

Pollution Prevention in Mining in the Americas

Research Guide for National Case Studies

PREFACE

As in many OECD countries over the past several years, the Canadian environmental regulatory framework as it applies to mining at both the federal and provincial levels is in a state of flux. In general, the momentum in Canada's environmental regulatory framework has not been towards higher and better enforced environmental and pollution prevention standards. Rather, there has been movement towards environmental deregulation, resulting from poor government enforcement of regulations, the withdraw of financial resources from government Departments and Ministries charged with environmental protection responsibilities, an increasing dependence on voluntary environmental measures over regulation, increasing decentralization of federal powers and, in some instances, the repeal of specific environmental regulations and policies. In combination, these forces are helping to produce a destabilized environmental regulatory climate in Canada. The mining industry has been a leading advocate of these changes.

INTRODUCTION

Federal and Provincial Jurisdiction over Mineral and Metals Development and Environmental Protection

Canada is a federation in which the provinces have virtually all responsibility for natural resources within their jurisdictions. Mineral exploration, development, conservation and management are under the jurisdiction of the provinces.¹ The powers over resources granted to the provinces under the Constitution Act of 1867 however, do not exclude the federal government from exercising authorities that may directly or indirectly affect mineral development. These powers include the federal parliament's general power to legislate for the "Peace, Order and Good Government" of Canada, and its specific heads of power laid out under section 91 of the Constitution Act, including the protection of sea coasts and inland fisheries, navigable waterways, criminal law, (inter-provincial and international) trade and commerce and "Indians and lands reserved for Indians". The federal government also has the authority to engage in "any form or mode of taxation" and to spend federal funds in any manner it wishes.

The federal government also retains responsibility for resources on federal lands found within provinces and in the Yukon and Northwest Territories. The *Territorial Lands Act* and the *Canada Mining Regulations* govern mineral deposits in the Northwest Territories, while the *Yukon Quartz Mining Act* and the *Yukon Placer Mining Act* govern deposits in the Yukon.² In 1946, the federal government used its constitutional powers to take control over all works and undertakings deal

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treatment of uranium. All aspects of uranium mining are subject to the regulatory authority of the federal Atomic Energy Control Board.³

In keeping with the division of powers, mine permitting processes are largely established under provincial mining legislation in Canada. The federal government, however, has some authority over mining activities that require specific environmental approvals under federal legislation. A common example of this is when the development of a mine disturbs or destroys fish habitat, thus requiring federal approval under the Fisheries Act. Under such circumstances, this federal authorization may also trigger the Canadian Environmental Assessment Act (CEAA), thus forcing the completion of an environmental assessment of the mine *prior* to the federal government granting approval (see Canadian Environmental Assessment Act below). Consequently, although not directly charged with the regulation of mining, through legislation such as the Fisheries Act and CEAA, the federal government has significant responsibility for mitigating the environmental effects of mining.

Surface and Sub-surface Rights in Canada

The vast majority of mineral rights in Canada are owned by the Crown and the disposal of these rights is governed under the various provincial mining acts. In the event that mineral rights are held by a private landowner, the common law states that all minerals are part of the land itself and belong *prima facie* to the owner of the land.⁴ This is not absolute however and admits to various exceptions, such as silver and gold, minerals vested in the Crown by statute, and minerals vested in another by the severance of surface and mineral rights.⁵ This latter exception usually occurs as a result of the Crown granting land to someone while reserving the rights to the sub-surface minerals. The right of the Crown to gold and silver is separate from its right to other minerals and is based on the Crown as “governing authority” and not “owner of land”. It is said that this right has its origins in the Queen’s needs for coinage.⁶ The development of mines on private land is governed by the same environmental legislation and regulations as mines developed on Crown land.

Where both the mineral rights and surface rights are privately owned, a rare exception in Canada as the vast majority of mineral exploration and development occurs on Crown land, the rights and duties between prospectors and landowners is determined in accordance with principles of common law.⁷ In the situation wherein the surface rights are privately held but have been severed from the mineral rights of the land, common law is overridden by mining legislation. This dominance of mining legislation is the case in all jurisdictions in Canada. In provincial statutes the conditions are described under which a miner can enter private land in pursuit of Crown minerals, and the way in which the miner is to compensate the surface owner.⁸ In Ontario and British Columbia miners are allowed to enter private land by simply extending the courtesy of a notice of entry, whereas in other provinces and territories agreement from the surface owner is required, or an order from the lead authority or tribunal is required, as established in the respective mining legislation.⁹ Consequently, provisions in the mining acts across Canada override principles of Common Law where surface and mineral rights have been severed. The various mining acts establish the process through which the exploration and development

of minerals is to occur, effectively negating the property rights of surface owners, although providing compensation for damages. This is seldom a problem in the mining industry in Canada because the majority of mining activity takes place on Crown land away from the areas of largest population and private land ownership.

It should also be stated that in Ontario the Mining Act and the Industrial and Mining Compensation Act combine to provide exceptional rights to mining companies and mill operators.¹⁰ The Mining Act allows the Mining and Lands Commissioner to grant easements over private land for: constructing drainage works through the property, draining any bodies of water, damming and diverting water courses, constructing roads and even dumping tailings, slimes and other wastes. Once an easement is granted the landowners common property right to seek an injunction to stop or prevent injury or damage to the property is suspended. As in the case where a landowner owns only the surface rights and not the mineral rights, the landowner is limited to an amount of money the court considers adequate compensation.¹¹

The Canadian policy of Crown control of minerals has played an important role in keeping minerals in public ownership in most parts of Canada.¹² Unfortunately, this control is limited, as federal and provincial mining legislation still maintains a “free entry” system under conditions established by the government. As required, mining leases are negotiated with mining companies seeking to develop mines on Crown-owned lands, as required under mining legislation.

Federal Environmental Legislation Relevant to Mining

With respect to mining, federal powers exist under several pieces of legislation (and their various regulations) – principally, the *Fisheries Act*, the *Navigable Waters Protection Act*, the *Canadian Environmental Assessment Act*, and the *Canadian Environmental Protection Act*.

- **Federal Fisheries Act**

The Federal Fisheries Act is arguably the most powerful, and important, piece of federal environmental legislation. Of specific relevance to the environment and mining are sections 34-38 of the Fisheries Act. These fish habitat protection provisions of the Act are administered by DFO and require departmental authorization for the alteration, disruption or destruction of fish habitat. Under sections 34-36 of the Act there is a strict prohibition against depositing any substance that degrades or alters the quality of water frequented by fish. Such a substance is defined as a “deleterious substance” for the purposes of the Act.¹³ Any deposition into any water body frequented by fish of a substance deleterious to fish, or their habitat, is prohibited under the Act but may be made subject to regulations prescribing: (a) the substances and classes of substances allowable for deposit in such waters; (b) the quantities or concentrations of these substances or classes of substances; and (c) the treatments, processes and changes of water required for mitigating these substances.¹⁴ In 1977 the Metal Mining Liquid Effluent Regulations (MMLERs) were established under the Act and apply to mine

effluent, mill water effluent, effluent from tailings, treatment pond effluent or treatment facility effluent, as well as seepage and surface drainage from mine sites.¹⁵

Although the Act is administered by the Department of Fisheries and Oceans (DFO) the administration and enforcement of the MMLERs is undertaken by the Department of the Environment.

Although the federal government issues any permits for the destruction of fish habitat under the Fisheries Act, the general enforcement of the Act is usually delegated to the provinces. This arrangement has proven highly problematic because many provinces are simply not enforcing the provisions of the Fisheries Act, and not prosecuting those in non-compliance with their permits under the Act.¹⁶

- Navigable Waters Protection Act (NWPA)

The NWPA requires that all works built or placed in, on, over, under, through or across any navigable water require approval of the Minister of Fisheries and Oceans, and that all conditions of the approval be carried out by the proponent prior to construction of the work.¹⁷ Requirements under this Act may be applicable to some exploration activities, especially at the advanced exploration stage, when bridges over rivers or the alteration of watercourses may be required.

- The Canadian Environmental Protection Act (CEPA)

CEPA provides the federal government with the legislated mandate to determine: (1) which substances used by industry are toxic; and (2) under what terms and conditions these toxic substances can be used or released into the environment. Part II of the Act establishes the scientific and technical procedures for classifying substances “toxic” for the purposes of the Act and how these substances are then to be added to Schedule 1. The listing of a substance on Schedule 1 is required before regulations can be promulgated to control uses or releases of the substance to the environment.

Although CEPA has potentially significant implications for the mining industry, at this point in time very few assessments of mining-related substances have been undertaken, and even fewer substances have actually been regulated.¹⁸ For example, nickel, arsenic, and cadmium have been assessed “CEPA-toxic” under the Act but as yet they have not been placed on Schedule 1 for control by regulation.¹⁹ Regardless of the fact that prior to being declared CEPA-toxic an assessment of these substances is conducted using available technical, scientific, health, and related-information, the mining industry is seeking a full risk assessment be performed on the substances before any regulatory measures are taken.²⁰ The only regulations promulgated under CEPA with implications for the mining industry are with respect to releases to air of lead from secondary lead smelters and asbestos from mines and mills. Consequently, releases of these substances are currently not being regulated at other stages of the mining process or in other forms of emission to the environment.²¹

Cyanide is not federally regulated under CEPA but is currently being considered for regulation under the MMLERs of the *Fisheries Act*. Developing a cyanide regulation is one of the Department of Environment recommendations put forward during an ongoing multi-stakeholder process charged with reviewing the MMLERs. Presently, cyanide is regulated by some provinces. In Ontario, cyanide is regulated under the Metal Mining regulations of the Municipal/Industrial Strategy for Abatement, and in British Columbia cyanide is regulated under the *Waste Management Act*.

- The Canadian Environmental Assessment Act (CEAA)

The Canadian Environmental Assessment Act is federal environmental assessment legislation with important implications for the development of mines and some exploration activities in Canada.²² The Act was proclaimed in 1995 and establishes an assessment regime that, providing certain criteria are met, requires all public and private proponents of projects complete an environmental assessment of their proposed project prior to receiving federal government approval for the project to proceed.

Where and When CEAA Applies

CEAA applies to public and private sector projects where a federal authority, termed the “Responsible Authority” in the Act, is a proponent of the project; provides financial assistance to the project; involves federal lands in the project; or, exercises a prescribed regulatory duty (i.e. issuing a permit, license or other approval). As defined under CEAA, “projects” are: (I) undertakings related to a physical work, or (II) physical activities designated by regulation under the Act.

Different Types of Assessment Under CEAA

There are four types of environmental assessment under CEAA. The most basic EA is termed a “screening”. This is followed by the more detailed and rigorous Comprehensive Study, determined by regulation under the Act. The most rigorous type of EA is the Panel Review that provides independent public hearings focused on a detailed Environmental Impact Statement (EIS) prepared by the proponent.

CEAA provides for a two-stage assessment process: (I) self-directed assessment (applying to screenings and Comprehensive Studies); and (ii) where a self-directed assessment raises out-standing environmental issues or public concern, a public review is invoked. The vast majority of assessments under CEAA (~95%) are self-directed.²³

All projects under CEAA are given an EA screening, unless listed in the Comprehensive Study Regulations in which case the screening would be replaced by a Comprehensive Study. Where there are outstanding environmental issues or public concerns identified at the screening level, the “Responsible Authority” in government (usually a government department) or the Minister of the Environment have the discretion to undertake a public review. The public review may consist of mediation, a public hearing before an independent panel of experts, or a combination of mediation and public Panel Review.

However, the Mediation provisions in CEAA have never been used. All environmental assessments involving public review in Canada have been through the appointment of an expert and independent Panel. The Minister of the Environment, or the “Responsible Authority” in government can also bump a Comprehensive Study up to a Panel Review if public concern is high, or it is deemed the project will cause significant environmental effects.

How CEAA Applies

The following four regulations established under CEAA determine which projects are assessed and the level of assessment required:

1. The Exclusion List Regulations specify the physical works exempt from assessment under CEAA because they are deemed to have insignificant environmental effects;
2. The Inclusion List Regulations specify what physical activities not related to physical works require assessment, providing there is a CEAA trigger. In other words, providing the project takes place on federal lands, receives federal funds, involves the federal government as a proponent or triggers one of the Acts on the Law List Regulations;²⁴
3. The Law List Regulations specify the sections of various federal statutes (e.g. the Fisheries Act, the Navigable Waters Act) under which an application for a permit triggers a federal environmental assessment. *The assessment must be completed prior to the permit being granted;*
4. The Comprehensive Study List Regulations designate projects likely to have significant environmental effects and which require comprehensive environmental impact studies before receiving federal approvals.

Factors to be Addressed Under Federal Environmental Assessment

Section 16(1) of CEAA defines the factors to be addressed regardless of the project type or the type of EA being conducted. They include: (I) the environmental effects of the project, including malfunctions or accidents, and the project’s cumulative effects (i.e. the effects of the project in combination with other projects or activities that have been or will likely be carried out); (II) the significance of the environmental effects of the project referred to in (I); (III) comments from the public; (IV) technically and economically feasible measures to mitigate significant adverse effects associated with the project; (V) other matters deemed relevant by the Responsible Authority, such as the need for the project and possible alternatives to the project.²⁵

Section 16(2) of the Act stipulates that Comprehensive Studies, Panel Reviews and Mediations must also consider: (I) the purpose of the project; (II) alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means; (III) the need for, and the requirements of, any follow-up program in respect of the project, and; (IV) the capacity

of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.²⁶

It is important to note that under CEAA expert or independent decision making is not required at any stage of the assessment process. All legally binding decisions under CEAA are made by federal ministers or the federal cabinet, and consequently there is no guarantee of independent decision-making.²⁷ Consequently, a Review Panel's recommendations are only advisory in nature. The government has complete discretion regarding whether to implement the Panel's recommendations.

CEAA and Crown Corporations

Under the Financial Administration Act a Crown Corporation is defined as any corporation owned entirely by Her Majesty in Right of Canada.²⁸ Section 8 of CEAA deals with Crown Corporations and states that if: a Crown Corporation is the proponent of a project, or provides any form of financial assistance to a proponent for the purpose of carrying out a project, or sells, leases, or disposes in another fashion of land required for a project to proceed, then an environmental assessment of the project is required.²⁹

Although Crown Corporations must conduct environmental assessments of their proposed projects, the Act stipulates they are to prepare assessments in keeping with regulations made for that purpose. As there have been no regulations promulgated under the Act that deal with environmental assessments by federal Crown Corporations, their assessments may not be as rigorous as those required by federal government departments under the Act.³⁰

This situation exposes a serious fault with CEAA – decision-makers are often the project proponents, and they may not be held to the same standards as other federal departments and agencies under the Act.

CEAA and Native Lands

Any project carried out in whole or in part on a reserve for the use of an Indian band and that is subject to the Indian Act is required to conduct an environmental assessment in accordance with regulations passed under CEAA. As with Crown Corporations no regulations dealing with this situation have been passed, and thus there is no way of knowing whether assessments on Indian reservations will be more or less rigorous than those carried out by federal authorities under the general auspices of the CEAA.³¹

Section 48 of CEAA provides a discretionary trigger applicable to Native Lands. If the Minister believes a project will have adverse environmental effects on a reserve, or an area under a Native land claim, she may refer the project to a Mediator or a Review Panel.³²

The Canadian Environmental Assessment Agency

Federal environmental assessment is the responsibility of the federal Minister of Environment, but the process of environmental assessment is administered by a separate agency at arms-length from the Minister and the Department of Environment. The Canadian Environmental Assessment Agency is charged with providing administrative support for public reviews and information for the facilitation of the environmental assessment process in general.³³ Although not formally mandated to do so, it is understood that the Agency is to provide the Minister of the Environment with advice regarding the establishment of the terms of reference for environmental assessments conducted under CEAA.³⁴

The Agency also prepares and provides information and guidelines to Responsible Authorities and proponents outlining what is required of them under CEAA.

In 1999 there is to be a five-year review of CEAA as stipulated in Section 72 of the Act. In undertaking this review, the Canadian Environmental Assessment Agency has been charged with being the lead party.

Native Lands

The treaties, land claims and reserves of Native peoples constitute a special case with respect to mining activities and land concessions. On reserves, and lands set aside under land claim agreements, special legislative and regulatory regimes govern title to minerals and the processes of exploration and mine development.³⁵

Native treaties and land claims can often impact lands not directly controlled by Native people as a result of conflicts between the native right to a traditional lifestyle and incompatible activities such as exploration and mining activities. Under 1982 amendments to the Canadian Constitution, treaty rights are protected from the infringement of both federal and provincial legislation, and hence development on or near Native lands must be in accordance with these rights. Effectively, the amendments not only entrench existing treaty rights into the Constitution but they also incorporate a much broader sense of Native rights that extends beyond treaty rights. These extended rights include the right to traditional uses and practices, such as the right to fish, hunt, trap and use trees, plants, wildlife for sustenance and social, spiritual and ceremonial purposes, on lands off reserves and lands under land claims. "Land claims" are lands never surrendered by Natives through treaties.

