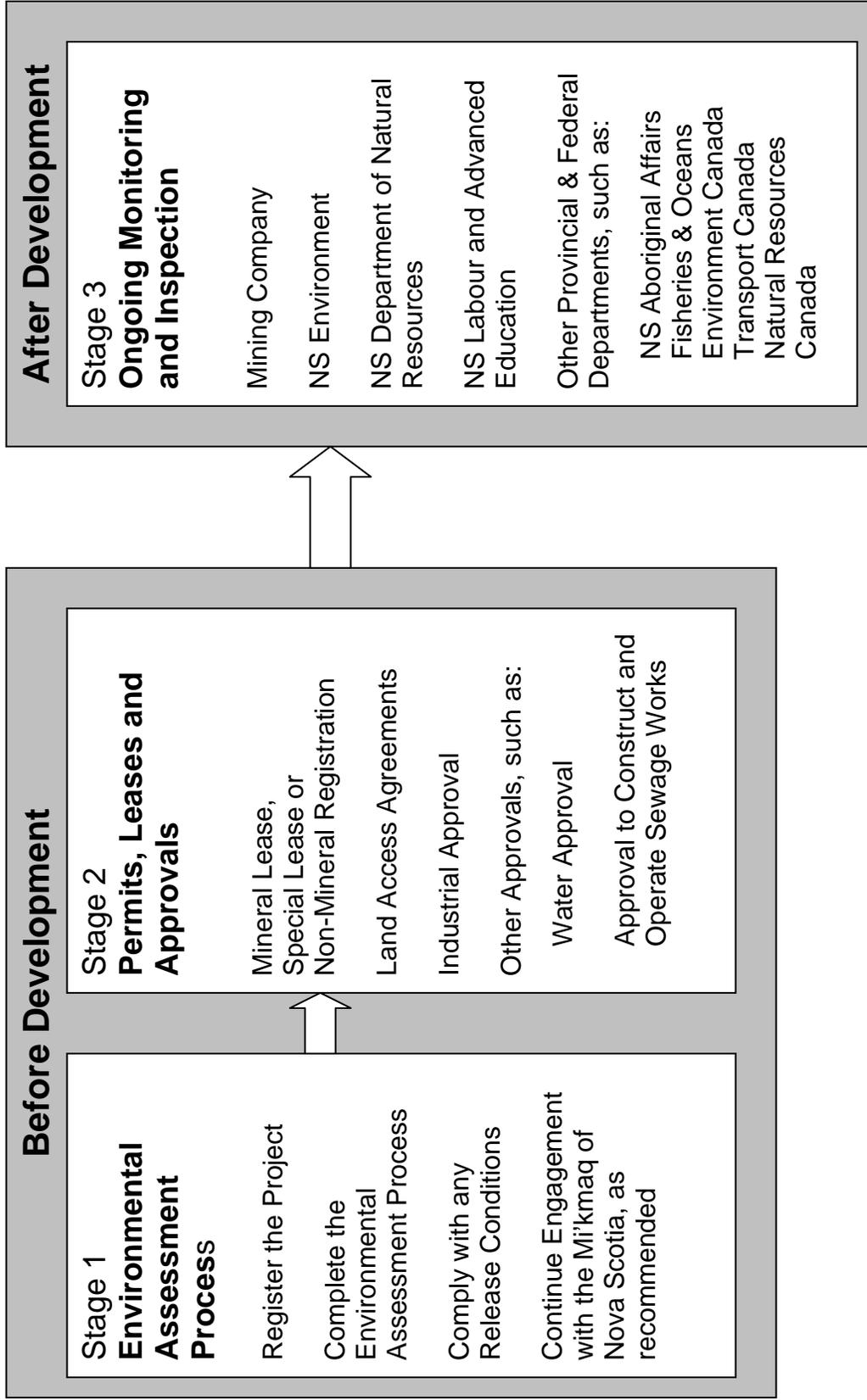


Figure 1. A brief outline of the 'One Window' process for mineral development approvals.

2. Department Responsibilities

This section provides a brief overview of the key departments' responsibilities with respect to mineral development projects.

To the extent possible, NSE, LAE and DNR provide technical assistance to each other. However, the decision-making authority for matters related to the environment, occupational health and safety, and resource management will continue to rest with NSE, LAE and DNR, respectively.

2.1 Nova Scotia Department of Natural Resources (DNR)

For someone interested in mineral rights or mineral development in Nova Scotia, DNR should be the first point of contact with government.

DNR's role with respect to mineral exploration and mining is to manage the province's mineral resources. Activities associated with this role include generating and distributing geological information, promoting the province's mineral resources, and administering and regulating mineral exploration and mining in Nova Scotia.

DNR's regulatory responsibility is based on the *Mineral Resources Act* and *Regulations*. Other issues within DNR's mandate that may relate to mining include Crown land access, park and wildlife considerations, and forestry.

Permits and approvals issued by DNR include: Prospector Registrations, Exploration Licences, Special Licences, Excavation Registrations, Letters of Authorization, Mineral Leases, Special Leases, Non-Mineral Registrations, Access Permits (Crown lands), Crown Land Leases and other permits under the *Beaches Act* and *Crown Lands Act*.

2.2 Nova Scotia Environment (NSE)

NSE has prime responsibility for all provincially regulated environmental issues including the provincial Environmental Assessment (EA) process, environmental approvals, and environmental compliance monitoring.

Regulatory responsibility comes under the *Environment Act* and its *Regulations*. All mine projects require an EA approval. Mine projects usually require additional environmental approvals, including an Industrial Approval and an approval to construct and operate sewage works or remove a sewage system, or an on-site sewage disposal system. Advanced exploration projects, such as large bulk samples, generally require an Industrial Approval, but may also require water and sewage approvals. In some particular cases, advanced exploration projects may require Environmental Assessment.

All projects may require approvals (Water Approval) for watercourse crossings, water withdrawals or wetland alterations. Proponents are encouraged to contact NSE for guidance on approval requirements.

Prior to obtaining any environmental approval for an underground exploration or mining activity, a proponent must provide written confirmation from the Occupational Health and Safety Division of the Department of Labour and Advanced Education that the proponent has provided sufficient information to comply with the filing requirements of the *Underground Mining Regulations* and that the information has not revealed any apparent violation of the *Occupational Health and Safety Act* or its *Regulations*.

2.3 Nova Scotia Labour and Advanced Education (LAE)

LAE's responsibilities include occupational health and safety (OH&S), industrial relations, labour standards, public safety and fire prevention. Regulatory authority for OH&S is based on the *Occupational Health and Safety Act* and its *Regulations*, particularly the *Underground Mining Regulations* and Part 15 (Surface Mine Workings) of the *Occupational Safety General Regulations*.

The OH&S legislation is based on the principle of internal responsibility through 'workplace parties', which include any person working on a project or contributing components to a project. LAE's role is to establish and clarify the responsibilities of workplace parties under the law, to support them in carrying out their responsibilities, and to intervene appropriately when those responsibilities are not carried out. The *Occupational Health and Safety Act* provides for the promotion, co-ordination, administration and enforcement of occupational health and safety in the province.

LAE concentrates its efforts on safe and healthy workplaces and work practices, and health and safety standards protecting the general public. The Occupational Health and Safety (OH&S) Division focuses on promotion of the internal responsibility system, which acknowledges the responsibility of employers, employees and other workplace parties for workplace health and safety. The OH&S Division, through information and enforcement, effects workplace and public health and safety by:

- supporting and encouraging the use of the internal responsibility system, which promotes the primary responsibility of employers and employees to create a healthy and safe work environment;
- providing inspection, investigation and enforcement services, particularly in support of internal responsibility; and
- ensuring that legislation is kept up to date, in order to respond to changes in workplace practices, procedures and technology.

3. Permits and Approvals

3.1 Approvals – Nova Scotia Department of Natural Resources

The licences, registrations, authorizations, and leases issued by DNR under authority of the *Mineral Resources Act* (MRA) are listed as follows:

Prospector Registration (ID Card): confirms that the holder has been registered with DNR for the non-exclusive right to search and prospect for minerals in a preliminary way and with the landowner's permission on unlicensed, open ground. Only non-disturbing activity can be carried out.

Exploration Licence: grants the exclusive right to search and prospect for minerals within a designated area. Activities can include prospecting and geological survey work, drilling, and minor excavation work (less than 1 metre in depth and without mechanized equipment).

Drilling Notification: holders of a licence must submit Part A of the drilling notification form to DNR prior to the commencement of a drilling program on their licenced area. When drilling has been completed, the licence holder is required to file Part B of the drilling notification form within 30 days of completion of the drilling program.

Excavation Registration: grants the holder of a licence permission to undertake limited trenching, test pitting, underground exploration or bulk sampling (less than 100 tonnes of mineral-bearing material).

Letter of Authorization: extraction of a bulk sample of more than 100 tonnes of mineral-bearing material by the holder of a licence requires an Excavation Registration and a Letter of Authorization. Generally, bulk samples are limited to a maximum of 10,000 tonnes of mineral-bearing material and a maximum of 50,000 tonnes of total material removed.

Mineral Lease: grants the exclusive right to some or all of the mineral resources in a specific area, subject to payment of royalties and all other conditions contained in the *Mineral Resources Act*.

Special Licence: grants the exclusive right to search and prospect for specific minerals within a designated area and to extract specific minerals for test purposes under the *Mineral Resources Act*. Special licences are granted only with the approval of the Governor in Council (cabinet, also called Executive Council), and may contain any terms or conditions that the Governor in Council approves. Generally, special licences are required for exploration of minerals that have been withdrawn from general staking, but may also be granted under other circumstances. Exploration for coal, salt and potash requires a special licence.

Special Lease: grants the exclusive right to specific minerals in a designated area under the *Mineral Resources Act*. Special leases are granted only with the approval of the Governor in Council, and may contain any terms or conditions that the Governor in Council approves. Generally, special leases are required for mining those minerals that have been withdrawn from general staking, but they may also be granted under other circumstances. Mining of certain minerals, including coal, salt and potash, requires a special lease.

Non-Mineral Registration: grants the holder of the rights to gypsum or non-Crown limestone in a designated area the right to carry on the production of that gypsum or non-Crown limestone under the *Mineral Resources Act*. Generally, the landowner holds the rights to the gypsum or non-Crown limestone, unless those rights have been granted to another party. Gypsum and non-Crown limestone are not minerals under the *Mineral Resources Act*.