The case for Native rights on non-treaty lands has been tested in the courts. The 1993 Delgamuukw decision in the British Columbia Court of Appeal ruled that aboriginal rights in British Columbia have never been extinguished and therefore continue to exist today.³⁶ In 1997 this decision was upheld in a unanimous decision by the Supreme Court of Canada. The Supreme Court also ruled that in considering land claims, governments need to respect native tradition and history as evidence. In addition, once a claim to land

is established, the court ruled that aboriginal title permits native peoples to enjoy full use of the land, including mineral and timber rights.

The Canada-Wide Accord on Environmental Harmonization

In January, 1998, the federal government moved to delegate much of its responsibility for environment-related legislation and policy to the provinces through the signing of the *Canada-wide Accord on Environmental Harmonization*, an Accord aimed at harmonizing federal and provincial environmental regulations through a "one-stop" regulatory window for proposed developments. An intermediary organization known as the Canadian Council of the Ministers of the Environment (CCME), which is supposed to have a solely co-ordinating relationship between the two levels of government, is becoming the medium through which environmental legislation and regulation is being decided in Canada. This is problematic in that the CCME is not directly accountable to the public and has no mandate as a law-making body.

The principles laid out in the Accord are to be implemented through the development and implementation of subagreements. The subagreements currently developed and awaiting implementation include: environmental assessment, environmental standards, and environmental inspections.³⁷ The Accord effectively commits the federal government to refraining from legislative action on environmental matters without the unanimous consent of the historically more development-oriented provinces. The mining industry has been a major advocate of the Accord, while environmental groups across the nation have been strongly opposed. Although the federal government retains its constitutional powers to act independently to protect the environment under the Accord, in the current political climate, these are unlikely to be exercised.

RESPONSES TO QUESTIONS

The following responses to the provided questions largely focus on the environmental regulation of mining activities at the federal level and in the provinces of Ontario and British Columbia. Ontario and British Columbia were chosen for the following reasons. First, Ontario is the largest mineral and metal producing province in Canada and has recently moved to weaken its environmental regulations on exploration and mining. British Columbia, although arguably having the most progressive regime for the environmental regulation of mining in Canada, is also restructuring its regulatory framework with respect to mining. The actions of both these jurisdictions in conjunction with the federal government's desire to withdraw from its environmental responsibilities help highlight the downward direction and state of regulatory flux that presently characterizes the regulation of mining in Canada.

Where there are important aspects of environmental regulation pertaining to mining in provinces other than Ontario and British Columbia, an effort has been made to include them.

Pollution Prevention

The federal government has adopted the following definition of “pollution prevention”:

“The use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants and waste, and reduce overall risk to human health or the environment.”³⁸

This definition was subsequently adopted by all of the provinces and territories at the November 1996 meeting of the Canadian Council of Minister’s of the Environment. It should be noted however, that this definition is not the one contained in the amendments to the *Canadian Environmental Protection Act* presently before Parliament. The understanding of pollution prevention presently being incorporated into CEPA via amendments emphasizes control of pollutants over prevention.

The above definition of pollution prevention is understood to exclude “end of pipe” pollution-control technologies, and out of process recycling of toxic substances. Rather it is intended to focus on changes in the design and operation of industrial and other facilities to reduce or eliminate the generation of pollutants at source. It may include such things as input substitution, process changes, product reformulation, or the reduced use of toxic or hazardous inputs.

I. ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment and Exploration

- 1(a) *Is an Environmental Impact Assessment (EIA) required for exploration, including any initial prospecting activities?*
- 1(b) *If so, please describe the process for preparation of the EIA and the review by a governmental agency. Please identify any specific differences or special requirements applicable to small business.*

Federal

Some mining exploration activities, such as road building and bulk sampling *may* invoke CEAA. CEAA principally focuses on “physical works”, such as the development of the mine proper, but could be triggered by some exploration activities, especially those at the advanced exploration stage. Some activities associated with basic exploration, such as building roads, may be considered a “project” under certain circumstances and require an environmental assessment. CEAA does not make specific mention of exploration activities in the four regulations that trigger the Act (see Introduction).

If an EA was to occur at the early exploration stage it would result from exploration activities taking place on federal lands, or their requiring federal regulatory approval

under the Law List Regulations, thus triggering CEAA. In the case of exploration activities, a possible Law List trigger would be the requirement for approval to disrupt fish habitat, requiring approval under the Fisheries Act, or approval to construct a bridge over a navigable waterway under the Navigable Waters Protection Act. Thus, in this instance, if an exploration activity constitutes a “project” under CEAA and is not included on the Exclusion List Regulations, then exploration activities involving the crossing of streams, rivers, and/or other forms of activities that may negatively affect fish habitat or the navigability of a river, should trigger a federal environmental assessment. Under CEAA, whether or not potentially environmentally destructive activities get a proper EA depends on what is deemed to be the “project” being assessed. It has been common under the Act for the scope of an assessment to be far too narrow, confined to the immediate impacts of building bridges and roads while failing to take into consideration the cumulative environmental impacts of the larger project which the roads and bridges are being constructed to serve.

Presently, what constitutes the scope of a “project” under CEAA is being litigated before the Federal Court of Appeal. In July 1998, the Friends of the West Country won a lower court decision overturning the federal government’s Navigable Waters Protection Act approvals for Sunpine Forest Products construction of a bridge over the Ram River and Prairie Creek, part of a remote logging road in the Alberta foothills. The judgment found that federal departments broke the law by issuing permits without conducting their own studies of the cumulative effects of the entire forestry development, and consequently the court referred the projects back to the government for a proper environmental assessment.³⁹ The federal government’s application to stay the ruling requiring a comprehensive environmental review of the logging road was recently dismissed by the Federal Court of Appeal.⁴⁰ The case of Sunpine Forest Products reflects how the federal government’s narrow interpretation of “project” has led to the environmental impacts of activities, such as mineral exploration, escaping the environmental assessment process. Although the Sunpine decision is to go before the Federal Court of Appeal sometime in the spring of 1999, an upholding of the lower court’s ruling will most certainly result in the case being appealed to the Supreme Court of Canada.

Beside the above problem, there is also a second barrier to mineral exploration activities receiving an EA in Canada. The type of assessment most likely to apply to early exploration activities, such as bridge building, is a screening. However, despite the relatively simple requirements involved in performing a screening, the Department of Fisheries and Oceans has contrived to limit the number of screenings actually undertaken by issuing “letters of advice” to proponents in an effort to avoid having various physical activities and/or physical works trigger CEAA. “Letters of advice” inform proponents of what steps they can take to avoid requiring an authorization under the Fisheries Act, thereby avoiding an environmental assessment.⁴¹ The Federal Court of Appeal recently ruled that DFO’s “letters of advice” are a blatant attempt to circumvent the intentions of the CEAA. With respect to DFO’s “letters of advice”, Federal Court Justice Muldoon stated in his ruling:

"...this is a transparent bureaucratic attempt at sheer evasion of binding statutory imperatives. It is neither cute nor smart, and this court is not duped by it. By making "policy" not contemplated by the statutes, the DFO types simply cannot immunize the Minister and DFO from judicial review, nor circumvent the environmental laws which they decline to obey."⁴²

It needs to be clearly recognized that environmental assessment *may* apply to exploration activities, but this is not usually the case. There is a much greater chance that mineral exploration activities in Canada will be subject to an EA if the Sunpine ruling is upheld in the Federal Court of Appeal, and ultimately at the Supreme Court level.

Provincial

All provinces in Canada have either an Environmental Assessment Act, or a regulation requiring environmental assessments of certain projects made under more general environmental protection legislation. For example, the Province of Ontario has a free-standing EA Act whereas the Province of Alberta's environmental assessment process is based on regulations made under its *Environmental Protection and Enhancement Act*. EA processes at the provincial level vary greatly in their scope and requirements with respect to the projects covered. In some provinces such as Ontario and Alberta, the EA Panel or Board makes the decision on whether to allow the development, whereas other provinces follow the federal model wherein the Panel decision is only a recommendation to the Responsible Authority and ultimately the Cabinet.

Ontario

The Ontario Environmental Assessment Act (OEAA) requires proponents of all public projects, and private sector projects designated by regulation, to prepare an environmental assessment detailing the purpose and rationale for the project. The OEAA is not solely limited to "projects" (i.e. physical works and their operations), but also includes "enterprises", "activities", "programs", and "proposals", which are all defined as "undertakings" in the Act.⁴³ In addition, the broad definition of "environment" contained in the Act provides the potential for it to apply to policy decisions as well as cultural, economic and social factors.⁴⁴

The OEAA applies to the Ontario government and its departments, all public bodies, and municipalities. "Public bodies" include all colleges, universities, and Ontario Hydro, among others. The OEAA criteria for determining whether a private sector undertaking should receive an EA is based on whether or not the undertaking is "major" and designated by regulation, or whether it is being carried out on behalf of the Ontario government.⁴⁵ What is meant by a "major" undertaking or "on behalf of" the provincial government is not clear.

In establishing the OEAA the government made it apply to the entire public sector but retained the power to exempt any undertaking without establishing criteria for

determining which undertakings should be exempt.⁴⁶ This discretion required the establishment of a watchdog committee, The Environmental Assessment Act Steering Committee (EAASC), composed of the Chair and Vice-chair of the Environmental Assessment Board as well as a representative of the concerned public. In 1983 EAASC became the Environmental Assessment Advisory Committee (EAAC), and in September of 1995 the present Ontario government disbanded the EAAC. The purpose of the EAAC was to work as a watchdog in trying to ensure that there were no improper exemptions of public projects by the government and that “major” private projects were designated under the Act. A problem with EAAC was that it could only review a case referred to it by the Minister of the Environment. Consequently, although EAAC could hold public hearings and provide recommendations when requested by the Minister, it could not independently investigate public requests for designations of projects and the removal of exemptions.⁴⁷ All public requests had to first be vetted through the Minister who in turn decided what requests the EAAC could investigate.⁴⁸

Consequently, because private sector projects must be “major” and specifically designated by regulation, few resource extraction activities – including those on Crown lands – have been designated and assessments conducted under the Act.⁴⁹ As a consequence, exploration activities are unlikely to trigger an EA in Ontario unless the activities require the construction of public infrastructure, such as a public road. The only private sector projects that are designated for EA on a routine basis in Ontario are private sector waste disposal projects.

The OEAA requires proponents to go through an environmental planning process based on four key elements: (1) consultation with affected parties; (2) consideration of all aspects of the environment; (3) systematic evaluation of net environmental effects; and (4) provision of clear and complete documentation.⁵⁰

Under the OEAA an assessment must include an analysis of the affected environment, potential environmental effects and mitigation measures.⁵¹ However, the Environmental Assessment and Consultation Improvement Act, passed in 1996, reduces the potential scope of assessment in the province by making the establishment of the need for the project and the examination of possible alternatives to it entirely discretionary.⁵²

In some cases, the Minister of the Environment may refer an environmental assessment to the Environmental Assessment Board for a public hearing and decision. The Board is an independent, quasi-judicial body with the power to accept or reject the environmental assessment, and approve or reject the proposed undertaking, subject to whatever terms and conditions the Board chooses to impose. The Board’s decisions can be appealed to the provincial cabinet, although such appeals are rare and unlikely to be successful. In the absence of a referral to the Board, the Minister of the Environment has the authority to grant the undertaking approval under the Act, subject to whatever terms or conditions she wishes to impose, or to reject the undertaking.

British Columbia

The British Columbia Environmental Assessment Act (BCEAA) applies to projects that meet specific criteria set out in regulations under the Act, or are designated as requiring assessment by the Minister of Environment, Lands and Parks. Categories of mine projects captured under the Environmental Assessment Reviewable Projects Regulation, include the establishment of new, or significant modification of existing coal mines, mineral mines, sand and gravel operations, placer mines, stone and industrial mineral quarries, and off-shore mines.⁵³

Small mines not captured under the Reviewable Projects Regulation are not subject to environmental assessments under the Act, and neither are exploration activities. In November, 1998, the British Columbia government announced changes to some threshold levels that dictate which industrial projects, including mining projects, are subject to full environmental assessment. Thresholds for new coal mines were increased from 100,000 tonnes/year to 250,000 tonnes/year.⁵⁴ New mineral mines were increased from 25,000 tonnes/year to 75,000 tonnes/year, whereas mine expansions went from either 250 hectares disturbed or a 35% increase in production to 750 hectares disturbed or a 50% increase in production.⁵⁵ Under these proposed changes several recent mine projects in British Columbia would not have been included under the EA process.⁵⁶

Proponents must submit information on the environmental, social and economic impacts of the project, including the existing location, potential environmental effects, measures to prevent or mitigate adverse environmental effects, and consultation activities with the public and First Nations. At discretion of the government, projects with significant environmental effects may be subject to a project review during which alternative sites, methods of construction and the monitoring of effects are also considered.⁵⁷ The Minister of Environment, Lands and Parks can decide to refer an application for project approval to the Environmental Assessment Board for a hearing and further study, followed by a report and recommendations. Unlike Ontario, the final decision is made by Cabinet prior to the Minister of Environment, Lands and Parks formally granting project approval.

Since coming into effect in 1995, six major mines have been approved by the Provincial Cabinet under BCEAA, with another dozen projects at various stages of review.⁵⁸ The Minister of Environment, Lands and Parks has never specifically designated a mining project for review under the Act, nor have any mining projects ever been referred for a public hearing under the Act.

1(c) *Please identify any opportunities for public review and public participation in commenting on the EIA before the final decision to allow exploration and describe the process for the government to consider and incorporate any public comments. Is there any opportunity for the public to challenge the decision approving the EIA?*

Federal

If exploration activities were subject to an assessment under CEAA it would most likely be at the screening level. Public participation and review of screenings is limited and largely at the discretion of the Minister of the Environment and the Responsible Authority, unless otherwise provided for by regulation. In general CEAA contains a minimum requirement for public access to reports, comments and other material for each project through a public registry. Beyond access to the public registry however, the extent and nature of public consultation for a screening process is entirely at the discretion of the Responsible Authority (RA). The Act states that where the RA is of the opinion that public participation in the screening of a project “is appropriate in the circumstances” or “required by regulation” the RA is obliged to provide public notice and an opportunity to examine and comment on the screening report and other project documents filed in the public registry.⁵⁹ At this point in time, no regulation dealing with public consultation has been promulgated, although the Canadian Environmental Assessment Agency has prepared a reference guide for RAs on public participation.⁶⁰ Thus, an enlightened public can file comments regarding a particular screening on the Public Registry maintained by the RA, but there is no mechanism to ensure the review of these comments or for their incorporation into the decision to approve the EA. If one is unsatisfied that the screening was properly conducted, there is no formal mechanism (e.g. an Appeal Board) which can be accessed. The net result is a poor system for public scrutiny of EA screenings at the federal level.

In addition, a significant problem in public participation during EAs has been the lack of timely public notice for projects being screened resulting in public concerns not being raised until the screening is substantially complete.

Provincial

Provincial environmental assessment acts and/or regulations do not usually apply to exploration activities, because, like CEAA, they tend to be project-driven, failing. In some provinces, most notably British Columbia, a permitting system is used to mitigate the environmental impacts of exploration. There are some mechanisms for public participation in permitting exploration activities (see 7(a)(b)).

1(d) *Is there an automatic approval process for the EIA? If so, please describe.*

Federal

There is no automatic approval process for environmental assessments at the federal level. This said, no project subject to a screening review under CEAA has ever been denied approval (see 2(d)).

Provincial

There are no automatic approvals at provincial level (see 2(d)).

1(e) *What type of pollution prevention measure, if any, must be identified in the EIA in order for it to be approved? What types of incentives, if any, exist for the inclusion of pollution prevention measures in the EIA?*

Federal

For an EA screening to be approved, the following measures related to pollution prevention must be identified in the EA: (i) the environmental effects of the project, including possible malfunctions or accidents, and the project's cumulative effects (i.e. the effects of the project in combination with other projects or activities that have been or will likely be carried out); (ii) the significance of the environmental effects of the project; (iii) technically and economically feasible measures to mitigate significant adverse effects associated with the project; (iv) other matters deemed relevant by the Responsible Authority, such as the need for the project and possible alternatives to the project. There are no monetary or other specific incentives to include pollution prevention measures in the environmental assessment process, and no specific regulatory standard addressing pollution prevention.

Provincial

In Ontario, the assessment must include an analysis of the affected environment, potential environmental effects, and mitigation measures required.⁶¹ (See Ontario under 1(a)(b)).

In British Columbia, proponents must submit information on the environmental, social and economic impacts of the project, including the existing location, potential environmental effects, measures to prevent or mitigate adverse environmental effects, and on consultation activities with the public and First Nations. Alternative sites, methods of construction and the monitoring of effects must also be considered.⁶² There are no monetary or other specific incentives for pollution prevention measures in the environmental assessment process.