A requirement of all letters of authorization, registrations, and leases granted under authority of the *Mineral Resources Act* is that work must be conducted in compliance with the *Occupational Health & Safety Act* and its *Regulations* and the *Environment Act* and its *Regulations*.

Permits and leases for access on Crown lands for the purpose of exploration or mineral development may be issued by DNR under authority of the *Crown Lands Act*, and are listed as follows:

Crown Land Access Permits: authorizes non-exclusive access on Crown lands for a specified purpose (e.g. exploration – non-disturbance or disturbance). Examples of Crown land access permits are the Permit for the Purpose of Prospecting on Crown Land and the Permit for Mineral Exploration on Crown Land.

Crown Land Lease: authorizes exclusive use of Crown lands for a specified purpose (e.g. mining). Generally, a Crown Land Lease is required for mining operations on Crown lands.

3.2 Approvals – Nova Scotia Environment

The following approvals are issued by Nova Scotia Environment under the *Environment Act* and its *Regulations*:

Environmental Assessment Approval: Mine projects require EA approval from NSE in accordance with Part IV of the *Environment Act* and the *Environmental Assessment Regulations*.

The EA process for a mine development project normally starts following advanced exploration, when the proponent has made the decision that geological and economic conditions determine that mine development is viable. There are some instances, however, when an EA may also be required for advanced exploration, such as bulk sampling of more than 100 tonnes in an ecologically sensitive area. When a proponent has made a decision on the viability of a project, the ‘One Window’ Committee will, through meetings with the proponent and other agencies, establish the information that should be included in the project’s EA. The ‘One Window’ process will continue throughout the EA at a level appropriate to the degree of assessment required for the project.

Full involvement of the ‘One Window’ Committee through the EA process will serve to reduce repetition of submissions by the proponent to the various government departments involved in the permitting processes. Information gathered in the EA may be used to support applications for other necessary approvals, such as an Industrial Approval or Water Approval.

Industrial Approval: is required under the *Environment Act* and the *Activities Designation Regulations* for industrial activities in Nova Scotia that have air, liquid, or solid waste disposal requirements associated with them. These include activities associated with advanced exploration, mining and processing. An Industrial Approval is required for the construction, operation and/or reclamation of an advanced exploration activity, surface mine, underground mine and/or mineral processing plant. It should be noted that an Industrial Approval for an underground project cannot be issued until the proponent has provided written confirmation from the OH&S Division of LAE that the proponent has provided sufficient information to comply with the filing requirements of the *Underground Mining Regulations* and that the information has not revealed any apparent violation of the *Occupational Health and Safety Act* or its *Regulations*.

Water Approval: is required under the *Environment Act* and the *Activities Designation Regulations* for the use or alteration of a watercourse, wetland or water resource. This approval includes, but is not limited to, withdrawal or diversion of water in an amount greater than 23 000 litres per day; storage of water in amounts of 25 000 cubic metres or greater; construction or maintenance of a dam, culvert, bridge, causeway, wharf, weir or fishway; and any modification of a surface water course whether it contains water or not. Generally, the dewatering of existing underground mine workings will require a Water Approval. It should also be noted that a Water Approval for an underground project cannot be issued until the proponent has provided written confirmation from the OH&S Division of LAE that the proponent has provided sufficient information to comply with the filing requirements of the *Underground Mining Regulations* and that the information has not revealed any apparent violation of the *Occupational Health and Safety Act* or its *Regulations*.

Sewage Disposal Approval: is required under the *Environment Act* and the *Activities Designation Regulations* for the construction, operation or reclamation of sewage works, including a sewage collection system, pumping station, retention or storage facilities, treatment facilities, and/or outfall. If the sewage disposal is not directly connected to a central sewage collection and treatment system or a

municipal system, an approval for an On-Site Sewage Disposal System may be required under the *On-Site Sewage Disposal System Regulations*.

Registration of Public Drinking Water Supply: is required under the *Environment Act* and the *Water and Wastewater Facility Regulations* for a public drinking water supply; which means a water supply system, including any source, intake, treatment, storage, transmission or distribution, that is intended to provide the public with potable, piped water and that has at least 15 service connections, regularly serves 25 or more persons per day for at least 60 days of the year, or serves any of the following for at least 60 days of the year:

- a day care facility licensed in accordance with the *Day Care Act*;
- a permanent food establishment licensed in accordance with the *Health Protection Act*;
- a commercial property for the accommodation of the travelling or vacationing public comprising land used for camping or for overnight parking of recreational vehicles or containing a separate building or buildings containing at least one room to be used as an alternate form of accommodation in a campground; and
- a commercial property for the accommodation of the travelling or vacationing public containing more than four rental units, including cottages or cabins.

3.3 Approvals - Nova Scotia Labour and Advanced Education

Mineral development projects are required to comply with the *Occupational Health and Safety Act* and its *Regulations*. The regulations that are particularly notable for mineral development are the *Underground Mining Regulations* and the *Occupational Safety General Regulations*. Section 15 of the *Occupational Safety General Regulations* includes particular sections on surface mining. As well, there are a number of filings and notices required under the OH&S legislation and regulations. With the notable exception of underground coal mining, the OH&S Division does not issue specific permitting and approvals, but does issue Codes of Practice as warranted. Codes of Practice are specifically written documents that provide for adequate health and safety measures for specific tasks or operations. The OH&S Division does issue approvals covering various aspects of underground subsea coal mining, as discussed further in this section.

Code of Practice for the Re-entry of an Underground Mine: A Code of Practice specified by the Director of OH&S can be adopted by a mining proponent who is planning to re-enter an underground mine and does not plan to significantly disturb the ground. A Code of Practice is generally prepared by the proponent, and then specified by LAE under the provisions of the *OH&S Act* and the *Underground Mining Regulations*. It should include the following items:

- a description of the project/work;
- an analysis of the project/work from a health and safety perspective;
- a description of the person power, equipment and materials to be used;
- a step-by-step description of the work procedures that will be used;
- information on the control and safety measures that will be used;
- a description of the responsibilities of the various workplace parties as they relate to the health and safety of the project/work;
- if explosives are to be used, the background, certification level and experience of all parties involved with explosives;
- notifications proposed;

- contingency plan;
- where there are other parties at the workplace, an indication that the other parties are aware of any health and safety impacts the project/work may have on them and that the other parties have no objection to the project/work proceeding; and
- any other information that is relevant to the healthful and safe performance of the project/work.

Adoption of a Code of Practice specified by the OH&S Division for the re-entry into an underground mine where the ground is not significantly disturbed relieves the holder of the Code of Practice from compliance with the provisions of the *Underground Mining Regulations*.

Underground Mining: A proponent of an underground mine that involves the disturbance of ground must comply with the *Underground Mining Regulations*. A proponent proposing to proceed with the initial development or construction of an underground mine, to re-enter a mine, or shut down, close or abandon a mine, must file the following reports with the Director of OH&S at least 90 days before proceeding with any of the activities:

- a report on proposed initial development or construction of a mine, or re-entry into a mine;
- a report on the shutdown, closure or abandonment of the mine;
- a mine plan;
- an electrical installations plan;
- ground control procedures; and
- a ventilation plan.

In addition, at an underground coal mine, the proponent must file a report with the Director of OH&S detailing the methane rate of release for each stage of mining and a report on the standards for which the electrical equipment complies. Such information must be submitted at least 90 days before proceeding with the mining activities.

For subsea coal mines, the mining proponent must make an application to the Director for approval of plans, procedures and programs. The proponent should refer to the *Underground Mining Regulations* for the detailed list of items requiring an approval from the Director.

Documents filed with the Director for review or approval will be subject to a filing fee as noted in Schedule A: "Fees for Filing and Review of Documents" of the *Underground Mining Regulations*.

Surface Mining: An operator of a surface mine must comply with the *OH&S Act* and its *Regulations*. Part 15 of the *Occupational Safety General Regulations* specifically covers surface mine workings. It should be noted that the commencement of operation of a surface mine, or a resumption of operations after a period of four months or more, requires notification to the Director of OH&S at least two weeks prior to commencing operation.

3.4 Federal Government

The Government of Canada may have a role in the permitting and approval for mineral development projects in Nova Scotia. Impacts relating to migratory birds, fisheries, explosive storage, navigable waters, or a requirement for federal environmental assessment may necessitate the involvement of federal agencies and departments. Departments and agencies that may be involved include Environment Canada, Fisheries and Oceans, Transport Canada, Natural Resources Canada and the Canadian Environmental Assessment Agency. Should federal environmental assessment of a project be required, generally the Canadian Environmental Assessment Agency will work with Nova Scotia Environment to co-ordinate and harmonize the EA reviews. The degree of federal government involvement will be assessed prior to and during One Window meetings with the proponent.

3.5 Municipal Government

In addition to federal and provincial jurisdictions, Nova Scotia has a third tier of government: municipal government. Municipal governments, which may represent a town, regional municipality or county, have responsibility for municipal development plans, planning strategies, building permits, streets and secondary roads, and municipal bylaws. Thus, for mineral development projects, a proponent may need to obtain municipal permits and approvals.

4. Mineral Rights and Land Access

4.1 Ownership of Minerals

Mineral rights in Nova Scotia are reserved to the Crown. ‘Mineral’, as defined under the *Mineral Resources Act (MRA)*, Section 2(s), includes all common mineral substances except ordinary stone, building stone, aggregates (both crushed and granular), peat or peat moss, ordinary soil, oil or natural gas, and gypsum. As well, several deposits of limestone have specifically been declared a mineral under the *MRA*. Otherwise, rights to limestone and all stone, sand, gravel, peat, soil and gypsum (but not anhydrite) are attached to ownership of the surface (private or Crown). When title to minerals for the purpose of production under the *MRA* is terminated for any reason, all minerals, including those in tailings and waste rock, revert to the Crown.

4.2 Identification of Mineral Rights

Mineral rights in Nova Scotia are acquired and referenced by means of a map-based staking system. The procedure eliminates the necessity of establishing claim lines on the ground and the attendant line cutting, blazing and flagging. If required, claim boundaries can be located in the field by a qualified surveyor, but this practice is seldom necessary until the actual mining stage is reached.