In both Ontario and British Columbia there are no pollution prevention or control standards internal to the EIA beyond those already established under air and water pollution control legislation and regulations.

1(f) *Are any monitoring or mitigation measures required in connection with the EIA? If so, please identify.*

Federal

For Comprehensive Studies, Panel Reviews and Mediations under CEAA both monitoring and mitigation measures are required as part of the assessment, but for screenings only mitigation measures need be described in the screening report.

Provincial

See 1(c).

1(g) *Do government officials have the authority to establish emission limits in connection with the EIA process that are not otherwise provided for by law?*

Federal

Normally emission limits are established through specific federal and provincial environmental approvals under air and water pollution control legislation and regulations. CEAA is principally a planning framework for assessing the environmental impacts of a particular project and, at best, the project's environmental impacts in conjunction with the projects around it, but is not a means for amending environmental regulations at either federal or provincial level. However, as a condition of approval, it is possible that the Minister, Cabinet or RA could impose additional conditions not contained in existing air and water approvals on the proponents. These could include such conditions as community liaison, environmental effects monitoring, and the mitigation of impacts on biodiversity such as the construction of wildlife corridors. CEAA itself contains the power to impose mitigation measures on any decision that allows a project to proceed, but does not include the powers required to ensure proponents comply with these measures.⁶³

Provincial

In the event an environmental assessment is given a public hearing in Ontario, the Environmental Assessment Board can also impose additional conditions related to air and water approvals on the proponents. Where there is no hearing before the Board, such conditions can be imposed by the Minister of the Environment.

1(h) *How is compliance with monitoring and mitigation requirements (or other EIA conditions) monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in monitoring or enforcement, including the authority of third party beneficiaries of the EIA to participate in any legal action?*

Federal

There are no formal mechanisms under CEAA for ensuring enforcement of monitoring and mitigation requirements. In Comprehensive Studies and Panel Reviews, monitoring and mitigation requirements are largely left to the public to enforce, but at the level of screenings it is effectively non-existent see (2(f) and (h)).

Provincial

See discussion in 2(h).

1(i) *Under what circumstances or for what activities is an EIA not required in the exploration phase?*

Federal

See 1(a)(b).

Provincial

See 1(a)(b)

1(j) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the EIA? If so, how is the amount of the financial assurance determined?*

Federal

There are no bonds or other forms of performance guarantee required by the federal government with respect to meeting the provisions of an approved EA.

Provincial

No bonds or other forms of performance guarantee relating directly to environmental assessments are required.

Environmental Impact Assessment and Mining

2(a) *Is an Environmental Impact Assessment (EIA) required for mining?*

2(b) *If so, please describe the process for preparation of the EIA and the review by a governmental agency. Please identify any specific differences or special requirements applicable to small business.*

Federal

Large proposed mines are subject to Comprehensive Studies by regulation under CEAA. The Comprehensive Study List regulation under CEAA contains projects with the potential to have significant environmental effects and/or generate significant public concern. The proposed construction, expansion, decommissioning or abandonment of mining projects above an established production level (600 tonnes/day of ore for gold mines, 3,000 tonnes/day for other metal mines) are among the projects requiring Comprehensive Study.⁶⁴ The level of assessment is determined by the Responsible Authority under whose jurisdiction the assessment was triggered, or by the Minister of the Environment. Comprehensive Studies follow the same process as a screening, but must also include: (I) the purpose of the project; (II) alternative means of carrying out the project that are technically and economically feasible, and the environmental effects of these alternatives; (III) need for, and requirements of any follow-up program for the project; (IV) the impact on renewable resources in the project development that could impact future generations use of those resources.⁶⁵

If the situation warrants, the RA can refer the project to the Minister of the Environment for referral to a Panel Review. It should be noted that at the Minister's discretion she can decide to refer any proposed mine to a Panel Review if: (I) there are outstanding issues relative to the environmental effects of a project and if these effects are determined to be significant; (II) the project may cause significant impact on aboriginal lands, federal lands or across provincial or Territorial boundaries; or (III) there is significant public concern. Ministerial authority can be exercised at any point in the assessment process, including prior to the beginning of a screening or a Comprehensive Study.

Provincial

Ontario

Because the OEAA applies solely to public projects, a mine would only undergo an assessment if specifically designated by Cabinet. Regardless of whether the mine proper receives an assessment, any access roads or power lines would be subject to an assessment under the Act, unless specifically exempt by Cabinet Order. There is precedent for a mine being designated for review under the OEAA.⁶⁶ Indirectly, aspects of a mine's development could receive assessment if public infrastructure work is required. Public works, such as an access road or power corridor, would require assessment under the Act.⁶⁷

See Ontario section under 1(a) and (b) for further details on the specifics of OEAA.

British Columbia

The BCEAA applies to mine projects captured under the Environmental Assessment Reviewable Projects Regulation, which include the establishment of new, or significant modification of existing, coal mines, mineral mines, sand and gravel operations, placer mines, stone and industrial mineral quarries, and off-shore mines.⁶⁸ Small mines are not captured under the Reviewable Projects Regulation and thus are not subject to environmental assessments under the BCEAA unless designated so by the Minister of Environment, Lands and Parks.

See British Columbia section under 1(a) and (b) for further details on the specifics of BCEAA.

Bilateral Agreements on Environmental Assessment with the Provinces and Joint Panel Reviews

In the event that a proposed mine triggers both CEAA and a provincial assessment process, then CEAA includes provisions for the co-ordination and development of bilateral agreements between jurisdictions for applying a “one window” EA process. The mining industry, with support from provincial governments, has been very active (and successful) over the past few years in lobbying the federal and provincial governments to “harmonize” their EA processes. It is advanced that this will result in a more efficient and cost-effective process that avoids the potential scenario of a project undergoing two assessments under two jurisdictions. The idea of “one project one EA” has led to several provinces negotiating bi-lateral EA agreements with the federal government (Alberta, British Columbia and Manitoba). These agreements lay out the process to be followed in the event that both jurisdictions are required to perform an environmental assessment on a particular project.

Joint Panel Reviews: The Case of the Cheviot Coal Mine in Alberta

The case of the Cheviot Coal mine, a proposed 22 kilometre strip mine on the edge of Jasper National Park in Southern Alberta, is the first joint federal/provincial EA in Canada.

Under Alberta’s Environmental Assessment regulations, coal mine EAs are controlled by the Alberta Energy and Utilities Board (AEUB), a quasi-judicial body with the power to directly issue permits for development. Participant funding is granted only to those considered “directly affected” by the development under review, and “directly affected” is interpreted in the most narrow sense as only applying to “affected” property owners. As a consequence the public has a great deal of difficulty getting standing at Alberta EA hearings because they are not considered “directly affected”, even though over 70% of Alberta lands are publicly owned. What CEAA was able to achieve in the case of Cheviot -- at least in part -- was an opening of the exclusionary public participation

provisions inherent in the Alberta EA regulations. Thus, under the public participation provisions of CEAA, the public was able to get standing at the Joint Panel EA hearings and more fully participate in the Cheviot coal mine EA. CEAA also provided intervenor funding. Simply, the application of CEAA's principles helped make Alberta's limited and exclusionary EA process more accountable to public and environmental concerns.

Despite these benefits, the overall review of the Cheviot project by the Joint Panel produced a thoroughly substandard assessment of the mine which failed to fulfill federal requirements under CEAA. Only a "joint" provincial/federal panel in theory, the Panel consisted of two representatives from the AEUB (including the Chair) and only one from CEAA. By allowing members of what is largely a provincial development board to outnumber federal members on the Panel, and run the hearings more in keeping with the AEUB process, the weaker provincial EA process dominated, producing serious failings. As a consequence, a coalition of environmental groups, including the Canadian Parks and Wilderness Society and the Canadian Nature Federation, has taken the federal government to court. Recently in the Federal Court of Appeal the coalition argued that the government failed to enforce CEAA by not ensuring the joint panel fully consider the cumulative environmental effects from all development in the region, including energy, other mines and forestry.⁶⁹ They also argued that the government failed to consider alternatives to the Cheviot proposal, including mining other area coal reserves, as required by the Act.⁷⁰

Environmental Assessment Sub-Agreement under the Canada-Wide Accord on Environmental Harmonization

Bilateral EA agreements have the potential to increase the impact of the weaker and less environmentally desirable provincial EA Acts or regulations and decrease the effectiveness of CEAA, as in the case of the Cheviot Joint Panel assessment. Compounding the situation is the federal and provincial governments recently signed multi-lateral environmental regulatory framework agreement, the *Canada-wide Accord on Environmental Harmonization*, which, when implemented, will result in even less federal presence in environmental decision-making in Canada. The Canada-wide Accord could serve to accelerate the regulatory "race-to-the-bottom" mentality already being displayed on the part the provinces of Ontario, Alberta, and more recently, British Columbia (see British Columbia under 1(a)(b)).

The Accord is comprised of various sub-agreements, one of which focuses on environmental assessment. At present, it remains unclear as to how the sub-agreement will ultimately affect environmental assessment in Canada, but Canadian environmental groups are closely monitoring impacts on public participation and participant funding. Early drafts of the EA sub-agreement show that, if implemented, CEAA would be weakened and more emphasis placed on provincial EA Acts.⁷¹ The Canadian mining industry has been at the forefront in arguing for the harmonization of the environmental regulatory framework in Canada, and the quick implementation of the *Canada-wide Accord on Environmental Harmonization*.⁷²

Before the Harmonization Accord Sub-agreement on Environmental Assessment, provinces without bilateral agreements on EA have typically worked with the federal government to develop project-specific agreements for major proposed mines. For example, such an agreement was reached between the federal government and the government of Newfoundland leading to a Comprehensive Study of the Voisey's Bay Nickel mine. This agreement evolved through the development of environmental impact assessment guidelines by an expert review panel. These guidelines may be the most comprehensive environmental assessment guidelines for mining yet developed under federal procedures.⁷³ The scope of these guidelines for the Voisey's Bay project is the result of a memorandum of understanding (MOU) between the Government of Canada, the government of Newfoundland and Labrador, and two aboriginal groups – the Innu Nation of Labrador and the Labrador Inuit Association. This MOU delineates the terms of reference for the assessment, including the need to consider alternatives and the cumulative environmental effects of the project.⁷⁴

With the federal government's adoption of the Harmonization Sub-agreement on Environmental Assessment, the potential for CEAA to strengthen weaker provincial environmental assessment processes, as occurred in the case of the Cheviot mine project, will be further restricted. In testimony before the Standing Committee on Environment and Sustainable Development's hearings into the Harmonization Accord, Rodney Northey, author of *The 1995 Annotated Canadian Environmental Assessment Act and EARP Guidelines Order*, emphasized the devolutionary nature of the EA sub-agreement. Regarding the EA sub-agreement, Northey states:

The concept...that is critical to the whole issue of environmental assessment, and why we call it devolutionary, is the notion of a 'lead party'...⁷⁵

In accepting the sub-agreement's "single-window" approach to EA, based on a "lead party" being responsible for the administration of the assessment process, the federal government is effectively reigning in CEAA and allowing the provinces to largely determine their own EA process, even where areas of federal responsibility (e.g. fisheries) are at stake. Had the Cheviot EA been done under a Harmonized assessment regime, Section 4.3 of the sub-agreement could have effectively negated many of the most important elements CEAA brought to the Joint Panel process – namely, increased public participation and funding. Section 4.3 of the sub-agreement states:

The Parties involved in an assessment will facilitate public participation where consistent with their policies and legislation, which may include access to information, technical expertise, and participation at public meetings. Participant funding may also be made available by any Party which requires participant funding by law or policy.⁷⁶

When one considers this in light of the narrow definition of "directly affected" under Alberta's environmental assessment regulations, and all it implies for public participation

in the Alberta assessment process, it becomes difficult to conceive how environmental assessment will not get weaker in some Canadian provinces.

2(c) *Please identify any opportunities for public review and public participation in commenting on the EIA before the final decision to allow mining and describe the process for the government to consider and incorporate any public comments. Is there any opportunity for the public to challenge the decision approving the EIA?*

Federal

The extent of public participation in an EA under CEAA depends upon the level of EA to which the mine is subject. Both Comprehensive Studies and Panel Reviews provide for greater public participation than screenings. A public review of screenings is at the discretion of the Responsible Authority unless otherwise provided for by regulation. The net result is usually no meaningful public scrutiny of screenings (see 1(c)). A screening or comprehensive study may be bumped up to a Panel Review, involving public hearings, where the Minister of the Environment deems there is: (i) uncertainty about whether significant adverse environmental effects are likely; (ii) at least one significant environmental effect is likely to occur, and where each effect is justified in the circumstances; (iii) public concerns warrant referral to a mediator or Review Panel.⁷⁷ The clause permitting the referral on the basis of public concern does not provide any guidance on the possible objects of concern.⁷⁸ Again, it is entirely at the Minister's discretion what constitutes sufficient "public concern".

At the outset of a Panel Review assessment, and some Comprehensive Studies, the public sometimes participates in the setting of the terms of reference for the proponent's EIS. This process is not clearly stated in the Act, but is used by proponents as a way to develop positive relations with critics involved in the EA of the project. Through written comments and, in some cases public hearings, the public can play a role in determining the scope and focus of a proponent's Environmental Impact Statement (EIS) or Comprehensive Study.

Panel Reviews provide the opportunity for public input to the EA process by holding Public Hearings on the proponent's Environmental Impact Assessment (EIA). These hearings allow local communities, environmental groups and others the opportunity to voice their concerns about the project and provide socio-economic and scientific critique of the proponent's EIS. Proponents' Comprehensive Study Reports and the recommendations made to the Minister by the RA are also subject to public comment through the EA Registry.

The Public Registry for the EA is established and maintained by the Responsible Authority from the commencement of the assessment until any follow-up program associated with the project is complete. In the case of a Panel Review, the Registry must be maintained until the Minister of the Environment has received the Panel's report. All

environmental assessments carried out under CEAA, regardless of the nature of the assessment, become part of a Public Registry which facilitates public access to information about EAs in progress. The Public Registry consists of three components: (1) a master index -- the Federal Environmental Assessment Index (FEAI). FEAI provides the who, what, when, where and why of an EA and provides contacts for those who require further information about a particular assessment; (2) Departmental Document Listings; and (3) any other documents related to the EA, including any comments filed by the public in relation to the assessment, any terms of reference for a mediation or a panel review, and any documents requiring mitigation measures to be implemented.

There is no appeal system for environmental assessments under CEAA. The Minister of the Environment and/or Cabinet makes the final decision. Recently a Joint-Panel decision regarding the approval of the Cheviot Coal Mine in Alberta was challenged in Federal Court by a coalition of regional and national environment groups. The Cheviot Coalmine is a proposed 22km. strip mine on the boundary of Jasper National Park in southern Alberta. Jasper is a World Heritage Site and the mine, even according to the proponents and officials from both levels of government, will have unmitigatable impacts on Grizzly bears and other large carnivores that inhabit the Park. The coalition argued that the Joint-Panel had failed to satisfy the provisions of CEAA in their recommendations allowing the mine to proceed. The federal court decided against the coalition, which is presently appealing the decision.

It is possible for the public to challenge the validity of an EA through the courts on points of law, procedural errors, or evidence of bias within a Review Panel. However, the substance of a Review Panel's findings cannot be appealed directly and, as evidenced in the case of the Cheviot Coal mine in Alberta, the chance of securing corrective measures or overturning a Review Panel's decision is small. In addition, court challenges are lengthy, expensive and require technical expertise that serve as deterrents to legal intervention by the public.

Provincial

Under the Ontario Environmental Assessment Act there are only two formal mechanisms for public participation. The public can comment on the environmental assessment or appear at an Environmental Assessment Board Hearing in the event one is held.⁷⁹ Environmental Assessment Board decisions on environmental assessments can be appealed to the Cabinet.

Intervenor Funding

Federal

Financial restraints are a clear impediment to public participation in the environmental assessment process as meaningful participation usually requires seeking expert advice and legal representation. CEAA includes a legal obligation for participant funding to

facilitate public participation in panel reviews and mediations only.⁸⁰ This funding may be used in a variety of ways, including covering the professional fees of experts. Although intervenor funding represents an attempt to level the playing field and provide for informed public input, the amount of funding is woefully inadequate. The amount of funding varies in accordance with the magnitude of the project under Panel Review. For example, the EA hearings into BHP's diamond mine in the Northwest Territories took 18 months to conclude and involved the analysis of BHP's eight volume, 37 kilogram environmental impact statement.⁸¹ Although the EIS cost BHP \$14 million to produce, public intervenors received only \$250,000 to fund their participation and critique.⁸² At present, there is no precise formula used by the Canadian Environmental Assessment Agency to determine the amount of intervenor funding allotted.