4.3 Land Access

Most of the land throughout Nova Scotia is open for mineral exploration. Exploration is encouraged by government policy that emphasizes the importance of access and tenure to land by the mineral industry. In Nova Scotia the landowner has surface rights to the land but not the mineral rights; mineral rights are reserved to the Crown. However, access on the land for mineral exploration requires the landowner’s permission.

Although most land in Nova Scotia is available for mineral exploration and development, there are some areas where mineral exploration or development is restricted or prohibited. Areas where mineral exploration and mining are prohibited include federal and provincial parks, park reserves, protected areas, certain ecological areas, and protected beaches.

Areas where mineral activity is permitted, but may be restricted or allowed only under special conditions, include: provincial or national wildlife management areas, designated water supply areas, Mi'kmaq reserves, and areas with developed infrastructure.

4.4 Access to Crown Lands

In order to access Crown lands for the purpose of mineral exploration, the project proponent should contact the Area Supervisor at the local DNR office for an access permit. Alternatively, proponents may contact the DNR Regional Geologist, who will co-ordinate with the local DNR office. Access permits authorize access to Crown lands for a specified purpose and may include some conditions unique to the location. Crown land access permits include a "Permit for the Purpose of Prospecting on Crown Land" and a "Permit for Mineral Exploration on Crown Land". Should the project proceed to a point where a large bulk sample is proposed, requiring disturbance of the land, additional land access authority will generally be required. This will also be administered by the local office of DNR.

Mineral development projects on Crown lands that progress to the mining phase require a Crown Land Lease for land access. Crown land leasing is a relatively complex process, co-ordinated by DNR's Land Services Branch. Staff from Land Services participate in the One Window Process for projects that require Crown land access, and will advise proponents regarding Crown land leasing.

The Mi'kmaq of Nova Scotia are usually informed of most of the land transactions taking place on Crown lands, some of which may trigger the duty to consult.

5. Aboriginal Consultation

5.1 The Legal Duty to Consult

In 2004 and 2005, the Supreme Court of Canada handed down three landmark decisions that found the Crown (provincial and federal) has a duty to consult with Aboriginal peoples when contemplating decisions or actions that might adversely affect their established or potential rights (*Haida and Taku, 2004, Mikisew Cree, 2005*). The Supreme Court also stated that, although proponents have no legal duty to consult with Aboriginal people, the province may delegate certain procedural aspects of consultation to proponents.

5.2 The Nova Scotia Office of Aboriginal Affairs (NSOAA)

One of the roles of the Office of Aboriginal Affairs is to coordinate the Province of Nova Scotia's consultation with the Mi'kmaq of Nova Scotia, the only recognised Aboriginal people in the province, and to provide direction to proponents when engaging with them.

NSOAA has contributed to the development of three main documents on Aboriginal consultation: the Consultation Terms of Reference, the province's Interim Consultation Policy, and a Proponents' Guide to Engagement with the Mi'kmaq of Nova Scotia. The latter, revised in 2011, outlines how proponents

can fulfill the important role they have to play in consultation with the Mi'kmaq of Nova Scotia. Six main steps have been identified:

- (1) notify Mi'kmaq early in the development process;
- (2) provide as much information as possible;
- (3) meet with the Mi'kmaq community(ies);
- (4) complete a Mi'kmaq ecological knowledge study;
- (5) address potential project-specific impacts; and
- (6) document the engagement process.

It is strongly recommended that proponents seek direction from NSOAA before engaging with the Mi'kmaq of Nova Scotia. All the documents referenced above are available on NSOAA's website at: <http://www.gov.ns.ca/abor/office/what-we-do/consultation/>.

6. Initial Meeting with Government

The proponent of a mineral development project is encouraged to make initial contact with the Chairperson of the 'One Window' Standing Committee, DNR's Manager of Mineral Development and Policy. This DNR representative will arrange an initial, informal meeting with the 'One Window' Committee.

Additional regional representatives of government departments, and other government officials as appropriate, may be invited to this initial meeting. The purpose of the initial meeting is for the proponent to provide an overview of the new project. Representatives of the various government departments want to be informed of the proponent's plans and they will use this meeting to advise and assist the proponent to understand the regulatory matters under the responsibility of each of the departments. The proponent will be asked to provide a brief summary of their project for circulation to committee members one week prior to the meeting.

Discussion items at the initial meeting may include:

- scope of the development project;
- general work plan and project management schemes;
- description of the proponent's staff, consultants and contractors;
- environmental protection measures planned;
- occupational health and safety measures planned;
- community consultation;
- consultation with the Mi'kmaq;
- emergency planning;
- locations of water courses in the area;
- mineral titles and leases;
- excavation, milling and tailings plans;
- property (land) ownership;
- description of the site; and
- conceptual reclamation plans.

The 'One Window' Committee will discuss any significant issues and answer questions the proponent may have regarding the review, approval and permitting processes. At the conclusion of this initial

meeting, NSE may be able to make a determination as to whether or not an Environmental Assessment will be required for the proposed phases of mineral development. On occasion, NSE will require additional information or internal review to make this decision.

7. The Environmental Assessment Process

7.1 Environmental Protection

Environmental Assessment (EA) is a planning and decision-making tool used to promote sustainable development. By predicting and evaluating the environmental effects of an undertaking before it begins there is the opportunity to mitigate potential impacts of the undertaking on the environment. For the public, this process ensures that resources and ecosystem functions are protected; for the proponent, this promotes better project planning, ultimately saving time and money.

Through the One Window process (Fig. 2), the proponent can ensure that issues associated with their project have been considered prior to the submission of the EA Registration Document (EA document), in order to avoid delays in the EA process. Proponents with thoroughly prepared EA documents are less likely to be required to submit more information following the EA decision.

Project-specific information will vary according to project scale, location, and the surrounding environment, and it is the responsibility of the proponent to ensure that this information is submitted as part of the registration. For a comprehensive list of minimum requirements to register an undertaking, the reader is encouraged to review Section 9 (1A) of the *Environmental Assessment Regulations*. Contact the EA Branch or visit the website (www.gov.ns.ca/just/regulations/REGS/envassmt.htm) to obtain a copy of these regulations.

Before registering an undertaking for EA, proponents should refer to the “Guide to Preparing an EA Registration Document for Mining Developments” for general information about EA and the proponent’s role during an assessment. Contact the EA Branch or visit the EA Branch website (www.gov.ns.ca/nse/ea) to obtain a copy of this guide. Proponents are also encouraged to contact the EA Branch for verbal and written guidance on the EA process at every stage from exploration to production.

Should an undertaking also require an EA under federal or another provincial jurisdiction, the process and the minimum requirements may differ from the information listed in the *Environmental Assessment Regulations*. The proponent should contact the EA Branch and the appropriate jurisdiction(s) early in project planning stages to determine if this applies to their project.

In some cases, an undertaking may require both provincial and federal environmental assessment. In these cases, the EA Branch will coordinate or harmonize its review with the federal government, where possible and practical. Formal harmonization has been addressed with the signing of the Canada-Wide Accord on Environmental Harmonization and the Sub-Agreement on Environmental Assessment between the Government of Canada and the territories and provinces, excluding Quebec. The aim of these agreements is to achieve ‘one project - one assessment’, to enhance environmental protection, promote sustainable development and achieve greater effectiveness, efficiency, accountability, predictability and clarity of environmental management for issues of Canada-wide interest.



Figure 2. 'One Window' process for mineral development approvals.

Mining Developments that Require Environmental Assessment

The *Environmental Assessment Regulations* require that the proponent of “a facility that extracts or processes any of the following: metallic and non-metallic minerals, coal, peat, peat moss, gypsum, limestone, bituminous shale or oil shale” must register for EA as a Class I undertaking before commencing work on the undertaking. A modification, extension, abandonment, demolition or rehabilitation of an existing mine may also be required to register for EA. Plans for expansion, modification or relocation of any aspect of the undertaking from that proposed in the registration information must be submitted to the EA Branch for review prior to commencing work.

It is the responsibility of the proponent to accurately determine the scope of the undertaking and what valued ecosystem components will be considered in the EA document. Scoping establishes the boundaries of the EA and focuses the assessment on relevant issues and concerns. The scope of the EA will vary from project to project but is determined through consideration of the project description, the expectations of stakeholders, and the potential for the project to have adverse environmental effects.

Prior to registering for the EA process, the proponent will find it useful to meet again with the members of the ‘One Window’ Committee. At this meeting, the committee and the proponent can finalize issues that should be addressed in the registration document. The proponent is encouraged to provide a project description and discuss environmental baseline conditions. At this time, the proponent should have already collected some early feedback from community members most likely to be affected by the development, in order to properly address their concerns in the registration document.

7.2 Planning for Public Input

It is within the proponent’s discretion to proactively work with the public to address any concerns prior to registering the undertaking. Proponents are encouraged to engage the public early so that issues and concerns can be incorporated into the project final design. Early involvement enables comprehensive, accurate and relevant information to be provided to the community.

When involving the public, the proponent should identify and contact:

- local community representatives,
- government representatives (municipal, provincial and federal), and
- other stakeholders who may have an interest in the proposed undertaking.

A program of public involvement may use several techniques (Fig. 3), each designed to reach a different segment of the community. For each project, the program of public involvement must be scaled to the scope of the project. In general, the larger the project, the more time must be made available and the more detail must be provided.

In practice, the process of consensus building involves informal discussions, resulting in a good level of understanding on both sides. Early, informal consultation inside the community usually pays dividends as the project proceeds. It is wise to stay in touch with the people and the groups most likely to be affected. Community response should become an “early warning system” for project management.