The following criteria are often used by the Canadian Environmental Assessment Agency in assessing public applications for funding: (I) is the participant directly affected by the project? (II) does the participant have a special interest in the project's potential environmental, health or socio-economic effects? (III) does the participant raise a legitimate public interest; (IV) does the participant demonstrate a commitment to contributing time and resources? (V) will the presentation be unique and original? (VI) can the participant cooperate with other persons or groups in presenting a point of view; (VII) does the participant request funds for studies or materials which duplicate other requests?⁸³

There have been numerous concerns around the allotment of intervenor funding, such as transparency in the selection of intervenors and the timing of funding for intervenors in the EA process. As a result, the Agency had the Regulatory Advisory Committee, originally established to advise the Minister of the Environment on the content of the four regulations under CEAA (see Introduction), establish a sub-committee to analyze options for improving the public participation component of CEAA. The sub-committee has recommended that participant funding be extended to include both comprehensive studies and screenings. They have also recommended detailed conditions for payment to be satisfied by intervenors, as well as the Agency providing funding three weeks in advance of any scoping meetings associated with a project's EA. To make the funding process more transparent it is recommended that CEAA prepare a report one week after announcing public funding decisions which provides reasons why particular intervenors were funded and why others were not funded. Whether these recommendations are adopted by the Regulatory Advisory Council and then implemented by the Agency is yet to be seen.

Largely as a result of funding cutbacks, the Canadian Environmental Assessment Agency is also exploring the development of a "proponent pay" approach to intervenor funding, similar to the Ontario Funding Project Act (see below).

Provincial

As some EA processes (e.g. Alberta and Ontario) are quasi-judicial in nature they often require expert advice and legal representation. Thus, in the event a community group

attains standing at a hearing, significant financial resources may be required to ensure meaningful and informed participation. The ways of attaining standing vary from province to province. Those with an interest in the EA would have to apply to be heard before the EA Panel. Although public participation is a central element of CEAA, the same cannot be said of some provinces' environmental assessment processes. For example, under Alberta's Environmental Assessment regulations as they apply to coal mines (there are no active mineral or metal mines in Alberta), environmental assessments are conducted by the Alberta Energy and Utilities Board (AEUB), a quasi-judicial body with the power to directly issue permits for development. Participant funding is granted only to those considered "directly affected" by the development under review, and "directly affected" is interpreted in the most narrow sense, usually only applying to "affected" property owners. Often the public has a great deal of difficulty being represented at EA hearings, as they are not considered "directly affected". This is despite the fact that over 70% of Alberta lands are publicly owned.

In Ontario, the Intervenor Funding Project Act (IFPA) was enacted in 1989 to provide funding for ordinary people and communities to hire experts and lawyers to represent their interests and interpret the complex scientific and planning related issues associated with environmental assessments.⁸⁴ The Intervenor Funding Project Act expired in 1996 and has not been renewed. This has had serious impact on the ability of the public to participate in the EA process.

Under the Act once an application for intervenor funding was received by the tribunal charged with reviewing the EA, a funding panel was established consisting of tribunal members who would not be participating in the hearing itself.⁸⁵ To qualify for funding under the Act, intervenors had to demonstrate that the issues they intended to address during the hearing reflected significant public interests, and not private interests. If a submission passed this test then it was submitted to criteria very similar to those applied to intervenor funding under CEAA (see federal above). One of the more interesting aspects of the Act was that the proponent, or any other party that would financially benefit from approval of the project, could be required by the funding panel to compensate the government for some of the funding granted to public interest intervenors.⁸⁶

In British Columbia funding is available to assist affected First Nation groups in participating in Panel Reviews where a demonstrated need exists. There are no provisions for any other types of intervenors.⁸⁷

2(d) Is there an automatic approval process for the EIA? If so, please describe.

Federal

There is no automatic approval process for environmental assessments. However, since CEAA's proclamation in 1995, no project, including the thousands of minor projects that have been subject to screening assessments, has been turned down. There were,

however, federal environmental assessments turned down turned down under CEAA's predecessor, a Cabinet Directive known as the federal Environmental Assessment Review Process (EARP) under which environmental assessments had been conducted in Canada since December of 1973.⁸⁸ In 1984 the EARP Guidelines were issued as an Order in Council under the Department of Environment Act. In the 1980's environmental groups asked the courts to rule on the status of the guidelines, and the courts ruled that the EARP Guidelines were a binding environmental law applying to all federal projects with significant environmental impacts. Under the EARP Guidelines as recently as 1990 there have been projects that failed to receive federal approval.

Although the EARP guidelines have been replaced by CEAA it is not the case that projects have gone ahead that would have been stopped under EARP. The fact that all projects have been approved under CEAA has more to do with the present political climate in Canada, based on the federal government's retreat from environmental protection, than with the change from EARP to CEAA (see Harmonization under 2(a)(b)).

Provincial

The Ontario Environmental Assessment Board has rejected undertakings under the OEAA on numerous occasions. One prominent example was its 1994 denial of approval of a proposed hazardous waste treatment and disposal facility to be constructed by a Crown Corporation, the Ontario Waste Management Corporation. In 1992, the Board made a decision imposing extensive terms and conditions on the management of timber resources on Crown land.

In British Columbia no assessment application under the BCEAA has been turned down to date.⁸⁹

2(e) What type of pollution prevention measures, if any, must be identified in the EIA in order for it to be approved? What types of incentives, if any, exist for the inclusion of pollution prevention measures in the EIA?

Federal

See 1(a) (b) (e) and CEAA under the Introduction.

CEAA sets no standards of its own regarding pollution prevention, but instead defers to the applicable regulatory standards that exist, provincially or federally. There are no monetary incentives to include pollution prevention measures in the EA.

Provincial

See 1(a)(b) and (e) for pollution prevention measures required under Ontario and British Columbia Environmental Assessment Acts. There are no incentives for the inclusion of pollution prevention measures in the EA.

Provincial EA Acts are subject to existing environmental regulations, including federal regulations where applicable.

2(f) *Are any monitoring or mitigation measures required in connection with the EIA? If so, please identify.*

Federal

For mitigation measures see (e). CEAA defines a follow-up program as a program for: (I) “verifying the accuracy of the environmental assessment of a project”, and (II) “determining the effectiveness of any measures taken to mitigate the adverse environmental effects of a project”.⁹⁰ CEAA does not require a follow-up program for screenings unless the Minister, with input from the Responsible Authority, deems such a program necessary for a screened project.

Comprehensive Studies, Panel Reviews and Mediations require that the proponent consider “the need for, and the requirements of, any follow-up program in respect of the project”.⁹¹ CEAA stipulates that where an RA approves a project it may, in accordance with regulations, design and implement any follow-up program it considers appropriate to the project. These regulations have never been passed.⁹² Although no regulations are in place regarding the design and implementation of follow-up programs for Comprehensive Studies, Review Panels and Mediations, the RA Guide, developed to assist an RA in carrying out its responsibilities under CEAA, proposes that a follow-up program should be implemented where: (I) the project involves a new or unproven technology, (II) the project involves new or unproven mitigation measures, (III) an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting, (IV) the assessment’s technique was based on a new assessment technique or model, or there is otherwise some uncertainty about the conclusions, or project scheduling is subject to change such that environmental effects could result.⁹³

CEAA lacks the powers to ensure required mitigation measures are actually implemented and shown effective. It is the responsibility of the Canadian Environmental Assessment Agency to monitor and report on the implementation of the EA process by Responsible Authorities. However, the Agency’s powers do not extend to monitoring the results of the EA and the implementation of mitigation measures.⁹⁴ Effectively, there are no statutory powers in CEAA to enforce the conditions under which the EA was approved. It should be noted there are also federal policies (e.g. DFO’s Fish Habitat Policy) which allow for financial, or alternative compensation, if a project under assessment has non-mitigable impacts on fish habitat, or some other significant environmental effect.

A major criticism of the federal environmental assessment process is that there is no institutional learning, or reflection, on an EA to EA basis.⁹⁵ This means that problems with respect to monitoring and mitigation are often perpetuated in subsequent assessments. See 2(h).

Provincial

See 1(a)(b) and (e).

2(g) Do government officials have the authority to establish emission limits in connection with the EIA process that are not otherwise provided for by law?

See 1(g).

2(h) How is compliance with monitoring and mitigation requirements (or other EIA conditions) monitored and enforced? Is there a mechanism for bringing existing operations into compliance with the EIA law provisions? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in monitoring and enforcement, including the authority of third part beneficiaries of the EIA to participate in legal action?

Federal

Compliance with EA conditions of approval rests largely with a well-informed, technically astute, and financially capable public to ensure the conditions of the EA are implemented. Again, under the Act the Agency has the power to report on the implementation of the EA process by the Responsible Authorities, and thus can play an important role in alerting the interested public as to where violations are taking place. Any results of the follow-up program must be posted in the Public Registry.

In practice, the monitoring of mitigation provisions has been poor. With respect to CEAA, the federal Commissioner for Environment and Sustainable Development emphasized in his 1998 Report that approved mitigation measures are not always monitored. Although Responsible Authorities routinely include mitigation measures as part of the terms and conditions of their EA approvals, the Commissioner found information regarding the proponent's actual implementation of the prescribed mitigation measures is seriously lacking.⁹⁶ Of 187 projects examined by the Commissioner, 48 should have had follow-up according to Agency criteria, yet none of these 48 was identified for follow-up in the Federal EA Index. The Commissioner also observed that in some cases the Responsible Authority stated that they allocated their scarce resources within the department to activities other than monitoring the mitigation measures under EA approvals.⁹⁷ The Commissioner recommended that the follow-up of environmental effects monitoring required under CEAA be strengthened.

If the public is aware that certain conditions of approval attached to an EA are being violated then they could turn to the courts to try and secure compliance.

The environmental assessment of the BHP diamond mine in the Northwest Territories created, as a condition of approval, the “Independent Environmental Monitoring Agency”. The function of the Agency is as an audit mechanism. The Agency reviews the design of monitoring programs and results from both government and BHP while examining the environmental management systems in place for their ability to respond appropriately to any problems, whether actual or potential.⁹⁸ The mandate of the Agency as set out in the Environmental Agreement is as follows⁹⁹:

- to provide an integrated approach to achieve the purposes [of the Agreement];
- to serve as a public watchdog of the regulatory process and the implementation of this Agreement;
- to compile and analyze relevant Environmental Quality data in order to review, report, or make recommendation concerning...environmental effects monitoring...and cumulative impacts, ...monitoring, regulatory and related management programs and activities of Canada and Government of the NWT;
- to integrate traditional knowledge and experiences of Aboriginal Peoples into Environmental Plans and Programs;
- to participate as an intervenor in regulatory and other legal processes respecting environmental matters;
- to provide an accessible and public repository of environmental data, studies and reports relevant to the Monitoring Agency's responsibilities;
- to provide programs for the effective dissemination of information to the Aboriginal Peoples and the general public about the Project and the monitoring and regulation of the Project; and,
- to participate as an intervenor, as appropriate, in the dispute resolution process under the EA agreement.

The Agency has a seven member Board of Directors with four appointed directly by the Aboriginal organizations and the remaining three appointed jointly by the federal and territorial governments and BHP in consultation with the Aboriginal organizations. The Agency is to report annually and the government and BHP are required to respond in writing to any recommendations from the Agency that they will not implement.¹⁰⁰

The funding for the Agency for the first two years is to \$450,000 each year with BHP contributing \$350,000 and the remaining amount split between the two governments. Subsequent funding is to be provided directly by BHP in consultation with the Agency, based on work plans and budgets. Where no agreement can be reached, the matter can be referred to binding arbitration, the only time that the Agency has such authority.¹⁰¹

Provincial

British Columbia's Environmental Assessment Act contains provisions for the appointment of inspectors for the purposes of the Act by the Minister of Environment, Lands and Parks. Inspectors have the power to enter the site of a project reviewed under the Act to review any works or activities connected with the reviewed project.¹⁰² If the Minister considers that a reviewable project is not being constructed, operated, modified,

dismantled or abandoned or, in the case of an activity that is a reviewable project, carried out, in accordance with a project approval certificate then the Minister has several options.¹⁰³ If a project approval certificate has not been issued, or has been issued but does not remain in effect, the Minister may order that the project or activities cease or require measures be taken by the holder of the approval to mitigate against any effects of non-compliance.¹⁰⁴

Where a project approval certificate is in place and the project is in contravention of the certificate, the Minister may order that construction, operation, modification, dismantling or abandonment of the project cease, or that the activity cease, either altogether or to the extent specified by the minister, until the holder of the project approval certificate comes into compliance with it. Mitigation measures required as a result of the violation can also be ordered by the Minister of the Environment, Lands and Parks.¹⁰⁵

If the minister considers that a person is not complying, or has not complied, with an order made under British Columbia Environmental Assessment Act, the minister may apply to the Supreme Court for either or both of the following: (a) an order directing the person to comply with the order or restraining the person from violating the order, or; (b) an order directing the directors and officers of the person to cause the person to comply with or to cease violating the order.¹⁰⁶ The Minister also has the option of entering into a compliance agreement with the holder of the certificate of approval. The compliance agreement would stipulate what terms and within what time frame the certificate holder must comply with the certificate of approval.¹⁰⁷ The Minister can still make an order with respect to the project or activity if the agreement is violated, the matter is not covered by the agreement, or if new information warrants action on a matter covered under the agreement.¹⁰⁸

The Provincial Auditor for Ontario preceded the federal Commissioner of Environment and Sustainable Development in drawing attention to the problem of monitoring and follow-up with respect to mitigation conditions in environmental assessment approvals. In his 1997 Report, the Provincial Auditor recommended that the Ministry of Environment and Energy “establish performance indicators to measure and report on the effectiveness of the environmental assessment process and monitor compliance with the terms and conditions of approved projects”.¹⁰⁹ If an environmental assessment was not reviewed through a public hearing, there may be no monitoring provisions attached to the approval.

Where binding terms and conditions are imposed as part of a federal or provincial EA approval, if there is evidence of failure to comply with these terms and conditions, a member of the public may go to federal or provincial court, as the case may be, and seek an order requiring the proponent to comply with the terms and conditions. This action is permitted under widened rules of standing adopted by Canadian Courts between the late 1970’s and early 1980’s. In a recent example of such an action, a number of environmental organizations obtained an order against the Ontario Ministry of Natural Resources regarding its failure to comply with the terms and conditions of the decision of the Environmental Assessment Board on the Class Environmental Assessment of Timber Management on Crown lands.

Legal Means for Achieving Compliance in Canada

Nine of the ten provinces in Canada are common law jurisdictions that provide various common law causes of action potentially useful to individuals seeking redress for mining-related environmental damage.¹¹⁰ Quebec is the exception, employing a civil code.

Private Prosecutions

Private prosecutions can provide recourse where permitting conditions are not being upheld by the federal or provincial governments. They entail a “quasi-criminal” proceeding in which a citizen may prosecute the party alleged to have violated an environmental law. Several Canadian statutes provide for prosecutions, including the Yukon Environment Act, the North West Territory Environmental Bill of Rights and the federal Fisheries Act.¹¹¹ Private prosecutions have had some success in getting governments to enforce their environmental laws. They suffer, however, from some significant limitations. The principal reason for these limitations is the fact that in all common law provinces private prosecutions can be taken over by the Attorney General of the province and not pursued, effectively ending the action. One variation is that in British Columbia the explicit permission of the Attorney General is required *prior* to initiating a private prosecution. The British Columbia Attorney General has granted permission to proceed in some instances and several private prosecutions involving the non-enforcement of the Fisheries Act have proceeded. Most private prosecutions have been taken over by the Attorney General and not pursued.¹¹²

Citizen’s Suits

In contrast to private prosecutions, a citizen suit is a civil action in which a party has a statutory cause of action to seek to enforce the provisions of a statute in civil court. In a citizen suit the emphasis is on compensation, not deterrence, which in some cases may be more appropriate.¹¹³ Importantly, given the recent track record of private prosecutions under the Fisheries Act in provinces such as British Columbia, the consent of the Attorney General is not required to pursue a citizen suit. Most importantly, however, in citizen suits the burden of proof is based on the “balance of probabilities” and not the more onerous “beyond a reasonable doubt” in criminal law.¹¹⁴

Numerous jurisdictions in Canada have enacted environmental statutes containing citizen suit provisions. These include the Northwest Territories under the Environmental Rights Act, the Yukon Territory under the Environment Act, Quebec under the Environmental Quality Act and Ontario under the Environmental Bill of Rights.¹¹⁵

It should be noted that both citizen suits and private prosecutions can be costly means of enforcing environmental legislation and regulations. Under civil actions an award of costs can be made against an unsuccessful plaintiff. This can be a significant barrier to individuals, or even environmental non-governmental organizations, pursuing actions.

Private prosecutions are still costly, as evidence has to be brought forward to support the prosecution. Cost awards, however, do not apply to unsuccessful private prosecutions.¹¹⁶

Requests for Investigation Procedures

Some environmental legislation, such as the Canadian Environmental Protection Act (CEPA) and the Ontario Environmental Bill of Rights (EBR), provide mechanisms whereby the public can request investigations of alleged violations of environmental laws.