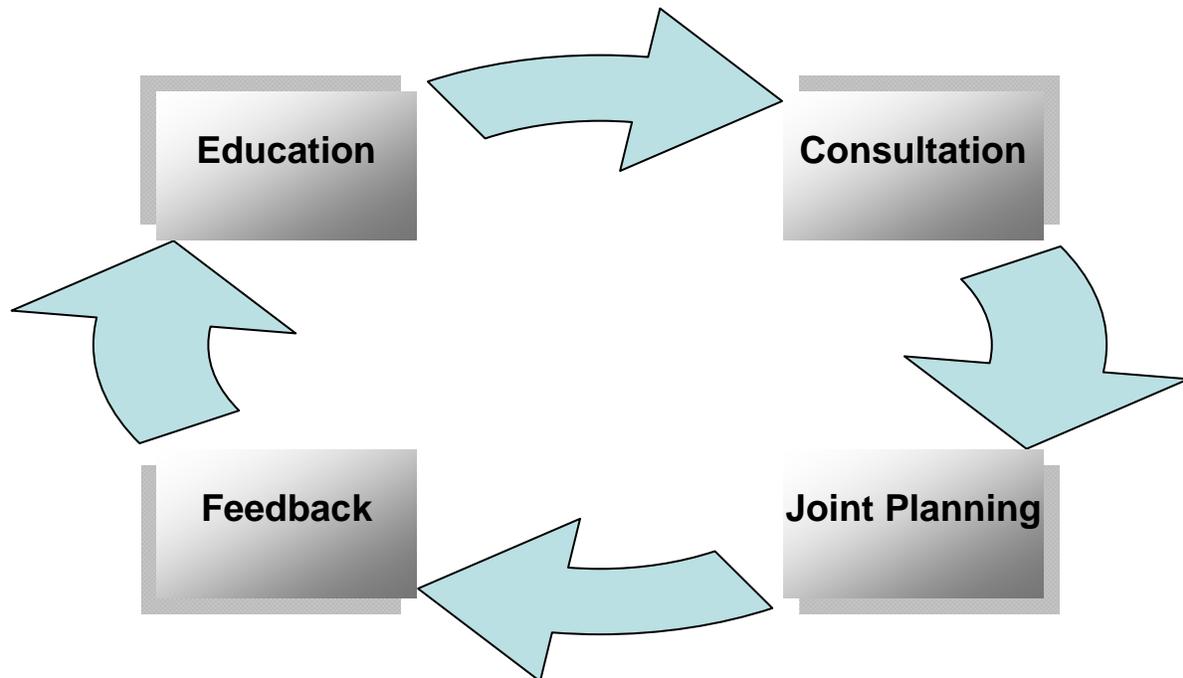


Figure 3. Techniques used for public involvement.

As a mineral development project evolves, the following checklist provides a useful evaluation of the effort to encourage public involvement.

- Are public comments reflected in project decisions and plans?
- Has a broad range of interest groups been included?
- Will the public be informed of continuing operations? How?
- Are company documents written and presented in plain language?
- Are public concerns revisited from time to time?

7.3 Stages of the Environmental Assessment

Developments required to undergo a provincial environmental assessment are listed in the *Environmental Assessment Regulations* (Schedule A). These developments are called undertakings and are divided into two classes, Class I and Class II. Class I undertakings are usually smaller in scale and Class II undertakings are typically larger in scale and include developments such as solid waste incinerators, petrochemical facilities, pulp and paper mills, etc.

This guide focuses on Class I undertakings. A flow chart diagram of the environmental assessment process for Class I undertakings is shown in Figure 4. An EA begins when the proponent of a Class I undertaking submits a document called a registration document to the Administrator, which outlines their proposal. Copies of the document are then distributed by the Administrator to various interest groups, First Nations, government departments and various public locations for review. The proponent will also be required to provide an electronic copy to be made available on the EA Branch website for public review.

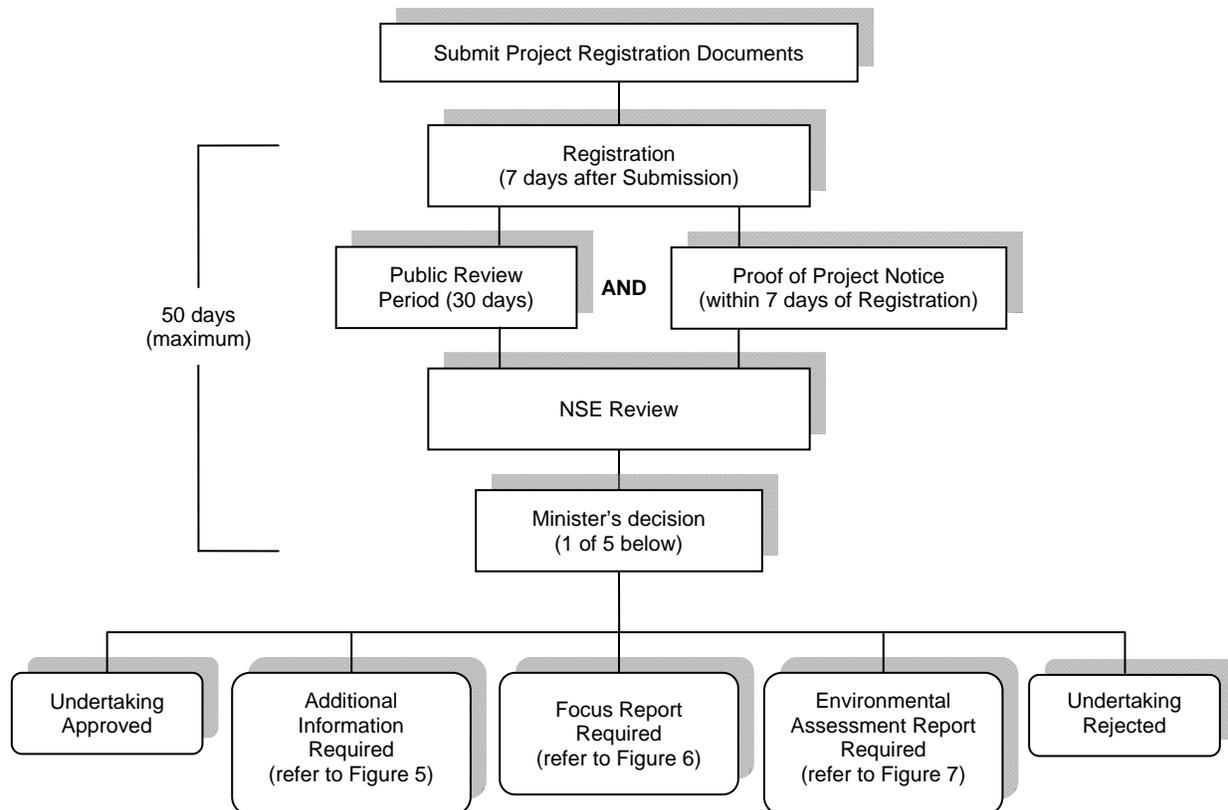


Figure 4. Environmental Assessment process for a Class I undertaking.

Generally, the Manager of Environmental Assessment is appointed “Administrator” for matters concerning environmental assessment.

The proponent must place an advertisement in two newspapers, one with circulation in the vicinity of the undertaking and one with province-wide circulation. The advertisement will provide information about the undertaking, indicate where the document can be viewed, and invite the public to submit any comments to the EA Branch.

The proponent must establish two viewing locations within the vicinity of the undertaking and supply each with a copy of the registration document. This will ensure that any person living in the local community will have access to the registration information.

Within 50 calendar days of the registration date, the Minister of Environment must provide the proponent with a decision in writing. The Minister must decide one of the following: (a) additional information is required; (b) undertaking is approved; (c) undertaking is rejected; (d) focus report is required; or (e) an environmental assessment report is required.

The Minister will consider the following information when making a decision:

- the location of the proposed undertaking and the nature and sensitivity of the surrounding area;
- the size, scope and complexity of the proposed undertaking;
- concerns expressed by the public and Mi'kmaq people about the adverse effects or the environmental effects of the proposed undertaking;
- steps taken by the proponent to address environmental concerns expressed by the public and Mi'kmaq people;
- whether environmental baseline information submitted under subclause 9(1A)(b)(x) for the undertaking is sufficient for predicting adverse effects or environmental effects related to the undertaking;
- potential and known adverse effects or environmental effects of the proposed undertaking, including identifying any effects on species at risk, species of conservation concern, and their habitats;
- project schedules where applicable;
- planned or existing land use in the area of the undertaking;
- other undertakings in the area;
- whether compliance with licences, certificates, permits, approvals or other documents of authorization required by law will mitigate the environmental effects, and
- such other information as the Minister may require.

Undertaking Approved

Approval is granted either with or without specific terms and conditions, when a review of the registration information indicates that there are no adverse effects or significant environmental effects which may be caused by the undertaking or that can not be mitigated. The terms and conditions lay out the requirements of the proponent during construction, operation and reclamation, if necessary, to monitor and mitigate any adverse effects or significant environmental effects.

Additional Information Required

Additional information may be required from the proponent if the registration information does not contain sufficient detail to allow the Minister to make a decision. Depending on the information submitted, the Minister may or may not require a public review of the additional information, when submitted (Fig. 5).

Focus Report Required

The Minister may decide that a focus report is required of the proponent when further information is needed to address one or more specific aspects of the proposed project that are unresolved. Once the focus report is submitted, there will be a public review of the report, and the Administrator will prepare a report and recommendation for the Minister to consider when making a decision (Fig. 6).

Environmental Assessment Report Required

The Minister may decide that an EA Report is required of the proponent when further information is needed to address several aspects of the proposed project that are unresolved. As a result, further public involvement is required at various stages (Fig. 7).