Federal

Under section 108 of CEPA any two Canadian residents over 18 years of age who are of the opinion an offence has been committed under the Act may apply to the Minister requesting an investigation of the alleged offence.¹¹⁷ An application for an investigation must be accompanied by a solemn or statutory declaration and state the names and addresses of the applicants. The nature of the alleged offence and the name of each person alleged to be involved in its commission and a concise statement of the evidence supporting the allegations of the applicants must also be included.¹¹⁸

Upon receipt of a request for investigation, the Minister must acknowledge the request and investigate all matters he or she considers necessary for a determination of the facts relating to the alleged offence.¹¹⁹ Within ninety days of receiving the request for investigation, the Minister must report to the applicants on the progress of the investigation and the action, if any, that the Minister proposes to take.¹²⁰ The Minister may also discontinue an investigation where he or she is of the opinion that the alleged offence does not warrant further investigation. In the event an investigation is discontinued a written report must be prepared describing the information obtained during the investigation and stating the reasons for its discontinuation. A copy of the report must be sent to the applicants and to any person whose conduct was investigated.¹²¹

It should be noted that at any stage of the Minister's investigation of the alleged offence, he or she may, in addition to or in lieu of continuing the investigation, can send any records, returns or evidence to the Attorney General of Canada for consideration of whether an offence has been or is about to be committed against the Act. The Attorney General will then determine what actions should be taken.¹²²

Present amendments to CEPA before Parliament call for supplementing these provisions with a form of citizen suit.

Provincial

The request for investigation of legal non-compliance procedure under Ontario's Environmental Bill of Rights is similar to that established under CEPA. Two Ontario

residents 18 years of age or older are required to complete a form provided by the Office of the Environmental Commissioner which states their names, the alleged contravention and those involved, and the evidence supporting their claim that a contravention of an Act has occurred.¹²³ The names and addresses of the applicants, and any other personal information about them, are protected from public disclosure.¹²⁴ Under the EBR, requests for investigation apply to both public and private sector compliance with all provisions of the Acts prescribed for the purposes of the EBR and any regulations or instruments issued under those Acts.¹²⁵

The application for investigation is submitted to the Environment Commissioner who then has 10 days to refer the request to the appropriate Minister(s). The Minister(s) has 20 days to acknowledge the receipt of the request for investigation.¹²⁶ Within 60 days of receiving the request the Minister responsible for the Act or regulation in question must determine whether an investigation is warranted and give notice that the investigation will proceed or not proceed. No determination is required if there is already an investigation being conducted with respect to the matter.¹²⁷

The EBR provides four grounds for a Minister(s) refusing to undertake an investigation: (I) the application is frivolous or vexatious; (II) the alleged contravention is not serious enough to warrant an investigation; (III) the alleged contravention is not serious enough to cause harm to the environment, or; (IV) the required investigation would duplicate on ongoing or completed investigation.¹²⁸ If an application is refused, the Minister must give notice of this decision, including reasons for the refusal, to each person for whom an address was given in the application and the Environmental Commissioner.¹²⁹

For a description of Third Party Appeals under the EBR see 8(c).

2(i) *Under what circumstances or for what activities is an EIA not required in the mining phase?*

Federal

If the mine is below the designated regulatory thresholds as designated under the Comprehensive Study regulations under CEAA, does not constitute a “project” under CEAA, does not require a federal permit, license or authorization designated through regulation as a CEAA trigger, and is not on the Exclusion List Regulations, then a mine would not require a federal environmental assessment. If there is sufficient public concern expressed, the Minister can require any mine to be assessed under the Act. However, this power has never been employed. Also see 2(a)(b).

Small mine expansions may not result in an environmental assessment. Large expansions of greater than 50% of existing capacity are provided for in the Comprehensive Study regulations. Off shore mining would also require an environmental assessment at the Comprehensive Study level.

Provincial

It is highly improbable that an environmental assessment would be required for a mine in Ontario. Under the OEAA, a proposed mine would have to be designated for review under the Act by Cabinet. This has happened once in Ontario (see 2(b)). As stipulated earlier, new public infrastructure, such as roads and power corridors through public land, may require an EA, so in an indirect sense some aspects of the mine's development may receive an EA.¹³⁰

As private sector activities are exempt under the OEAA, unless designated by regulation or Cabinet as included, or unless captured for assessment under CEAA, small mines in Ontario can operate without having performed an environmental assessment.

In British Columbia some smaller mines may also be able to elude environmental assessment (see British Columbia under 1(a)(b)).

2(j) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the EIA? If so, how is the amount of the financial assurance determined?*

There are no requirements to post bonds or any type of financial assurance in order to guarantee performance in accordance with the EA at either federal or provincial levels.

2(k) *Under what circumstances or conditions is construction permitted to proceed prior to approval of the EIA?*

Construction prior to EA approval is not allowed under CEAA. The legislation stipulates the government is barred from any action that would allow the project to proceed prior to full approval.¹³¹ Ultimately, this provision comes down to enforcement on the ground and may vary depending on the level of assessment being undertaken. However, with Comprehensive Studies and Panel Reviews proponents are not likely to proceed prior to having their EA approved.

Provincial

Proceeding with a project prior to the environmental assessment being approved is an offense under the Ontario Environmental Assessment Act. The legislation also stipulates that no other approvals can be granted until the EA is approved.¹³²

II. PLANNING

Exploration Plan

- 3(a) *Is an exploration plan required to be submitted in connection with exploration operations?*
- 3(b) *If so, when must the plan be submitted, and to whom must it be submitted?*
- 3(c) *Is governmental approval of the plan required?*
- 3(d) *What are the required elements of the plan? Is there a mechanism for modifying the plan?*

Federal

No formal exploration plans are required to be submitted prior to exploration on federal or private lands unless CEAA is triggered, or the lands in question are covered under the Yukon Quartz Mining Act or the Yukon Placer Mining Act. In the case an EA is required with respect to early exploration activities, it would most likely be a screening.

1996 amendments to the Yukon Quartz Mining Act and the Yukon Placer Mining Act require exploration operating plans in the Yukon Territory. In December 1998, regulations were promulgated under the Acts detailing what exploration activities require permits. Under the Yukon Quartz Mining Land Use Regulations the extent of regulating land use operations is based on the level of activity and resulting environmental impact of individual projects.¹³³ These levels are classified as Classes I, II, III and IV with threshold activities identifying the Class of any exploration program. Class I include only low impact activities below the first threshold, and require no approval.¹³⁴ However, Class I activities must comply with prescribed operating conditions set out in the regulations. Class II activities require prior notification and approval by the Chief Inspector of Mines.¹³⁵ Class III activities require the advance submission and approval by the Chief Inspector of a detailed operating plan.¹³⁶ Class IV activities require an operating plan and require public notification and, in some cases, public consultation.¹³⁷ Class IV activities involve bulk sampling and are considered the beginning of production. The thresholds for the four Classes relate to specific activities which are normally conducted during mineral exploration such as the number of persons in a campsite, the number of cubic metres of trenching, the number of square metres of stripping, the number of kilometres of road construction, vehicle weights and the number of kilometres travelled and the capacity of fuel storage facilities.¹³⁸ Exceeding any threshold for a Class moves the activity into a higher Class with more stringent approval requirements.

Under the Yukon Quartz Mining Land Use Regulations if the Chief of Mines believes, on reasonable grounds, that an activity carried out under an operating plan is causing or is likely to cause any unnecessary danger to persons, property or the environment, he may require the operator to submit amendments to the plan in order to correct the problem.¹³⁹ The Chief cannot reject the plan, only amend it.

Provincial

Some provinces require exploration plans. Over the past 3 years, however, a great deal of provincial deregulation has occurred with respect to exploration activities. In British Columbia a prospector must file a Notice of Work consisting of a map or air photo

showing the proposed work, reclamation and a completed form detailing the work to be performed.¹⁴⁰ The plan also must outline how affected watercourses and land will be protected and/or reclaimed. The plan must be filed with the Chief Inspector of Mines who then issues a permit. If the Chief Inspector is satisfied that, because of the nature of the work, it is not necessary to obtain a permit then the Chief Inspector may exempt the proposed work.¹⁴¹ Thus, some exploration activities may not require a permit if exempted by the Chief Inspector. Presently, it is not clear what parts of the permitting process may be dropped in a move to “streamline” exploration permitting under proposed Mines Act amendments in British Columbia.

The province of Newfoundland also requires exploration plans be submitted to the Department of Mines and Energy for approval. The Protected Areas Association of Newfoundland and Labrador has viewed this action as a conflict of interest because the Department also has the promotion of mineral development in its mandate.¹⁴²

Alberta does not require exploration plans by regulation. Exploration companies in Alberta simply need to submit their plans to the Environmental Protection Department prior to beginning the building of roads and drilling of holes.¹⁴³ These activities were previously regulated under Alberta’s Environmental Protection and Enhancement Act. Prior to 1996, exploration activities in Ontario required permitting under the Public Lands Act. This requirement has since been removed and now neither plans nor permits are required specifically for mineral exploration purposes on public lands until the point of advanced exploration.¹⁴⁴ At the point of advanced exploration, public notice and closure plans may be required by the Director of Mine Rehabilitation. If a closure plan is required then the project shall not proceed until the Director has approved the closure plan (see 4(a)(b)(c)(d) for discussion of advanced exploration stage).

3(e) *Is the plan required to identify or predict the existence of any toxic substances or acid-forming materials at the exploration site?*

Federal

No, not unless the exploration activities trigger an environmental assessment or such requirements were called for by regulation under the Yukon Quartz Mining Act or the Yukon Placer Mining Act. This is not the case at present.

Provincial

To the extent that acid forming materials can be predicted, British Columbia requires this be outlined in the exploration plan, and mitigation measures put in place to address the problem.

3(f) *Is the plan required to disclose the use of any toxic substances in connection with the exploration operation?*

Federal

No, not unless an environmental assessment is triggered. Of course, exploration activities are still subject to federal and provincial laws and regulations relating to toxics and other measures, such as the destruction of fish habitat and the deposit of deleterious substances into waters frequented by fish, as stipulated under the Fisheries Act.

Provincial

In the case of BC, the plan may require toxic substances be disclosed as exploration plans require details regarding how affected land and watercourses will be protected and reclaimed.

3(g) *What type of pollution prevention measures, if any, are required in order for the plan to be approved?*

Federal

None, unless an environmental assessment was performed on the exploration activities and mitigation was required as a condition of approval.

Provincial

Pollution prevention provisions could be required under BC exploration plans when determining how to reduce the impacts of the exploration activities on affected lands and watercourses.

3(h) *How is compliance with the plan monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?*

Federal

If an environmental assessment were required for exploration-related activities, especially at the screening level, compliance monitoring would be minimal, if at all (see 1(h) and 2(h)).

Under the Yukon Quartz Mining Act inspectors can be appointed and charged with the responsibility of ensuring that exploration activities are being carried out in compliance with the conditions established in exploration plans.¹⁴⁵ Under the Yukon Quartz Mining Land Use Regulations the Chief of Mines is required to keep a Public Registry documenting all exploration activities at Class II and above.

Provincial

Provincially the trend is towards compliance and monitoring with respect to exploration activities being self-regulated by the exploration company, often under a Code of Practice. This is the case in Alberta. There are no civil or criminal penalties applicable for exploration per se, unless other applicable laws are breached (e.g. the Fisheries Act). In British Columbia, inspectors operating under the Mines Act could potentially monitor exploration plans and if operators were out of compliance it is possible that the Chief could cancel their permit and require work to cease. The Chief of Mines can also choose to impose additional conditions in a permit, or change existing conditions, if he considers it necessary.¹⁴⁶ There is little public involvement at the early exploration stage of mine development in Canada, unless an environmental assessment is triggered by federal or provincial legislation or regulations, and then participation is usually marginal. See 2(h). Also see federal above.

3(i) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the plan? If so, how is the amount of the financial assurance determined?*

Federal

The Yukon Quartz Mining Act allows for the Chief of Mining Land Use to request financial security for Class II, III and IV exploration activities where he believes there is the risk of significant adverse environmental effects.¹⁴⁷ See 3(a)(b)(c)(d).

Provincial

In the case of British Columbia, as a condition of granting a permit, the Chief Mine Inspector may require security in the amount and form that he specifies for reclamation, protection, and mitigation work.¹⁴⁸

3(j) *Under what circumstances is a plan not required for exploration?*

Federal

Where no environmental assessment is required. In other words, in the case where the exploration activities do not trigger an EA (see Introduction and 1(a)(b)).

Provincial

In British Columbia, where exploration plans are required under the Mines Act, the Chief Inspector or the Minister of Mines may exempt in writing the owner, agent or manager from the requirement to secure a permit for exploration activities.¹⁴⁹ Exploration plans are not required in Ontario.

Mining Plan

Note: Although many provinces have mining-specific legislation or regulations requiring the submission of mine plans, both the federal and provincial environmental assessment processes are crucial steps in the overall planning process. Thus, most planning requirements, such as mitigation and reclamation issues, are dealt with during the EA process(s), where an EA is required.

- 4(a) *Is a mining plan to be submitted in connection with mining operations?***
4(b) *If so, when must the plan be submitted, and to whom must it be submitted?*
4(c) *Is governmental approval of the plan required?*

Provincial governments with mining Acts or mining-specific regulations usually require the submission of a mining plan. In British Columbia a permit is required under the Mines Act before beginning any work “in, on, or about a mine”.¹⁵⁰ There is a general requirement that upon applying for a permit to commence work with respect to a mine the applicant must file a plan with the district mines inspector outlining the details of the proposed work and a program for the protection and reclamation of the land and watercourses affected by the mine.¹⁵¹ For a proposed hard rock or coal mine, major extension, or modification, to an existing mine, large pilot project, bulk sample, trial cargo or test shipment, a plan must be filed detailing the nature and present uses of the affected lands, particulars regarding the nature of the mine, and a program for protecting the land and watercourses affected by the mine. However, the Chief Inspector has the discretion to exempt a mine from the requirement for a permit if he or she believes it is not required.¹⁵² The Inspector also has the discretion to require a permit application to be published in a local newspaper. If an application is published, an affected person has 30 days from the last day of publication to view the application and make comments to the Chief Inspector. For proposed mines only, the Chief Mines Inspector must refer the plan to an Advisory Committee established under the Mines Act that reviews the application

and makes recommendations to the Inspector. In making a decision the Inspector must take into consideration the recommendation of the Panel and any interested persons.

In Ontario, notice of advanced exploration activities is required under the Mining Act. “Advanced exploration activities are defined as “the excavation of an exploratory shaft, adit or decline, the extraction of material in excess of the prescribed quantity, the installation of a mill for test purposes or any other prescribed work”.¹⁵³ The Director of Mine Rehabilitation must be notified prior to the advanced exploration stage and *may* require one or both of: (i) public notice of the proposed mine; (ii) the submission of a proposed closure plan. If the Director has not written to the proponent within 30 days, the proponent can proceed.¹⁵⁴ The Director can approve the plan based on delegated authority from the Minister of Northern Development and Mines. Regardless of whether a closure plan was required at the advanced exploration stage, an annual report in prescribed fashion was to be prepared by the proponent and submitted to the Director if the project was ongoing in all or part of the preceding 12 months. This annual reporting requirement has been changed under the present Ontario government’s deregulatory actions (see 5(a)).

4(d) *What are the required elements for the plan? Is there a mechanism for modifying the plan?*

In the case of BC the plan must include: (I) nature and present use of lands to be mined; (II) program for the protection of lands and waters affected by the mine; (III) a reclamation program. At the discretion of the Chief Inspector, the recommendations of the Advisory Committee and/or interested persons represent ways through which the mine plan could be modified. Under the Mines Act a proponent, agent or manager, or an inspector may apply to the Chief Inspector for a revision of the conditions of mine permits, including reclamation, or an extension of the term of a permit. The Chief Inspector may revise the conditions or extend the term.¹⁵⁵ If considered necessary, the Chief Inspector may impose additional conditions or changes on the existing conditions, including changes to the security deposit required, if he deems it necessary.¹⁵⁶

In the case of Ontario the plan may be required to outline a proposed closure plan and provide public notice regarding when mine operations are going to commence. In the event that the Director has required a proponent to submit a proposed closure plan, the Director may require changes to the closure plan. If, based on information received from a Rehabilitation Inspector, the Director has reasonable grounds for believing that the closure plan or the financial assurance will not be sufficient to rehabilitate the site then he can require amendments to the rehabilitation plan as required.¹⁵⁷ In the event that an advanced exploration project not currently subject to a closure plan has advanced to the point where an inspector believes one to be required, then the Director may request in writing that the proponent provide him with a rehabilitation plan.¹⁵⁸ There is no direct mechanism for proponents to have their plans modified without the inspectors or Director deeming such modifications to be necessary and certifying them as such. Where a

proponent plans to expand or alter a project, the proponent must give written notice to the Director who can request amendments to the revised plan based on the changes.¹⁵⁹

4(e) *Is the plan required to identify or predict the existence of any toxic substances or acid-forming materials at the mining site?*

In the case of British Columbia, reclamation standards are specified in the Mines Act with respect to the disposal or impoundment of waste, including the minimization of acid mine drainage.¹⁶⁰ In Alberta, which has a large number of coal mines, general predictions as to the environmental impacts of the mine are to be included in the mine plan, with more detailed information being required once the mine moves to the licensing stage.