The Administrator will prepare draft terms of reference which outline what information needs to be included in the EA Report. The draft terms of reference will be made available for public review. The second opportunity for public involvement will occur after the EA Report has been submitted to the EA

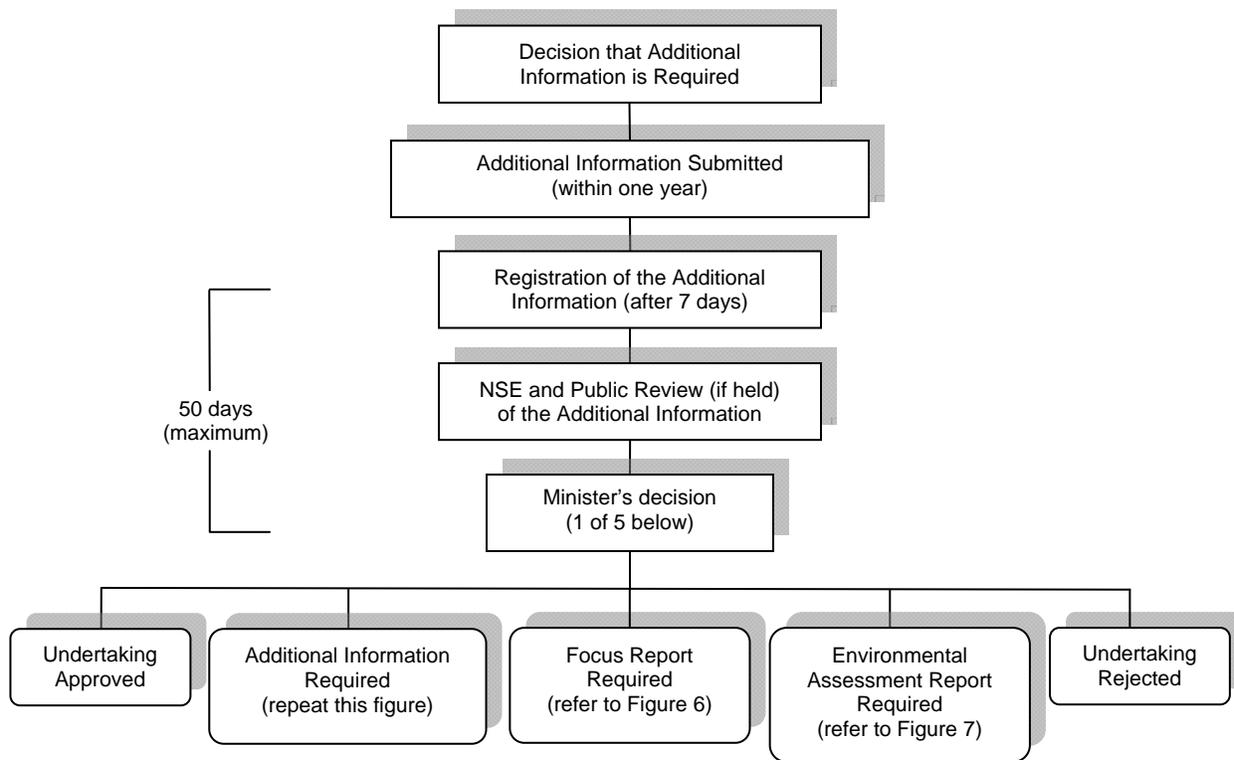


Figure 5. Additional information required.

Branch. At that time, the Minister will make a decision whether the Administrator will conduct the review, or if the project will be referred to the Environmental Assessment Board, which would then conduct the review. In either case, the EA Report will be released for public review and comments accepted for a 48 day period.

Undertaking Rejected

An undertaking is rejected when a review of the registration information indicates that the undertaking is likely to cause adverse effects or significant environmental effects, which are unacceptable. The Minister must provide the proponent with written reasons stating why the undertaking is rejected.

It should be noted that some of the time periods established by the regulations as discussed above, and shown in the reference figures, are subject to extension by the Minister of Environment.

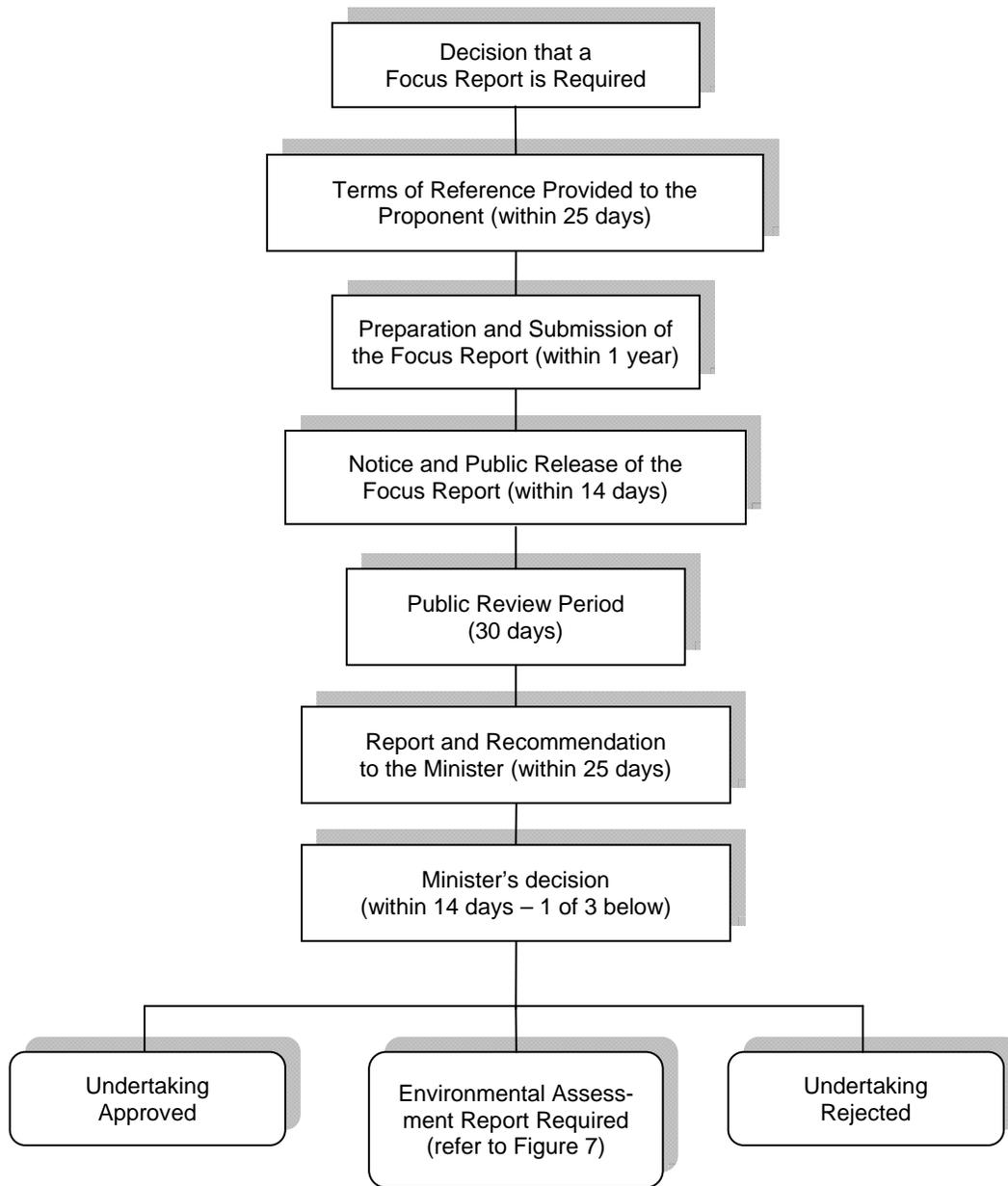


Figure 6. Focus Report required.

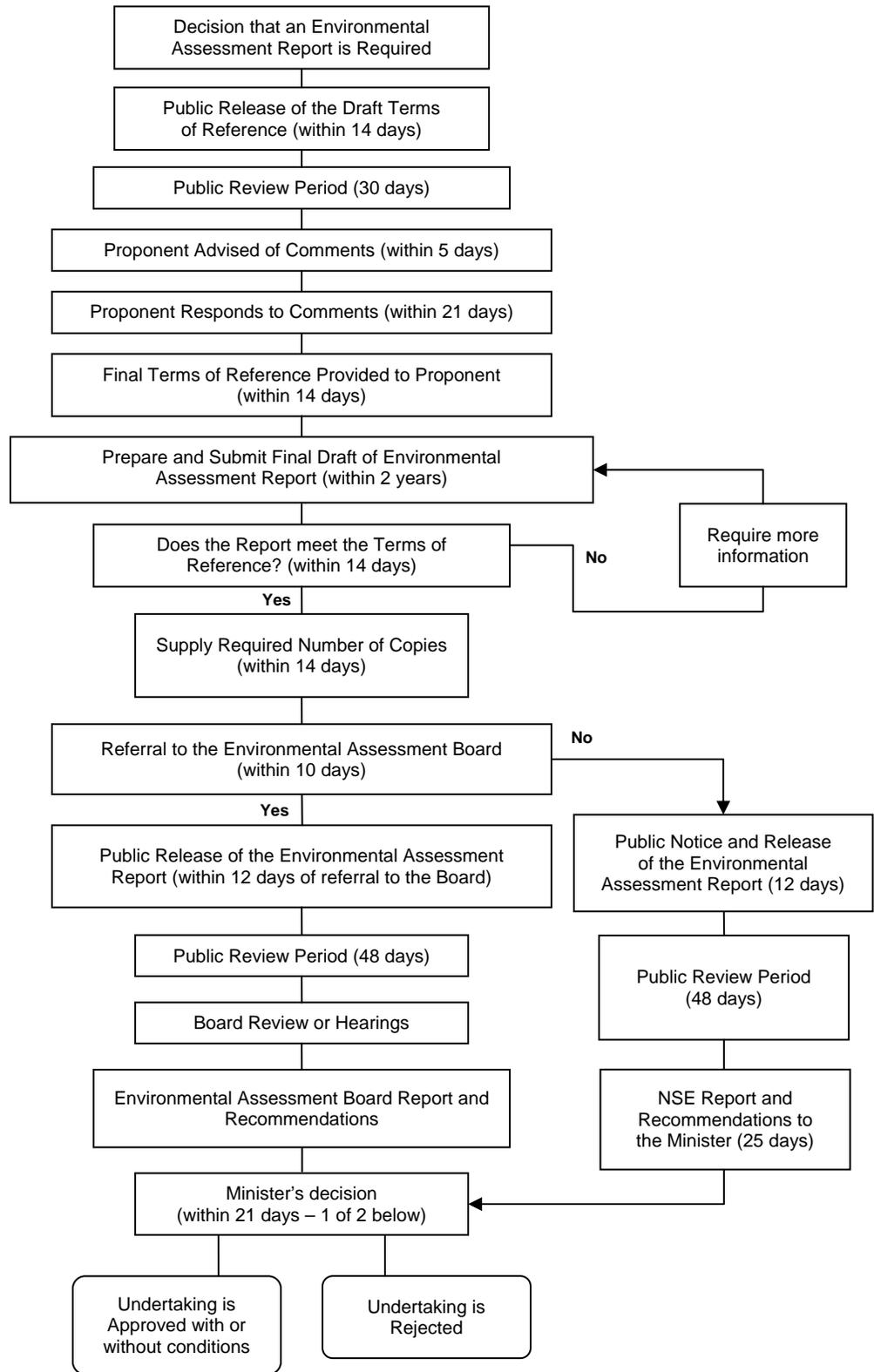


Figure 7. Environmental Assessment Report required.

8. Guide to Required Licences, Approvals, Leases and Registrations

Support documents for applications to DNR and NSE for the various licences, leases, registrations and approvals should be prepared in triplicate. This provides DNR, NSE and LAE with the same information package - a convenience for the 'One Window' process. With ready access to the complete information package, a specific application can more easily be considered in relation to the others and the time required for the overall process is reduced. However, submissions in triplicate are not required of the information to support applications for exploration licences or environmental assessment.

For mineral development projects, some or all of the following may be required:

<p>N.S. Department of Natural Resources</p> <ul style="list-style-type: none"> • Exploration Licence • Excavation Registration • Letter of Authorization • Mineral Lease • Non-Mineral Registration • Special Licence/Special Lease 	<p>N.S. Environment</p> <ul style="list-style-type: none"> • Industrial Approval • Water Approval • Approval for Sewage System • Registration of Public Drinking Water Supply <p>N.S. Labour and Advanced Education, Occupational Health & Safety Division</p> <ul style="list-style-type: none"> • Code of Practice • Filing of documents on initial development, construction or re-entry of a mine, and shutdown of mine (underground mine only) • Subsea Approval (underground coal mine only)
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A list of some of the applicable Acts and Regulations related to mineral development is provided in Appendix A. General information related to the various Department of Natural Resources approvals, permits and licences follows. Where application is made for a licence, lease, etc., proponents are referred to the *Nova Scotia Mineral Resources Act and Regulations* for more detailed information.

8.1 Exploration Licence

An Exploration Licence grants the right to search and prospect for minerals within a designated area. Activities can include prospecting, geological survey work, drilling and minor excavation work (excavations of less than 1 metre in depth and without mechanized equipment). An Exploration Licence has a one year term, and can be extended or renewed subject to the requirements of the *Mineral Resources Act and Regulations*. Licence holders are generally required to carry out a minimum amount of exploration and/or prospecting work in order to renew their licence. An annual fee applies and a report of assessment work is required annually.

An application for an Exploration Licence cannot be accepted for areas that are already subject to an Exploration Licence, Special Licence, Mineral Lease, Special Lease, Non-Mineral Registration or where there is an existing application on file at the Registry of Mineral and Petroleum Titles for any of the foregoing.

Access to lands over which an Exploration Licence has been granted may have certain restrictions or require additional notifications. This includes municipal water supply lands. These guidelines are provided with the Exploration Licence and are available at the Registry of Mineral and Petroleum Titles.

8.2 Excavation Registration/Letter of Authorization

An Excavation Registration is required for a mineral right holder to undertake limited surface or underground exploration or bulk sampling (removal of less than 100 tonnes of mineral-bearing material) under authority of the *Mineral Resources Act*. Extraction of more than 100 tonnes of mineral-bearing material also requires a Letter of Authorization from the Registrar of Mineral and Petroleum Titles.

To obtain an Excavation Registration, a licensee must submit an application in the prescribed form with supporting information, as follows:

- sketch map(s) showing the extent of the proposed work and in sufficient topographic detail to easily locate the site of the excavation; and
- a statement confirming the consent or agreement of the landowner or tenant;

DNR may require a reclamation security (bond or other financial security) in order to provide for reclamation of areas that may be disturbed during the activity. Excavation Registrations must be submitted at least 7 days before the planned commencement of the work.

A licence holder who proposes to extract a bulk sample of more than 100 tonnes of mineral-bearing material also requires a Letter of Authorization from DNR. By policy, DNR limits the size of bulk samples under Letters of Authorization to 10,000 tonnes of mineral-bearing material and 50,000 tonnes of total material removed. The information required in the supporting report for the application for a Letter of Authorization is outlined in the *Mineral Resources Regulations* and should be submitted in triplicate. DNR will not issue a Letter of Authorization until NSE has advised that it has issued an Industrial Approval and OH&S has advised that it has reviewed the information submitted and does not oppose granting of the Letter of Authorization. To obtain a Letter of Authorization, the licence holder must submit an application in the prescribed form along with a report to DNR that describes all aspects of the proposed undertaking, as follows:

- a map showing the location of the proposed activity and access route to the site from the nearest public road;
- a statement confirming the consent or agreement of the landowner or tenant;
- a brief report on the size, location and purpose of the bulk sample, mining method, schedule, expected results, equipment to be used, and personnel to be employed;
- a map of the site showing existing surface features, diamond-drill holes, test pits, and any shafts or underground workings;
- a map or drawing showing: major geological features, sample location and dimensions, location and dimensions of proposed workings, location of settling ponds and waste disposal areas, location of all buildings, roads and other infrastructure, and all other major project-specific features;

- a description of the reclamation work to be conducted upon completion of the exploration or sampling; and
- any additional information requested by the Registrar of Mineral and Petroleum Titles.

DNR will require a reclamation security (bond or other financial security) in order to provide for reclamation of areas that would be disturbed during the bulk sampling. The amount of the reclamation security will be determined jointly with NSE.

Work conducted under an Excavation Registration and/or Letter of Authorization must be conducted in compliance with the *Occupational Health & Safety Act* and its *Regulations* and the *Environment Act* and its *Regulations*.

8.3 Mineral Lease

A Mineral Lease grants the exclusive right to some or all of the mineral resources in a specified area for the term of the Lease. A Mineral Lease has a 20 year term and is renewable. To obtain a Mineral Lease, the licence holder must:

- file with the Registrar an application in the prescribed form;
- provide the prescribed information in the prescribed form or manner;
- satisfy the Minister of Natural Resources that the applicant has delineated a mineral deposit within the proposed lease area;
- provide a written undertaking to commence production within two years of obtaining the lease; and
- pay the first year's rent in advance.

The applicant for a lease must submit a report that includes:

- a general location map of the area showing all claim boundaries, surface rights ownership and boundaries, nearby roads, buildings, power lines, watercourses, topography and other surface features in the vicinity of the deposit.
- resource information, including:
 - a map showing the location of all drillholes, trenches, test pits and sample locations;
 - a geological map showing the known location of the deposit and its relationship to the host geological units;
 - geological cross-sections and longitudinal sections through the deposit,
 - a table of ore reserves, including:
 - grades and quantities, categorized as proven, probable or possible;
 - a description of the method of calculating the reserves;
 - a statement of the specific gravity used and reason for its use; and
 - a statement of the cutoff grade used and reason for its use;
- mining information, including:
 - a general map showing the surface facilities buildings, water diversions, settling and treatment ponds and ore and waste storage areas;
 - strip ratio and recovery factor;

- a description of the proposed mining methods and schedules for all surface and underground development work; and
- a description of the methods to be used for the reclamation of the mine, waste dumps, tailings ponds and other areas disturbed by the project, including a site plan;
- Mineral processing information, including:
 - a description of the processing method; and
 - a flow sheet for the process showing metallurgical balances; and
- any additional information that the Registrar considers necessary for the purposes of the Act.

The applicant for a Mineral Lease must also submit a survey of the boundaries of the proposed lease area, unless otherwise exempted from this requirement by the Registrar of Mineral and Petroleum Titles.

DNR will require a reclamation security (bond or other financial security) in order to provide for reclamation of areas that may be disturbed during mining. The amount of the reclamation security will be determined jointly with NSE, and the reclamation security may be held by either of the departments.

Final reclamation of a site to the satisfaction of DNR and NSE is the responsibility of the operator. The amount of the reclamation security will be calculated on a site-specific basis and will be an aggregate of the cost to conduct the necessary reclamation activity, including:

- removal of buildings and structures,
- removal or breaking up of foundations,
- capping or filling of pits, declines and shafts,
- stabilization of tailings disposal sites and drainage containment facilities,
- surface contouring,
- establishing proper site drainage,
- revegetation, and
- any additional work necessary to reclaim the disturbed area.

8.4 Non-Mineral Registration

A Non-Mineral Registration may be granted to the holder of the rights to gypsum or non-Crown limestone who wants to carry out production of that gypsum or non-Crown limestone. To obtain a Non-Mineral Registration, an applicant must:

- file an application in the prescribed form with the Registrar;
- provide the prescribed documentation;
- provide a written undertaking to commence production;
- provide evidence that the applicant has delineated a deposit of gypsum or non-Crown limestone within the proposed non-mineral registration area, and
- provide evidence of the applicant's right to the gypsum or non-Crown limestone, including a right to surface access.

Note that "non-Crown limestone" is limestone that has not been declared to be a mineral pursuant to Section 5 of the *Mineral Resources Act*.

The prescribed documentation noted in the second bullet point must be submitted in a report that includes:

- a general location map of the area showing all claim boundaries, surface rights ownership and boundaries, nearby roads, buildings, powerlines, watercourses, topography and other surface features in the vicinity of the deposit;
- mining information, including:
 - a general map showing the location of the existing and proposed mine workings, surface facilities buildings, water diversions, settling and treatment ponds and ore and waste storage areas;
 - strip ratio and recovery factor;
 - a description of the proposed mining methods and schedules for all surface and underground development work; and
 - a description of the methods to be used for the reclamation of the mine, waste dumps, tailings ponds and other areas disturbed by the project, including a site plan;
- any additional information that the Registrar considers necessary for the purposes of the Act.

DNR will require a reclamation security (bond or other financial security) in order to provide for reclamation of areas that may be disturbed during mining. The amount of the reclamation security will be determined jointly with NSE, and the reclamation security may be held by either of the departments.

Final reclamation of a site to the satisfaction of DNR and NSE is the responsibility of the operator. The amount of the reclamation security will be calculated on a site-specific basis and will be an aggregate of the cost to conduct the necessary reclamation activity, including:

- removal of buildings and structures,
- removal or breaking up of foundations,
- capping or filling of pits, declines and shafts,
- stabilization of tailings disposal sites and drainage containment facilities,
- surface contouring,
- establishing proper site drainage,
- revegetation, and
- any additional work necessary to reclaim the disturbed area.

8.5 Special Licence/Special Lease

Section 22 of the *Mineral Resources Act* provides that the Minister of Natural Resources may withdraw any lands from licensing for all or certain minerals, and establishes a mechanism for special licensing and leasing. In 1975 the Minister of Mines (now Natural Resources) withdrew coal, salt and potash from the regular licensing and leasing process. While withdrawn, lands can only be explored or mined for these minerals pursuant to a special licence or special lease granted by the Minister of Natural Resources with the approval of the Governor in Council (cabinet). Such a special licence or special lease is subject to the *Mineral Resources Act* and *Regulations* and may contain any terms and conditions as are approved by the Governor in Council.