In Ontario, if a closure plan is required it *may* include predictions of the existence of any toxic substances or acid-forming materials at the mine site, but nothing is mandatory.

4(f) *Is the plan required to disclose the use of any toxic substances in connection with the mining operation?*

There are no requirements under federal or provincial legislation to report the use of toxic substances.

4(g) *Is the plan required to describe the methods that will be used to control and dispose of tailings and the locations of such disposal?*

Provinces with provincial mining legislation can control the location and disposal of tailings through imposing terms and conditions on mining permits. The Health, Safety and Reclamation Code under British Columbia's Mines Act specifies standards regarding the disposal and impoundment of waste.¹⁶¹ Methods to control and dispose of tailings may also be dealt with during the environmental assessment process.

In the case of the Reclamation Code under British Columbia's Mines Act the physical conditions of what constitutes a tailings impoundment are defined and a permit is required showing these conditions have been met before work can begin constructing a major waste dump, dam, or impoundment.¹⁶² Under the Code the mine manager must implement and maintain a surveillance and instrumentation program for major waste emplacements and major impoundments, or dams, as recommended in the design accepted by the chief inspector. The design must: (I) be designed by a qualified professional engineer registered in British Columbia, and (II) comply with the specifications established by the chief inspector.¹⁶³

4(h) *What type of pollution prevention measures, if any, are required in order for the plan to be approved?*

In Canada there are typically two permit streams for mining operations. The first stream is required under mining legislation (largely provincial) and applies to mine operations and tailings disposal. The second stream is with respect to environmental legislation (both provincial and federal) and applies to air, water and waste management (excluding tailings and waste rock). Under the environmental permitting process effluent and emission limits are usually set and monitoring and reporting requirements established.

Some pollution prevention measures could be initiated during the EA process, but would be under the jurisdiction of other Acts, or regulations, or policies charged with “pollution prevention” (if in existence). Legislation with implications for mining include the Canadian Environmental Protection Act, the Metal Mining Liquid Effluent Regulations under the Fisheries Act, and numerous provincial Environmental Protection Acts and regulations governing discharges to both water and air.

In British Columbia the mine plan would have to incorporate pollution prevention measures as stipulated under the Health, Safety and Reclamation Code for Mines, and any regulations promulgated under the Code. Pollution prevention related measures in the Code require mine plans to include the prediction of acid generation for all strata and deposits, including static, if necessary, and kinetic tests, and the protection of watercourses, including the prediction of effluent quality for all disturbances.¹⁶⁴

4(i) *How is compliance with the plan monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?*

In Ontario, mine plans focus on closure plans, as a closure plan has to be submitted to the Director of Mine Rehabilitation prior to a mine going into production.¹⁶⁵ Thus, compliance with mine plans in Ontario follows the requirements for closure which commence with the operations of the mine. Closure provisions are more fully described in 5(a)-(g) below.

There are no specific criminal or civil penalties for non-compliance with mining plans. Public participation in the approval of mine plans may occur in some jurisdictions, for example British Columbia and Ontario (see 4(a)(b)(c)). When one considers environmental assessment, provincial and/or federal, as part of the mine planning process, the opportunity for public involvement increases, especially where the Canadian Environmental Assessment Act is invoked.

For civil and criminal aspects to enforcement of environmental regulations see 2(h).

4(j) *Is there a requirement that a bond, or other type of financial assurance, be provided by the owner or operator to the government to guarantee performance*

in accordance with the plan? If so, how is the amount of the financial assurance determined?

The British Columbia Mines Act provides the Chief Mine Inspector with the discretion to require financial security as a condition of a permit. This is described in the Act as a means of providing for the protection and mitigation of damage to watercourses affected by the mine.¹⁶⁶ Additional security can be required throughout the mining cycle, again, at the discretion of the Chief Inspector.

Financial assurance is required with respect to mine closure under mine plans in most provinces. See 5(f).

4(k) *Under what circumstances is a plan not required for metal mining?*

In some jurisdictions, for example British Columbia and Ontario, the lead official in her respective jurisdiction has the discretion to exempt a mine from the requirement for a permit under their Acts, and thus not require a mine plan be filed. This is only in circumstances where the inspector believes a plan is not necessary. In Ontario, the onus is on the Director of Mine Rehabilitation to respond in writing when given notice by the proponent at the advanced exploration stage with respect to whether a mine plan needs to be filed.

Closure Plans

5(a) *Is a plan for the closure of tailings disposal areas required to be submitted in connection with a metal mining operation?*

Yes, closure plans are mandatory in most provinces and the Territories for metal mines. Often plans for the closure of tailings disposal areas are required as part of federal and/or provincial environmental assessments, but some provinces also require formal closure/reclamation plans to be submitted in conjunction with mine plans.

It is important to note that closure is a principal area of environmental deregulation with respect to mining in Ontario. 1996 amendments to the Mining Act have significantly weakened the strong closure and reclamation provisions originally in the Act, with significant implications for the future of mine closure and reclamation in the province. The amendments eliminated the requirement that companies post realizable financial securities to cover the cost of closure in the event of bankruptcy.¹⁶⁷ In place of mining companies posting realizable financial securities, the government is introducing a “corporate financial test” calculated based on a company’s credit rating that means a company is not required to set aside realizable funds to cover reclamation costs in the case of bankruptcy. In addition, all information related to the financial assurances for mine closures provided by mining companies is now exempt from the province’s freedom of information legislation.¹⁶⁸ The requirement to provide annual reports on the implementation of closure plans to the Ministry of Northern Development and Mines has

also been removed, and companies who voluntarily surrender mining lands after reclamation activities are complete to the Crown are now exempt from any future liabilities, even if the company is at fault.¹⁶⁹

5(b) *If so, is such a plan submitted as part of the "mine plan" or as a separate plan?*

Closure plans could be part of the environmental assessment of a proposed mine, but in some provinces the requirement for closure plans is also part of the mine plan. In Ontario, mine plans effectively focus on closure plans, with a closure plan having to be submitted to the Director of Mine Rehabilitation prior to a mine going into production.¹⁷⁰ British Columbia also requires reclamation planning be detailed in the mine plan.

5(c) *To whom is the plan submitted, and when is it submitted? (Before mining? A certain number of years before closure? After completion of mining?) Is governmental approval of the plan required? What are the required elements of the plan? Is there a mechanism for modifying the plan?*

In the case of BC the reclamation plan is submitted at the very beginning of the mine process – before mining or the commencement of any work “in, on, or about a mine”.¹⁷¹ It is submitted at the same time as the mine plan. Government approval for reclamation plans is required. The elements required in the plan vary from jurisdiction to jurisdiction, but all provinces and Territories require some form of financial security to ensure that mine closure work is completed.

In British Columbia the closure plan is required to follow the Health, Safety and Reclamation Code and its regulations. The Code specifies reclamation standards for major coal and mineral mines (see 4(a)(b)(c)). Mine plans must be updated by mining companies every 3 months under the BC Mines Act, and the Chief Mines Inspector must publish an annual report showing the results from the previous year with respect to the purposes of the Mines Act.¹⁷² The closure plans can be modified through the promulgation of new regulations under the Code, or through a recommendation for changes from a mine inspector. The latter requires agreement from the Chief Inspector who can impose additional conditions or change existing permitting conditions in keeping with the Act.¹⁷³

In Ontario the company must notify the Director of Mine Rehabilitation that closure has commenced. The requirement for yearly reports on the implementation of the closure plan were to be submitted to the Director once closure had commenced, but this requirement has recently been removed (see 5(a)). Based on these yearly reports the Director could have required amendments to the original closure plan before accepting it, or changes to amendments put forth by the proponent.

5(d) *What type of pollution prevention measures, if any, are required in order for the plan to be approved? Is there a specific requirement to predict and address future acid mine drainage?*

BC's Health, Safety and Reclamation Code under the Mining Act specifies reclamation standards for major coal and mineral mines, including requirements for the disposal and impoundment of waste and the minimization of acid mine drainage (See 4(h)).

No specific pollution prevention measures are required in reclamation plans for approval in most jurisdictions, British Columbia being the exception.

British Columbia has an Acid Rock Drainage (ARD) Policy that reflects the government's goals for pollution prevention with respect to acid mine drainage.

The guiding principles for the regulation of Metal Leaching and Acid Rock Drainage in the Province of British Columbia include¹⁷⁴:

Ability and Intent - A mine proponent must demonstrate the necessary understanding, site capacity, technical capability and intent to operate a mine in a manner which protects the environment. Mitigation plans must meet the environmental and reclamation objectives for the site and be compatible with the mine plan and site conditions.

Site Specific - The current regulatory philosophy appreciates that every mine has a unique set of geological and environmental conditions and therefore ML/ARD will be evaluated on a site-specific basis.

Metal Leaching/Acid Rock Drainage Program - Whenever significant bedrock or unconsolidated earth will be excavated or exposed, the proponent is responsible for the development and implementation of an effective ML/ARD program. The program must include prediction, and, if necessary, mitigation and monitoring strategies.

Prediction and Prevention - The primary objective of a ML/ARD program is prevention. This will be achieved through prediction, design and effective implementation of appropriate mitigation strategies.

Contingency - Additional mitigation work or contingency plans will be required when existing plans create unacceptable risks to the environment as a result of uncertainty in either the prediction or primary mitigation measures. The timing and degree of preparation required will depend on the risk, when the potential event of concern may occur and the resources required for implementation.

Minimize Impacts - Where ARD or significant metal leaching cannot be prevented, mines are required to reduce discharge to levels that assure

long-term protection of the receiving environment. An important secondary objective is to minimize the alienation of on-site land and water resources from future productive use. Impacts and risks must be clearly identified by the proponent and will be considered during the project review process, in conjunction with other environmental, economic, community and aboriginal impacts and benefits. Mitigation is usually more effective if problem prediction and prevention occur prior to the occurrence of significant metal leaching or ARD.

Cautious Approach - Cautious regulatory conditions based on conservative assumptions will be applied where either the ML/ARD assessment or the current level of understanding is deficient.

Reasonable Assurance - The regulation of ML/ARD will be carried out in a manner that minimizes environmental risk and with reasonable assurance that government will not have to pay the costs of mitigation.

Financial Security - As a permitting condition, financial assurance will be required to ensure sufficient funds are available to cover all outstanding ML/ARD obligations, including long-term costs associated with monitoring, maintenance, outstanding mitigation requirements, and collection and treatment of contaminated drainage.

It should be noted that the above are guidelines, not regulations, and are therefore not enforceable.

5(e) How is compliance with the plan monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?

British Columbia's Health, Safety and Reclamation Code requires the establishment of an environmental monitoring program and the submission of an annual reclamation report. Mines, however, can be exempt from reclamation standards through their reclamation permits.¹⁷⁵

In Ontario, the provincial government has recently weakened the Mining Act's provisions for provincial approval of mine closure plans (see 5(a)).

Where the reclamation plan is part of the follow-up process under an environmental assessment, there may be some monitoring. If the environmental assessment was under the auspices of CEAA then reclamation activities would be posted on the federal public registry for comment (see 2(f) and (h)).

5(f) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the plan? If so, how is the amount of the financial assurance determined?*

Most provinces require some form of financial assurance be provided by the owner or operator of the mine to ensure funds are available for reclamation purposes.

The British Columbia Mines Act authorizes the creation of a “mine reclamation fund”. This fund was established in 1994 and is intended to ensure there will be sufficient moneys for the reclamation activities after operations have ceased.¹⁷⁶ In this case, each mine has a separate account and the funds are not themselves used for reclamation purposes but are refunded to the operator once reclamation work has been completed to the satisfaction of the Chief Mine Inspector.¹⁷⁷

Manitoba also has provisions in its Mines and Minerals Act for establishment of a mine rehabilitation fund, and the potential for regulations pertaining to ensuring reclamation work is done properly.¹⁷⁸

In Ontario, financial assurance requirements for mine reclamation have recently been weakened (see 5(a)).

In New Brunswick security may be required to ensure the performance of protection, reclamation and rehabilitation work.¹⁷⁹

5(g) *Under what circumstances is a plan not required for the control and disposal of tailings and abandonment of the tailings disposal area?*

In the case of British Columbia the reclamation code under the Mines Act does not apply to mines established prior to 1969 that have remained inactive since that time.¹⁸⁰ Post 1969, abandonment and tailings disposal facilities are controlled through regulations under the Health, Safety and Reclamation Code in the Mines Act.

In general, reclamation regulations apply to new and existing mines. It should also be noted that a mine in BC can be exempt from reclamation standards through its reclamation permit, issued by the Chief Mine Inspector. In some cases, the reclamation plan would be caught under an environmental assessment.

Under the Ontario Mining Act existing mines and projects in the advanced exploration stages when amendments requiring closure plans were made to the Act (1990), were given three months to provide the Inspector of Mines with information about the mine. After companies submitted the information, the Minister would determine the amount of time allowed for the mine to submit a complete closure plan.¹⁸¹

Contingency Plan/Emergency Response Plan

6(a) *Is the owner or operator of a metal mining operation required to submit a plan describing how the company intends to deal with foreseeable accidents involving toxic substances at the mine site? (For example, cyanide spills, overflow of ponds containing toxic substances during major storm events).*

If required, a contingency plan would be part of the federal and/or provincial environmental assessment processes, or required under relevant provincial environmental legislation or regulations. There are no direct mining-related provisions dealing with contingency plans in either the Ontario Mining Act or the British Columbia Mines Act.

Federal

There are provisions under the proposed amendments to the Canadian Environmental Protection Act, presently before the federal Parliament, to require environmental emergency plans be prepared by companies using a substance or group of substances specified on the List of Toxic Substances in Schedule 1 of the Act (for an explanation of how CEPA operates see Introduction).¹⁸² These emergency plan requirements could be made into regulations with consent of the Governor in Council (Cabinet). The only two substances presently on Schedule 1 of importance to the mining industry are lead and asbestos. Cyanide is not regulated under CEPA, and the federal government is presently considering regulating it under the Metal Mining Liquid Effluent Regulations under the Fisheries Act. There are regulations under CEPA controlling the release of asbestos to air during both mining and milling, and regulations controlling the release of lead to air from lead recycling smelters. Releases to air from primary lead smelters are not regulated under the Act. The CEPA regulations for lead and asbestos only apply to release to air and do not apply at any other stage in the mining cycle (i.e. exploration, mining, closure or release to water or land).¹⁸³

Provincial

Ontario

In Ontario contingency or emergency plans could be imposed as a term or condition of approving an environmental assessment (if an EA is conducted), or as a term or condition for a certificate of approval under the Environmental Protection Act or the Ontario Water Resources Act.

British Columbia

Section 12 of British Columbia's Waste Management Act can require any person who has possession, charge or control of polluting substances to undertake spill prevention works and to prepare contingency plans for response to spills.¹⁸⁴ The minister can also order a person who prepared a contingency plan to test the plan.

Under the Waste Management Act, where spills into the environment do occur, the person responsible is required to report them immediately to the Ministry of Environment, Lands and Parks. If a contingency plan has been prepared, the Regional Environmental Protection Manager can order the person to implement the plan at his/her expense. The Ministry is also charged with monitoring the clean up. It should be noted that contingency plans are not mandatory, but at the discretion of the Minister.

6(b) *If so, to whom is the plan submitted and when is it submitted? What are the required elements of the plan?*

Federal

Although not specific to mining, under the proposed CEPA amendments an emergency plan would be submitted to the Department of the Environment. The elements required in a plan under CEPA are with respect to the prevention of, preparedness for, response to, or recovery from an environmental emergency involving a Schedule 1 substance.¹⁸⁵

Provincial

In the case of British Columbia's Waste Management Act, the plan would be submitted to the Ministry of Environment, Lands and Parks.

In Ontario the plan would be submitted to the Ministry of the Environment if required as a term or condition under the Ontario Water Resources Act or the Environmental Protection Act. Under an EA, it would be submitted to either the Minister or the Ministry of Environment, depending on the nature of the assessment process.

6(c) *What type of pollution prevention measures, if any, are required in order for the plan to be approved?*

No specific measures would relate to pollution prevention in these contingency plans because they are essentially reactive by nature. However, other pollution prevention-related Acts, regulations and/or guidelines still apply.