Information and application procedures for special licences and special leases are generally similar to those for exploration licences and mineral leases. However, the applications for special licences and special leases require approval of Governor in Council.

8.6 Industrial Approval

In Nova Scotia, an Industrial Approval is required under the *Environment Act* and the *Activities Designation Regulations* prior to construction, operation and/or reclamation of industrial activities that have air, liquid, or solid waste disposal requirements. These include activities associated with minerals, mining and mineral processing. NSE consent or approval may also be required for significant changes to an activity or the transfer of control or ownership of the company.

Sections 53 and 54 of the *Environment Act* and Section 5 of the *Approvals Procedure Regulations* identify the general information requirements of an application. Of particular note, Section 53(5) of the *Act* requires that:

- (5) The Minister shall require, as part of an application for an approval respecting an underground mine, that an applicant obtain written confirmation from the Executive Director of the Occupational Health and Safety Division of the Department of Labour that:
 - (a) the applicant has provided the Executive Director with sufficient information to comply with the filing requirements of the *Underground Mining Regulations* in respect of the proposed underground mine; and
 - (b) that a review of the information provided pursuant to the *Underground Mining Regulations* has not revealed any apparent violation of the *Occupational Health and Safety Act* or *Regulations* made pursuant to that *Act*.

An application for an approval respecting an underground mine is not considered complete unless the information identified in Section 53(5) of the *Environment Act* has been provided to the department.

To facilitate the review of each Industrial Approval application, supporting documentation must be submitted to NSE, and may include but not be limited to:

- certified copies of the Articles of Incorporation of the company, including a copy from the Registry of Joint Stock Companies showing the company's official name, its president and CEO, its agent, and the fact that the company is registered in good standing;
- proof that the applicant either owns the site or has a lease or other written agreement or option with the landowner or occupier to enable the applicant to conduct the activity on the site or has the legal right or ability to conduct the activity without the consent of the landowner or occupier;
- if requested by the Minister or an Administrator, any municipal approval, permit or other authorization required pursuant to subsection 53(4) of the *Act*;
- copies of existing approvals that have been issued to the applicant relating to the activity under this *Act* or a predecessor to this *Act*;
- copies of any EA study reports which may pertain to the activity;
- a summary of required environmental monitoring information gathered during any previous approval period which has not already been submitted to the department;
- proof that financial or other security, if required, will be provided;
- contingency plans to deal with any reasonably foreseeable sudden or gradual release of a substance which is likely to have a significant adverse effect;
- a preliminary abandonment or rehabilitation plan, and, if required, a final abandonment or rehabilitation plan;
- a description of any public consultation undertaken or proposed by the applicant;

- a comprehensive, written description of the industry proposed and each unit process or step in production, including:
 - the nature/type of industry,
 - the size and capacity of the industry,
 - the quality and quantity of raw materials and water used by the process,
 - identification of where each discharge point to the environment originates,
 - quantities of hazardous materials anticipated for use in the process and appropriate material safety data sheets, and
 - description of blasting methods and schedule, if applicable.

- a site plan (scaled drawing, minimum scale 1:2,000) of the property on which the industry will be situated, including:
 - the property boundaries,
 - the contours of the site and adjacent properties,
 - the locations of all relevant industrial structures, including buildings, stockpiles, disturbed lands, pipelines, stacks, waste discharge points, treatment structures and proposed monitoring points,
 - the location of nearby watercourses, dwellings, wells and public roads and highways, and
 - the location, orientation and final contours of any pit or quarry.

- Engineering drawings, plans and specifications, including:
 - (i) plans and drawings for structures and equipment used to treat wastes resulting from industrial processes,
 - (ii) sufficient data to demonstrate the feasibility of a process to supply satisfactory treatment,
 - (iii) reports on the proposed treatment facilities indicating design capacities, flows and concentrations of wastes expected to be emitted to the environment, and
 - (iv) calculations, factors and parameters used in the design of waste control systems.

- A description of all liquid effluents discharged from the process or property, including:
 - (i) the quantity and quality of all surface discharge waters that have contacted unstabilized areas prior to discharge,
 - (ii) the quantity and quality of each individual liquid effluent discharge before treatment,
 - (iii) the quantity and quality of each individual liquid effluent discharge after treatment, and
 - (iv) the quality should include, if relevant, the concentration or levels of pH, temperature, chlorine residual, 5-day biochemical oxygen demand, chemical oxygen demand, suspended solids, acute toxicity, heavy metals, total petroleum hydrocarbons, total oil and grease, total dissolved solids, ammonia and phosphorus.

- A description of all air emissions discharged from the process stacks, vents, etc., including:
 - (i) the stack height above base (metres), elevation at base (metres), stack top inside diameter (metres), flow velocity through the stack exit (metres/sec.), temperature of stack gas (°Celsius) at exit,
 - (ii) the average daily concentrations of total particulate, specific particulate, and gases (general and odorous) before and after treatment,

- (iii) the maximum daily concentrations of total particulate, specific particulate, and gases (general and odorous) before and after treatment,
 - (iv) the quality and/or concentration should include, if present, but not necessarily be limited to, carbon monoxide, carbon dioxide, oxygen, total suspended particulates, oxides of nitrogen, hydrogen sulfide, sulphur dioxide and polyaromatic hydrocarbons, and
 - (v) the capacity, type of fuel used, sulphur content of fuel, higher heating value of the fuel, monitoring equipment to be employed and soot blowing schedule if the process is a boiler or heating plant.
- A description of all solid wastes that require disposal, including:
 - (i) the quantity of all solid wastes,
 - (ii) the quality of all solid wastes including an indication of whether they are considered hazardous in accordance with the regulatory classification system that is used to determine whether goods are dangerous for the purposes of transportation within Canada. If necessary CGSB provisional standard No. 164-GP-1 MD leachate extraction procedure data should be submitted,
 - (iii) the location where solid wastes will be disposed,
 - (iv) how solid wastes will be disposed of,
 - (v) storage quantities of all wastes prior to disposal, including storage site capacity and schedule of disposal, and
 - (vi) supporting geotechnical and hydrological findings, if waste is to be landfilled.

8.7 Water Approval

A Water Approval is required under the *Environment Act* and the *Activities Designation Regulations* for the use or alteration of a watercourse or a water resource for one or more of the following purposes:

- (1) (a) the withdrawal or diversion of water in an amount greater than 23,000 L per day from a source of surface water or groundwater,
- (b) the construction or maintenance of a dam,
- (c) the storage of water in amounts of 25,000 m³ or greater,
- (d) the construction or maintenance of a culvert in a manner consistent with current applicable guidelines and standards issued by NSE, excluding a culvert installed between June 1 and September 30 of any year,
- (e) the construction or maintenance of a bridge where:
 - (i) a portion of the structure of the bridge is in a watercourse, or
 - (ii) use of equipment in the watercourse of 3 m from the edge of the watercourse is required,
- (f) the construction or maintenance of a causeway,
- (g) the construction or maintenance of a wharf,
- (h) the construction or maintenance of a weir, fishway or other instream structure,
- (i) the removal of material from a surface watercourse,
- (j) the diversion of a watercourse from its natural channel,
- (k) the installation or maintenance of fishing equipment, a fishway, a counting fence, a fish habitat improvement structure, an aquaculture cage or any similar structure in a watercourse,
- (l) the dredging or any other modification of a surface watercourse,
- (m) the installation or maintenance of a pipeline, cable or other equipment in a surface watercourse,
- (n) the placement of rock or other erosion protection material in a surface watercourse,

- (o) the alteration of a wetland, or
 - (p) any other alteration of a surface watercourse or the flow of the water therein.
- (2) An approval is not required for an activity designated in subsection (1) where the activity is:
- (a) a non-recurring use of water from the same watercourse for less than 2 weeks,
 - (b) a continuous use of water less than 23,000 L per day,
 - (c) use of seawater,
 - (d) use of brackish water from an intertidal zone of a river estuary,
 - (e) maintenance of lands and structures incorporated by marsh bodies under the *Marshland Reclamation Act*, or
 - (f) such other use as may be exempted in writing by the Minister or an Administrator.

To facilitate the review of a Water Approval application, supporting documentation must be submitted to Nova Scotia Environment, including:

- the applicant's name and address, the contractor's name and address, and the location of the proposed work,
- a site map of the proposed work area, including the exact coordinates of the project site,
- details of the proposed work, structures, and/or activities and measures to protect the watercourse, and
- a sketch of proposed work and watercourse location, hydrology report, and plans, drawings and specifications, as applicable.

Typically, dewatering of existing underground mine workings at a rate in excess of 23,000 litres/day for a period of more than two weeks will require a Water Approval.

8.8 Sewage Approval

There are primarily two general approaches used for the treatment of sewage, which both require approvals: (1) the construction and operation of a central sewage treatment works or (2) the installation of a more passive on-site sewage disposal system.

For the construction and operation of a sewage works, including a central sewage collection system, pumping station, retention or storage facilities, treatment facilities, and/or outfall, guidance should be obtained from the *Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment and Disposal of Sanitary Sewage 2006*.

The sewage system is required to be classified and the system operators trained and certified in accordance with the *Water and Wastewater Facilities and Public Drinking Water Supplies Regulations*.

An On-Site Sewage Disposal System approval may be required under the *On-Site Sewage Disposal System Regulations*. An on-site sewage disposal system means a system for disposing of sewage that is not directly connected to a central sewage collection and treatment system or a municipal system and includes all of the following: a septic tank, a disposal field and inter-connecting pipes, a holding tank, a pit privy, a vault privy and a sewage disposal system that is approved or adopted by the department as an on-site sewage disposal system and meets any specifications established by the department.

An approval is required for installation of an on-site sewage disposal system, but generally not for operation. Close reference to the *On-Site Sewage Disposal System Regulations* and the *On-Site Sewage*

Disposal System Technical Guidelines is required. A Qualified Person, Level 1 (QP1) is required to design an on-site sewage disposal system for a mining project.

8.9 Registration of Public Drinking Water Supply

Registration is required for a public drinking water supply including any source, intake, treatment, storage, transmission or distribution, that is intended to provide the public with potable, piped water and that has at least 15 service connections, regularly serves 25 or more persons per day for at least 60 days of the year, or serves any of the following for at least 60 days of the year - a day care facility, a permanent food establishment, a commercial property for accommodation of the public for camping, or a commercial property for the accommodation of the public of more than four rental units.