In British Columbia under the Waste Management Act, if a person has possession, charge or control of any polluting substance, the minister may, if she considers it reasonable and necessary to lessen the risk of an escape or spill of the substance, order the person to undertake investigations, tests, surveys and any other action the minister considers necessary to determine the magnitude of the risk and to report the results to the minister.¹⁸⁶ Some pollution prevention measures may arise from these "investigations" and "tests", but it is unlikely.

6(d) *How is compliance with the plan monitored and enforced? Identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?*

Federal

Under the proposed amendments to CEPA, the company would be required to contact an Environment Canada inspector in the event of an emergency. If the company does not follow the plan in the event of an emergency the inspector has the powers to ensure they take the required measures. Guidelines and codes of practice established by the Minister with respect to emergency plans will be Gazetted.¹⁸⁷ The Canada Gazette is a weekly publication which details material required by federal statute or regulation to be published. Failure to report a spill immediately to the Department of the Environment would be subject to fines under the Act.

Provincial

In British Columbia, compliance with a contingency plan, if required, would be monitored by the Ministry of Environment, Lands and Parks. If an individual fails to report a spill then they are subject to fines under the Act.

In Ontario, spills and/or accidents must be reported to the Ministry of Environment immediately. Failure to report a spill is subject to fines under both the Ontario Water Resources Act and the Ontario Environmental Protection Act.

For civil and criminal penalties see 2(h).

6(e) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the plan? If so, how is the amount of the financial assurance determined?*

No.

III. PERMITS

Exploration Permits

7(a) *Are permits required for exploration operations?*

7(b) *If so, please describe what type of permits are required, and any permit requirements that address pollution prevention.*

Federal

Authorizations under the Fisheries Act or Navigable Waters Protection Act may be required if activities interfere with fish habitat or a navigable waterway, possibly triggering an environmental assessment under CEAA. An environmental assessment may also provide the opportunity for some public scrutiny of exploration operations. There are also federal regulations applying to uranium exploration that require permits.

Provincial

In some jurisdictions permits are required for exploration activities. Under its Mines Act, British Columbia requires a permit for all exploration activities. Until recent amendments (1998), exploration permits in British Columbia required approval from both the Minister responsible for mines and the Minister of Forestry under the BC "Forest Practices Code". Now the Mines Minister can approve exploration permits independent of the Minister of Forestry.¹⁸⁸

Until recently both Alberta and Ontario required exploration permits but this formal requirement has been removed. In Ontario, amendments to the Public Lands Act have effectively deregulated exploration activities on public lands.¹⁸⁹ Alberta has moved away from requiring exploration permits to an industry enforced Code of Conduct. The province of Newfoundland has regulations such as the Archeological Investigation Permit Regulations in Labrador, administered by the Ministry of Tourism, Culture and Recreation which require permits for exploration activities in Labrador. There is little public participation in the issuing of permits for exploration, with British Columbia being an exception in the event the Chief Inspector decides to print an application for a Notice of Work in a local newspaper. The Chief Inspector is also required to take into consideration the recommendations of her Advisory Committee if they were sought and the recommendations of any interested persons.¹⁹⁰

At the advanced exploration stage, the Director of Mine Rehabilitation under Ontario's Mining Act may also require public notice be given in connection with the commencement of the closure plan.

7(c) *How is compliance with the permit monitored and enforced? Identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?*

Compliance with permits is usually monitored and enforced by the jurisdiction responsible for issuing the permit.

With respect to public participation in the exploration permitting process, Alberta formerly allowed for public input but this is no longer the case (see 7(a)(b)).

Prior to 1996 amendments to the Public Lands Act in Ontario, public notice under the Environmental Bill of Rights would have been required when permits were issued for exploration activities such as clearing land, mechanical stripping, bulk sampling, drilling and blasting.¹⁹¹ As permits are no longer required for these activities, this is no longer the case.

For civil and criminal penalties see 2(h).

7(d) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the permit? If so, how is the amount of the financial assurance determined?*

Only British Columbia has provisions in legislation for requiring financial assurance to ensure compliance with an exploration permit. It is, however, at the discretion of the Chief Mine Inspector.¹⁹² Most jurisdictions have permitting fees to help cover administration costs. Newfoundland requires a security deposit in conjunction with exploration activities because metal and mineral exploration is linked by legislation to the Archeological Investigation Permit Regulations that are very important to the archeological recovery of native culture. The Newfoundland and Labrador Explorationists see these regulations as overly restrictive and inflexible, and as imposing high costs and expensive delays on exploration activities.¹⁹³

In Ontario, the mine closure requirements of the Mining Act apply to an advanced exploration project. Some form of financial guarantee may be required under these provisions (see 5(a)).

7(e) *Describe any opportunities or procedures provided for public review of permit applications and comment on whether permits would be issued, conditioned, or denied. How is compliance with the permit monitored and enforced? Identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in monitoring and enforcement?*

See 7(a)(b) and (c).

For criminal and civil penalties see 2(h).

Mining Permits

8(a) *Are permits required for mining operations?*

8(b) *If so, please describe what type of permits are required, and any permit requirements that address pollution prevention.*

Permits are required for mining operations in all jurisdictions, although the permitting process differs from jurisdiction to jurisdiction.

Permits dealing with design, mine operations, tailings disposal and closure are usually covered under provincial mining legislation. Permits required to use public lands and water, and to discharge particulate or chemicals into the atmosphere or waters are handled by provincial Ministries of the Environment and/or the federal Departments of Environment, and of Fisheries and Oceans depending on the legislation involved (see Introduction).

Federal

Federally the most important permits come under the Fisheries Act and deal with the harmful alteration, disruption or destruction of fish habitat and/or the deposit of deleterious substances into waters frequented by fish (see Fisheries Act description under Introduction). Mining's large impacts on water resources led to the promulgation of regulations under the Fisheries Act in 1977 relating specifically to the control of water pollution in the mining industry. The Metal Mining Liquid Effluent Regulations (MMLERs) apply to new, expanded, or re-opened mines (other than gold mines) but not to mines in operation at the time of their promulgation. The MMLERs set emission limits on substances determined to be deleterious substances under the Fisheries Act. The substances are arsenic, copper, lead, nickel, zinc, total suspended matter and radium 226.¹⁹⁴

Mining facilities are required to comply with the MMLERs regardless of any terms and conditions imposed in permits issued under provincial legislation. Typically, the requirements of the MMLERs are incorporated into provincial water pollution control permits issued to the mine.

A mine requires a license under the Yukon Quartz Mining Act prior to commencing operation in the Yukon Territory.

Provincial

In Ontario, a mine requires permits under the Mining Act, the Environmental Protection Act (EPA), and the Ontario Water Resources Act (OWRA).

General approval for the mine, including issues relating to design, operation, tailings disposal and waste disposal, require approval from the Minister of Northern Development and Mines under the Mining Act.

Environmental approvals for the mine are the responsibility of the Minister of the Environment through permitting processes in the EPA and OWRA. The EPA establishes a general prohibition against pollution and then a permitting system to allow for particular emissions to air and water. The OWRA contains many of the same provisions as the EPA, including a general prohibition against the pollution of waters and the authority to issue approvals for exceptions to the statute's pollution prevention provisions.¹⁹⁵ Water taking approvals may be required under the OWRA as well as certificates of approval for the discharge of mine effluent.

In BC, the principle environmental statute is the Waste Management Act (WMA). This statute contains many similar provisions for the issuing of permits and orders to polluters as Ontario's EPA. Under the WMA, remediation certificates can be issued upon completion of remediation work. "Commencement of any work in, on, or about a mine" requires a permit under the Mines Act in BC (see 4(a)(b)(c)).

Territories

In the Territories permits under the Water Act are required for a mine to begin operation.

8(c) *Describe any opportunities provided for public review of permit applications and comment on whether permits would be issued, conditioned, or denied.*

Federal

Federally, the public would have a chance to comment on the issuing of permits under the Fisheries Act through the federal environmental assessment process, if triggered. Under the Yukon Quartz Mining Act the Minister of Indian and Northern Affairs cannot issue a license until the applicant has notified the public in a manner prescribed by the Minister. The Minister can also require that public consultations on the terms and conditions in the license be held.¹⁹⁶

Provincial

In Ontario, proposed mine permits under the Mining Act and certificates of approval under the EPA and OWRA are subject to the Environmental Bill of Rights's Public Notice and Comment requirements. This entails the posting of the proposed permit or approval on a publicly accessible electronic registry (usually via the Internet), followed by a thirty-day public comment period. To ensure consistency of information, the EBR has standardized reporting methods to be followed by Ministries when posting notices on the registry.¹⁹⁷ Under the EBR, the Minister is required to take into consideration the comments submitted by the public in making a decision regarding the approval of the project in question.

Both Ontario's EPA and British Columbia's WMA provide Appeal Boards for hearing appeals by applicants and holders of certificates of approval regarding the Ministries' refusal to issue approvals, or the imposition of the terms and conditions of the approval.¹⁹⁸

"Third party" appeals under Ontario's EBR are another possible means for public input into the permitting process.¹⁹⁹ The EBR contains provisions allowing third parties to appeal the granting of approvals in any instance where the proponent has the right to appeal the Ministry's decision. To qualify as a "third party" one must have shown interest in the decision by exercising one's right to comment during the thirty-day posting period.²⁰⁰

Although this change has enhanced the public's environmental decision-making capacities, the appeal provisions under the EBR are subject to very stringent requirements. An appeal will only be granted if "no reasonable person" could have made the type of decision under appeal, and if the decision being appealed could result in significant environmental damage.²⁰¹ Despite these stringent tests, leave to appeal has been granted on a number of occasions under the EBR.

8(d) *How is compliance with the permit monitored and enforced? Identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in the approval process as well as in monitoring and enforcement?*

Compliance with the permits are monitored and enforced by the respective government Ministries (provincial) and/or Departments (federal). Mining and exploration permits (where applicable) are enforced by the Ministries responsible for mining within each province. Federal responsibilities for pollution control under federal statutes are often delegated to provincial governments for monitoring and compliance functions, however the provincial record of enforcement of federal regulations is very poor.

It must be noted that all levels of government have significantly reduced the enforcement capacities of their departments responsible for mining and environmental protection over

the past three years. It is well established, especially at the federal level, that departments charged with environmental protection do not have the financial resources required to enforce their regulatory responsibilities.²⁰²

Federal

Federally, the Fisheries Act contains provisions to fine those who fail to comply. In spite of the fact that violations of the Fisheries Act are rampant, there are few convictions under the Act each year and the numbers are declining.

Most federal statutes contain their own penalties for violation. For example, except where otherwise provided for in the Fisheries Act, anyone who is guilty of an offence under the Act punishable on summary conviction can be fined up to three hundred thousand dollars.²⁰³ Any subsequent offence may result in a fine up to three hundred thousand dollars and/or a six-month prison term.²⁰⁴ If a person is found guilty of an indictable offence under the Act, the fine for a first offence is up to one million dollars. Any subsequent offence may result in a fine of up to one million dollars and/or up to a three year prison term.²⁰⁵

In the event a corporation is charged under the Fisheries Act there are provisions allowing any officer, director or agent of the corporation who directed, authorized, assented to, acquiesced in or participated in the commission of the offence is a party and guilty of the offence and is liable on conviction to the punishment provided for the offence, whether or not the corporation has been prosecuted.²⁰⁶ In addition, "if the court is satisfied that as a result of committing the offence the person acquired monetary benefits or monetary benefits accrued to the person, the court may, notwithstanding the maximum amount of any fine that may otherwise be imposed under this Act, order the person to pay an additional fine in an amount equal to the court's finding of the amount of those monetary benefits."²⁰⁷

The Act also stipulates that one half of any fine under the Fisheries Act resulting from a private prosecution is required to be paid to the private prosecutor.²⁰⁸ In addition, any person involved in depositing deleterious substances in water frequented by fish is liable for any government costs required to remedy the adverse effects of the substance.²⁰⁹

Provincial

Under Ontario's EPA, the Ministry of Environment may prosecute violations of the statute's prohibitions, orders, approvals or regulations as quasi-criminal offences. Under these authorities, officers and directors of mining companies have been convicted for failing to take reasonable care in allowing unlawful discharges contrary to provisions in the EPA.²¹⁰ Mining companies can also be convicted for non-compliance with effluent standards set under the OWRA. Most provincial statutes have their own provisions for penalizing those found in violation of the Act.

In Ontario's EPA, there are different levels of fines according to the offence committed. If an individual is found guilty of discharging a contaminant that may cause adverse effects to the environment, or that involve hazardous waste or liquid industrial waste, they are subject to a fine of up to \$25,000/day and up to a year in jail.²¹¹ Corporations can be fined up to \$200,000/day for the same offences. For many other offences committed under the Act, individuals may be fined up to \$10,000/day and corporations up to \$100,000/day. These maximum fines may be increased by the amount of monetary benefit that the individual or corporation obtained by committing the offence.²¹²

In addition to any other penalty being imposed by the court, the court may also order the person to "take all or part of the action applied for to prevent, decrease or eliminate the effects on the natural environment of the offence and to restore the natural environment within the period or periods of time specified in the order".²¹³

Under the Ontario Water Resource Act every person convicted of an offence is liable on conviction for each day or part of a day on which the offence occurs, or continues, to a fine of not more than \$10,000 on a first conviction and not more than \$25,000 on each subsequent conviction.²¹⁴ If a corporation is convicted of an offence under the Act, the maximum fine that may be imposed for each day or part of a day on which the offence occurs or continues is \$50,000 on a first conviction and \$100,000 on each subsequent conviction.²¹⁵

The Ontario Mining Act includes penalties for failure to comply with Part VII of the Act that deals with mine rehabilitation. Under the Act every person who contravenes any provision of Part VII or its regulations is guilty of an offence and on conviction is liable to a fine of not more than \$30,000 for each day on which the offence occurs or continues. In addition, every director or officer of a corporation engaged in their mine's rehabilitation has a duty to take all reasonable care to ensure that the corporation complies with the requirements of Part VII. Failure to carry out that duty is guilty of an offence under the Act and on conviction is liable to a fine of not more than \$10,000.

Under section 39(3) of the British Columbia Mines Act failure to comply with the provisions of the Act and its regulations is liable to a fine of not more than \$100,000 and/or a one-year prison term.²¹⁶ If an inspector serves a written notice on a person alleging a contravention of the Act, regulation, code or order under the Act, then that person is liable to an additional fine beyond that prescribed in section 39(3) of not more than \$5000/day and not less than \$500/day for each day during which the offence continues.²¹⁷

In British Columbia, the Waste Management Act contains provisions for fines ranging from \$2000 to one million dollars depending on what provision of the Act the offence falls under.

Also see 7(c) and 8(c).

8(e) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the permit? If so, how is the amount of the financial assurance determined?*

Federal

In the Territories, security deposits may be required to secure proponent's obligations under the Water Act regarding the taking of, or discharging to, water. The Water Board, the administrative body overseeing the provisions of the Water Act, has the power to request security up to 10% of the capital cost of the project. In one case, however, the federal Minister of Northern Indian and Northern Affairs required a \$4 million deposit under the Water Act for a mine's post-closure water treatment.²¹⁸ In 1993, the Territories enacted new water legislation that may require security to cover all present, and some future, damage.

The Yukon Quartz Mining Act provides for the Minister to determine the amount of security required for the project to be licensed, either by regulation or to the satisfaction of the Minister of Indian Affairs and Northern Development.²¹⁹

Provincial

In BC the Chief mine inspector has the discretion to require security as a condition of issuing a permit under the Mines Act, to provide for mine reclamation and mitigation of watercourses affected by the mine. This is also the case in Ontario (see 5(f)).

The Environmental Protection Act in Ontario was amended in 1986 to provide for the incorporation of financial assurance provisions into approvals.²²⁰ Under the amendments an "approval" includes a program approval, a certificate of approval or permit, or an order in respect of a works.²²¹ Under the Act, financial assurance may be required of approval holder to ensure that any action stipulated in the order or approval is complied with.²²² The amount of the financial assurance required is based on the worst case scenario, such as the abandonment of the contaminated facility, and is calculated based on the costs of site remediation²²³.

IV. CONCESSIONS

In general, Canada operates a free entry system with respect to exploration activities. There are no environmental stipulations attached to claims. Some jurisdictions require by legislation, usually under their mining or mineral legislation, that prospectors hold a free miner's certificate, or prospector's license, in order to acquire mineral title or carry out exploration and mine development work.²²⁴ Other jurisdictions, like Alberta, require no license, and allow any individual to engage in exploration activities.

9(a) *Do the laws governing mining concessions impose any environmental conditions as a condition to obtaining or maintaining the concession?*

Laws governing mining concessions do not include any environmental conditions, other than those relating to exploration and mine development activities.

Two provinces – Nova Scotia and Prince Edward Island – do not practice free entry, and the right to mine inherent in “free mining”. The issue of whether to grant an exploration license lies with the Minister of Mines and Energy who may refuse and defer an application if it is determined not to be in the best interest of the province, or would hinder mineral development.²²⁵ These are essentially economic-related concerns, but could provide the opportunity to refuse mining based on environmental factors.