The operator of a registered public drinking water supply treatment system may be required to obtain operator certification in accordance with the *Water and Wastewater Facilities and Public Drinking Water Supplies Regulations*. Regular testing and monitoring of the water supply is an integral part of this regulation.

Appendix A: Relevant Acts and Regulations

Following are the three main acts and their associated regulations related to exploration and mining activities in Nova Scotia. However, it should be recognized that there are others, including federal legislation. For a complete list of regulations for any specific act, please consult the Registry of Regulations at: <http://www.gov.ns.ca/just/regulations/regsxact.htm>

Nova Scotia Department of Natural Resources

Act *Mineral Resources Act*
<http://nslegislature.ca/legc/statutes/mineralr.htm>
 Regulations *Mineral Resources Regulations*

Nova Scotia Environment

Act *Environment Act*
<http://nslegislature.ca/legc/statutes/envromnt.htm>
 Regulations *Environmental Assessment Regulations*
 Activities Designation Regulations
 Air Quality Regulations
 Approvals Procedure Regulations
 Dangerous Goods Management Regulations
 Emergency Spill Regulations
 On-Site Sewage Disposal System Regulations
 Pesticide Regulations
 Petroleum Management Regulations
 Sulphide Bearing Materials Disposal Regulations
 Used Oil Regulations
 Water and Wastewater Facilities and Public Drinking Water Supplies Regulations
 Well Construction Regulations

Nova Scotia Labour and Advanced Education, Occupational Health and Safety Division

Act *Occupational Health & Safety Act*
http://nslegislature.ca/legc/statutes/occph_s.htm
 Regulations *Appeal Panel Regulations*
 Administrative Penalties Regulations
 Blasting Safety Regulations
 Disclosure of Information Regulations
 Fall Protection and Scaffolding Regulations
 Occupational Diving Regulations
 Occupational Health Regulations (listed under the Health Protection Act)
 Occupational Health and Safety First Aid Regulations
 Occupational Safety General Regulations
 Temporary Workplace Traffic Control Regulations
 Underground Mining Regulations
 Violence in the Workplace Regulations
 Workplace Hazardous Materials Information System Regulations
 Fees for Filing of Documents as per Schedule A of the Underground Mining Regulations

Appendix B: Contacts Within Government

Name	Location	Telephone
'ONE WINDOW' STANDING COMMITTEE		
Chairperson: Patrick Whiteway Manager, Mineral Development and Policy (DNR)	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-7199
DNR Representative	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-4911
NSE Representative Environmental Assessment	5151 Terminal Road, PO Box 442 Halifax, NS B3J 2P8	(902) 424-3230
NSE Representative Monitoring & Compliance	30 Damascus Rd., Suite 115, Bedford, NS B4A 0C1	(902) 424-3631
LAE Representative	5151 Terminal Road, PO Box 697 Halifax, NS B3J 2T8	(902) 424-0451
NS DEPT OF NATURAL RESOURCES		
General Information	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-5935
Executive Director, Mineral Resources Branch	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-2523
Director, Mineral Management	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-5618
Manager, Mineral Development and Policy	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-7199
Registrar of Mineral and Petroleum Titles	1701 Hollis St., PO Box 698, Halifax, NS B3J 2T9	(902) 424-8155
Regional Geologist, Eastern	300 Mountain Road, Sydney (Coxheath), NS B1L 1A9	(902) 563-3370
Regional Geologist, Central	664 Prince St., PO Box 68, Truro, NS B2N 5B8	(902) 896-2261
Regional Geologist, Western	312 Green St., PO Box 6000, Lunenburg, NS B0J 2C0	(902) 634-7518
Core Library	107 Acheron Court, PO Box 999, Stellarton, NS B0K 1S0	(902) 752-4842
<u>Area Offices</u>		
Truro Regional Director	664 Prince St., PO Box 68, Truro, NS B2N 5B8	(902) 893-6350
Bible Hill Area Supervisor	626 College Road, Bible Hill, NS B2N 2R2	(902) 893-5620
Oxford Area Supervisor	4917 Main St., PO Box 130, Oxford, NS B0M 1P0	(902) 447-2115
Parrsboro Area Supervisor	12057 Route 209, Advocate Hwy. Crossroads Parrsboro, NS B0M 1S0	(902) 254-3241
Middle Musquodoboit Area Supervisor	12086 Highway 224, PO Box 112, Middle Musquodoboit, NS B0N 1X0	(902) 384-2290
Waverley Area Supervisor	2115 Waverly Road, Waverley, NS B2R 1Y8	(902) 861-2560
McLellan's Brook Area Supervisor	459 Coalburn/McLellan's Brook Rd., RR #4, New Glasgow, NS B2H 5C7	(902) 922-4020

Appendix B: Contacts within Government (continued)

Name	Location	Telephone
NS DEPT OF NATURAL RESOURCES (cont'd)		
Windsor Area Supervisor	55 Wentworth Rd., PO Box 190, Windsor, NS B0N 2T0	(902) 798-2796
Coxheath Regional Director & Area Supervisor	300 Mountain Road, Sydney, NS B1L 1A9	(902) 563-3370
Antigonish Area Supervisor	190 Beech Hill Road, RR #6, Antigonish, NS B2G 0B4	(902) 863-4513
Baddeck Area Supervisor	Provincial Building, 2 Campbell St., PO Box 610, Baddeck, NS B0E 1B0	(902) 295-2554
St. Peter's Area Supervisor	Provincial Building, 10258 Grenville St. PO Box 363, St. Peter's, NS B0E 3B0	(902) 535-2032
Lunenburg Regional Director	312 Green St., PO Box 6000, Lunenburg, NS B0J 2C0	(902) 634-7555
Lunenburg (District) Area Supervisor	312 Green St., PO Box 6000, Lunenburg, NS B0J 2C0	(902) 634-7560
Lawrencetown Area Supervisor	PO Box 130, 108 Elliott Road, Lawrencetown, NS B0S 1M0	(902) 584-2229
Tusket/Yarmouth Area Supervisor	404 Highway 308 North, PO Box 99, Tusket, NS B0W 3M0	(902) 648-3540
Kentville Area Supervisor	Provincial Building, 136 Exhibition St., Kentville, NS B4N 4E5	(902) 679-6097
NS ENVIRONMENT	PO Box 442, 5 th Floor, 5151 Terminal Road, Halifax, NS B3J 2P8	
General Information	Emergency, Toll-Free	(902) 424-3600 1-800-565-1633
Executive Director, Environmental Monitoring & Compliance	PO Box 442, 5 th Floor, 5151 Terminal Road Halifax, NS B3J 2P8	(902) 424-2547
Executive Director, Environmental Science and Program Management	PO Box 442, 5 th Floor, 5151 Terminal Road Halifax, NS B3J 2P8	(902) 424-2386
Executive Director, Environment and Sustainable Prosperity Partnerships	PO Box 442, 5 th Floor, 5151 Terminal Road Halifax, NS B3J 2P8	(902) 424-3325
Executive Director, Policy and Corporate Services	PO Box 442, 5 th Floor, 5151 Terminal Road Halifax, NS B3J 2P8	(902) 424-8006
<u>Environmental Monitoring & Compliance</u> <u>Regional Offices</u>		
Central (Bedford) Regional Director	30 Damascus Road, Suite 115, Bedford, NS B4A 0C1	(902) 424-7773
Northern (Truro) Regional Director	36 Inglis St., 2 nd Floor, PO Box 824 Truro, NS B2N 5G6	(902) 893-5880
Eastern (Sydney) Regional Director	295 Charlotte St., PO Box 714, Sydney, NS B1P 6H7	(902) 563-2100
Western (Kentville) Regional Director	Provincial Building, 136 Exhibition St., Kentville, NS B4N 4E5	(902) 679-6088

Appendix B: Relevant Contacts within Government (concluded)

Name	Location	Telephone
NS ENVIRONMENT (cont'd)		
<u>Environmental Monitoring & Compliance District Offices</u>		
Amherst District Manager	71 East Victoria St., Amherst, NS B4H 1X7	(902) 667-6205
Antigonish District Manager	155 Main Street, Suite 205, Antigonish, NS B2G 2B6	(902) 863-7401
Pictou District Manager	20 Pumphouse Road, RR #3, New Glasgow, NS B2H 5C6	(902) 396-4194
Port Hawkesbury District Manager	218 MacSween Street, Suite 12, Port Hawkesbury, NS B9A 2J9	(902) 625-0791
Bridgewater District Manager	60 Logan Road, Bridgewater, NS B4V 3J8	(902) 543-4685
Yarmouth District Manager	13 First St., Yarmouth, NS B5A 1S9	(902) 742-8985
NS LABOUR AND ADVANCED EDUCATION	PO Box 697, 6 th Floor, 5151 Terminal Road Halifax, NS B3J 2T8	
General Information		(902) 424-5301
Occupational Health & Safety Division		(902) 424-5400 Toll Free Number 1-800-952-2687
Director, Investigations, Technical and Internal Services	PO Box 697, 6 th Floor, 5151 Terminal Road Halifax, NS B3J 2T8	(902) 424-8478
Mining Engineer — Halifax	PO Box 697, 6 th Floor, 5151 Terminal Road Halifax, NS B3J 2T8	(902) 424-0451
Mining Engineer — Sydney	360 Prince St., Suite 32 Sydney, NS B1P 5L1	(902) 574-5640
NS DEPT OF ECONOMIC AND RURAL DEVELOPMENT AND TOURISM	PO Box 2311, 1660 Hollis St., Suite 600, Halifax, NS B3J 3C8	(902) 424-0377
SERVICE NOVA SCOTIA AND MUNICIPAL RELATIONS	Maritime Centre, 1505 Barrington St., Halifax, NS B3J 3K5	(902) 424-5200
ENVIRONMENT CANADA	45 Alderney Drive, Dartmouth, NS B2Y 2N6	(902) 426-7231
FISHERIES & OCEANS CANADA	PO Box 1035, Dartmouth, NS B2Y 4T3	(902) 426-3550
CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY	1801 Hollis Street, Suite 200, Halifax, NS B3J 3N4	(902) 426-0564
NS OFFICE OF ABORIGINAL AFFAIRS	5251 Duke St., 5th Floor, PO Box 1617 Halifax, NS B3J 2Y3	(902) 424-7409