9(b) *Do laws governing mining concessions give governmental agencies the authority to require any type of pollution prevention measures as a condition to the granting of the concession? If so, please describe.*

No (see 9(a)).

9(c) *How is compliance with the concession monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there any opportunity for public participation in approval of the concession as well as in monitoring and enforcement?*

Not applicable.

9(d) *Is there a requirement that a bond or other type of financial assurance be provided by the owner or operator to the government to guarantee performance in accordance with the concession? If so, how is the amount of the financial assurance determined?*

Not applicable.

9(e) *How does the concession terminate? Can the concession be terminated for non-compliance with any environmental laws or conditions?*

Not only are there no conditions tied to land access and the right to prospect, BC has recently introduced amendments to the Mines Act and the Mineral Tenure Act which not only guarantee land access but provide the legislated right to market-value compensation for existing claims in the event that the government impinges on a claim in the creation of new protected areas.²²⁶ This change effectively eliminates the possibility of new parks being created in areas of staked mineral and metal claims because the costs of the

government settling the claims on staked lands would be prohibitive. In anticipation that these actions could create a market in unstaked territory in areas where parks are being considered, environmental groups in British Columbia were able to get explicit reference to excluding compensation where it can be shown that claim-staking has been done with the goal of gaining compensation (as in staking a candidate protected area in hopes of capitalizing at the public's expense).²²⁷

In the past there is an example of a provincial government terminating a concession. In the case of the Windy Craggy Mine in British Columbia the provincial government decided that the development of the mine would cause expensive and irreparable damage to the surrounding area. The proponent, Royal Oak Mines, continually failed to adequately revise its mine plan for the site, and eventually the British Columbia government expropriated the land to create a provincial park. As a result, Royal Oak Mines threatened to sue the government for "hundreds of millions" in compensation for their lost claim.²²⁸ However, a buy out package totaling some \$160 million was eventually agreed to by the two parties.

V. REGULATORY STANDARDS AND BEST PRACTICES

10(a) *Do any legally enforceable standards or suggested best practices or incentives address the handling of toxic substances introduced to the mining site -- e.g. cyanide, mercury, acids? If so, please identify.*

Legally enforceable standards for toxic substances introduced to the mining site exist both federally and in Ontario.

Federal

Under the proposed amendments to the Canadian Environmental Protection Act mercury is included as a Schedule 1 substance, which means that a substance is defined toxic under the Act, and hence regulations could be passed controlling releases to the environment.²²⁹ Although other substances used by the mining industry have been declared toxic under CEPA -- nickel, arsenic and cadmium were declared toxic under CEPA in reports issued in 1993 and 1994 -- they have yet to be controlled by regulation.²³⁰ The only two substances presently regulated are emissions to air from secondary lead smelters (i.e. lead recycling facilities) and asbestos mines and mills. Thus the entire lifecycle of asbestos is not currently being regulated at the mine site, and releases of lead at mine sites are not being regulated at all. For cyanide see the Canadian Environmental Protection Act on page 3.

The Metal Mining Liquid Effluent Regulations (MMLERs) made under the Fisheries Act apply to effluent discharged to water for Arsenic, Copper, Lead, Nickel, Zinc, Total Suspended Matter and Radium 226. They do not however, apply to discharges into a

tailings pond, into which effluent can be dumped at full concentration and any quantity as long as the Minister has approved the tailings facility in writing.²³¹

It is important to re-state that the MMLERs do not apply to gold mines. In addition, all mines established prior to the promulgation of the MMLERs in 1977 are grand-fathered, in that their emissions of toxic effluent are not controlled or subject to this regulation. These serious shortfalls are at least partly attributable to the fact that the development of the MMLERs took place behind closed doors between the federal government, the provinces and industry with no public consultation.²³²

In most cases the requirements for satisfying the MMLERs are incorporated into provincial water pollution control permits issued to the mine.

Provincial

The Metal Mining Sector Regulations established under the Ontario Environmental Protection Act as part of the Municipal/Industrial Abatement strategy (MISA) specifically regulate toxic effluent from mine facilities. These regulations establish maximum effluent concentration limits for the mining sector as a whole and total loading limits for individual mines. Maximum contaminant concentrations for substances, sampling and monitoring regiments, and reporting requirements are also established by the regulation.²³³ A key requirement under the Metal Mining Sector Regulations is that mine effluent be non-toxic to Rainbow Trout and *Daphnia magna*. Using the LC50 test, rainbow trout and *Daphnia magna* immersed in 100 per cent effluent must have a survival rate of 50% over a prescribed period of time.²³⁴ The MISA regulations cover both toxic (e.g. metals) and conventional pollutants, such as pH, Chemical Oxygen Demand, Biological Oxygen Demand, and Total Suspended Solids.

Like the MMLERs the requirements for the MISA Metal Mining Sector Regulations would be incorporated into the provincial certificate of approval for any new mine.

In Ontario there are provincial guidelines for water quality, however these are not legally binding and may or may not be incorporated into certificates of approval on a case by case basis.

10(b) *Do any legally enforceable design standards, performance standards, suggested best practices or incentives address the construction and maintenance of ore beneficiation units or areas (mills, heap leach pads, dump leach areas, ponds) to prevent releases of introduced toxic substances?*

Federal

The MMLERs do require mine operators to install and maintain facilities that the Minister deems proper for sampling and analysing effluents under the regulations.²³⁵ The general provisions applying to “deleterious substances” under the Fisheries Act (see

description in Introduction) would apply to the releases of toxic substances from a mine site. However, no specific standards apply to the construction and design of facilities such as mines or tailing ponds.

In the Yukon Territory, regulations could be passed under the Yukon Quartz Mining Act to address the construction and design of mining facilities if desired by the Minister of Indian Affairs and Northern Development.

Provincial

Under the Health, Safety and Reclamation Code in the British Columbia Mines Act, there are regulations pertaining to the design, construction, maintenance, abandonment, modification, siting, operation and reclamation of tailings impoundments.

The MISA Metal Mining Regulations in Ontario pertain only to mine effluent and not leachate from tailings or from closed or abandoned mines. The general “no adverse effect” provisions of the Ontario Environmental Protection Act and the Ontario Water Resources Act would apply to toxic releases from a mine site. There are however, no specific standards that apply.

10(c) *Do any legally enforceable standards, suggested best practices, or incentives address the handling of ores and rock to avoid or minimize the release of naturally occurring toxic substances -- e.g., acid mine drainage, metals, arsenic? If so, please identify.*

See reference to British Columbia under 4(e).

10(d) *Do any legally enforceable standards, any suggested best practices, or incentives address the disposal of mine tailings in constructed units to prevent the release of toxic substances into the environment? If so, please identify.*

See (b).

10(e) *Do any legally enforceable standards, suggested best practices, or incentives address the closure of constructed units for the disposal of mine tailings to ensure that they are stabilized, decontaminated, or otherwise placed in a condition that releases of toxic substances to the environment are prevented after closure?*

See (b).

10(f) *How is compliance with any legally enforceable standards monitored and enforced? Please identify any civil or criminal penalties that may be imposed for non-compliance. Is there an opportunity for public participation in monitoring and enforcement?*

Federal

Under the MMLERs monthly reports are to be compiled by operators for the Minister detailing their monthly compliance with the regulation. In addition, the general enforcement provisions of the Fisheries Act under which the MMLERs are established stipulate penalties for any violation of the statute's provisions.

Provincial

Under the Metal Mining Regulations in Ontario the monitoring of effluent concentrations at sampling points is done by the individual companies. A plan establishing the sampling points for discharge must be established by the discharger and submitted to the Director prior to discharging effluent. The sampling schedule is detailed in the regulation and the results of sampling must be made available to inspectors at all times during normal operating hours. By June 1 each year, each discharger under the regulation must produce a public report detailing their discharges on a monthly basis for the previous year, including details of any abnormalities, or spills, that occurred at the site.²³⁶

Under the Metal Mining Sector Regulations penalties and fines stipulated under the Environmental Protection Act apply.

With respect to civil and criminal penalties see Figures 2(h).

A successful enforcement action under the general provisions of the Fisheries Act or provincial environmental protection legislation would turn on whether the prosecution could demonstrate that the defendant had failed to exercise "due diligence" using the substances. The court would take into consideration things such as standard industry practices when determining what should comprise "due diligence".

For penalties see 8(d).

10(g) *Has the government itself developed any other "best practices" designed to prevent pollution in the metal mining sector, or adopted such a document developed by the mining industry?*

In response to the significant problem of acid mine drainage in Canada the federal and provincial governments in conjunction with the mining industry developed the Mine Environment Neutral Drainage (MEND) program. The goal of MEND is to reduce the corporate and public liability resulting from acidic drainage through a co-operative research organization sponsored, financed and administered by a voluntary consortium

VII. MONITORING AND DISCLOSURE

12(a) *Does the law require an operator / owner of metal mining operations to disclose the release of introduced toxic substances into the environment? Describe the required form of the disclosures, if any, and to whom the information must be disclosed.*

The National Pollutant Release Inventory (NPRI), established by Ministerial Order under the Canadian Environmental Protection Act, requires that on-site releases to air, water and land, transfers off site in wastes and the recovery, reuse and recycling of 176 listed substances must be publicly reported. The NPRI is a nation wide, publicly accessible inventory of pollutant releases and transfers in Canada. If a mining operation manufactures, processes or otherwise uses any of the NPRI-listed substances in quantities of 10 tonnes or more per year, and employs 10 or more people per year, then it must report releases or transfers in wastes of the listed substances. Emissions are submitted to the regional NPRI office, which is maintained under the auspices of Environment Canada, which then releases the information to the public.

12(b) *Does the law require an operator/owner of metal mining operations to disclose the release of naturally occurring toxic substances and acid mine drainage into the environment? Describe the required form of the disclosures, if any, and to whom the information must be disclosed.*

If the releases of naturally occurring toxic substances and/or acid mine drainage result in non-compliance with permitted levels of emissions, then the operator is legally bound to report them to the responsible authorities.

Federal

Releases would also be reportable under the National Pollutants Release Inventory.

In the absence of specific provisions, requirement for disclosure would be based on whether the release violates the general provisions of the federal Fisheries Act relating to the deposition of deleterious substances into water frequented by fish (see Fisheries Act in Introduction). In accordance with the Fisheries Act, releases would be reported to the Department of Fisheries and Oceans.

Provincial

In Ontario, the general provisions under the Ontario Environmental Protection Act or the Ontario Water Resources Act may also apply, meaning releases would be required to be reported to the Ministry of the Environment.

12(c) *Does the law require an operator to disclose the presence of introduced toxic substances at the mine site, regardless of whether such substances are released into the environment? Describe the required form of the disclosures, if any and to whom the information must be disclosed.*

Federal

The NPRI does not contain provisions for reporting the storage of toxic substances except if they are waste.

Provincial

Reporting on the presence or use of introduced toxic substances could be required as a term or condition of an environmental assessment approval, or a certificate of approval under provincial environmental statutes.

12(d) *When must disclosures be made?*

Under the federal NPRI and Ontario's Metal Mining Sector Regulation disclosures regarding emissions must be made annually. Monitoring data required under the MMLERs, the Metal Mining Sector Regulation, or any terms or conditions of approval, is also submitted to environment departments on a monthly basis. Members of the public may request access to this data however access may be denied. In this case a member of the public could file a freedom of information request under freedom of information legislation. In most cases, requests for such information under a freedom of information request would be granted (see 13(f)).

VIII. PUBLIC INFORMATION AND PARTICIPATION

13(a) *Please identify each point in the exploration and mining process at which the mining operator (or the government) is required to disclose information to the general public and the type of information that must be disclosed in each instance. Are there any gaps in information that are required to be disclosed?*

The principal source of public information in the mining process occurs during the analysis of a company's Environmental Impact Statement during the environmental assessment process. Requirements under the National Pollutant Release Inventory and the Metal Mining Sector regulations under Ontario's Municipal/Industrial Abatement Strategy both require the disclosure of information about the mine once in operation. For more detail see 1(c) and (h); 2(c); 3(h); 4(a)(b)(c) and (i); 5(e); 6(d); 7(c); 8(d); 10(f); and 12(a) and (d). Requirements for the disclosure of information can also be incorporated into the terms and conditions of a certificate of approval for the mine. In British Columbia, at the discretion of the Chief Mines Inspector, exploration activities require a

permit and that the public be informed of the activities through publication in local newspapers.

As pointed out in various places, deregulation has left serious gaps in the exploration permitting process. In most jurisdictions in Canada, with the possible exception of BC, there is a serious public information gap around early exploration activities. Considering recent actions by the British Columbia government with respect to claims rights and Ontario with respect to closure provisions, there has been a disturbing move towards increasing the public's liability for mining operations.

13(b) *What information is available to the general public about specific exploration operations? Where is such information available, in what form and at what cost? Are there any gaps in the information that are required to be disclosed?*

Federal

In the rare event that exploration activities triggered an environmental assessment under CEAA, information about specific exploration activities would be available on the Public Registry via the internet, or in hard copy from the Canadian Environmental Assessment Agency. The information would be free. If exploration activities triggered a screening under CEAA the EA would provide a very basic statement of the exploration activities. Even though CEAA calls for cumulative environmental effects to be taken into account, this is not usually given much importance at the screening level regardless of the fact exploration activities can have serious cumulative effects on the ecology of the explored area.

Provincial

In British Columbia there is the possibility information will be made available to the public if the Chief Inspector has the exploration company publish its activities in the local newspaper (see 4(a)(b)(c)).

13(c) *What information is available to the general public about specific mining operations? Where is such information available, in what form and at what cost? Are there any gaps in the information that is required to be disclosed?*

All information submitted to the various levels of government regarding a proposed or existing mine with respect to environmental assessments is available to the public from the respective government departments or ministries. However other types of information, for example regarding permitting and discharges, may have to be acquired through Access to Information requests at both the federal and provincial levels.

Federal

Federally, one of the most comprehensive pieces of public information would be the Environmental Impact Statement compiled by the project proponent and filed with the Responsible Authority(s) as part of the environmental assessment process (where undertaken). This information is provided to the public free of charge. The Federal Environmental Assessment Index is a master list of all federal environmental assessments carried out under the Canadian Environmental Assessment Act which contains "tombstone" information (who, what, when, where, why) about federal environmental assessments in progress. It can be accessed via the internet and provides contacts for further information on the environmental assessments and associated documents. Provincial governments with environmental assessment processes also make this information available to the public.

There are many gaps in the information available to the public during environmental assessments. Often very little baseline data is compiled by the project's proponent and hence no sound basis exists against which to measure environmental impacts as the project progresses. Baseline work is both time consuming and expensive, and beyond the capacities of the public to carry out. Another information gap exists when measuring the cumulative environmental affects a particular project will have. The mining industry has shown little capacity for taking into consideration the cumulative environmental affects of projects and possible alternatives to mining projects as required under CEAA. Hence, public information on these aspects of the federal EA process is seriously lacking. In general, the problem is not with the public access to information during EA's, but the quality of information available and the time allowed for the public to digest the information and develop a meaningful critique of it.

Monitoring reports detailing discharges by specific mines as required under the MMLERs are available but may only be available through a Freedom of Information Request, which can be expensive.

Provincial

There is also a public participation problem in some jurisdictions when translating the conditions for the approval of the EA into the provincial permitting process. There can be a lack of transparency in the permitting process after an environmental assessment has been approved in that some jurisdictions fail to provide for direct public comment on the permits. This has been a complaint with respect to Alberta's permitting of coal mines.²³⁹

Under the Metal Mining Regulations in Ontario, there are public reporting requirements (see 10(f)). In addition, a member of the public has the option of requesting specific discharge data from a provincial Ministry. However, if an informal request is refused the individual would have the option of filing a request under Freedom of Information legislation.

13(d) *Is there a formal process to initiate or investigate complaints by members of the general public with regard to pollution prevention practices or problems at specific exploration and mining sites? If so, please describe the process.*

Federal

There is also the possibility of filing a request for investigation under the Canadian Environmental Protection Act, where applicable (see 2(h)).

At the federal level there exists a newly constituted Commissioner of Environment and Sustainable Development. At the federal level, if pollution prevention practices are sub-standard, then citizens can file a petition through the Commissioner with the responsible federal department. For example, if an exploration project is negatively impacting fish habitat and a member of the public would like to know if the Department of Fisheries and Oceans has authorized the destruction of this habitat, then a petition can be filed with the Commissioner of Environment and Sustainable Development to determine the process followed.

Provincial

In Ontario formal requests for investigation procedures exist under the Environmental Bill of Rights. See 8(c) and 2(h).

13(e) *Please identify each point in the exploration and mining process at which members of the public may offer comments to governmental agencies concerning the permitting, approval, disapproval, or terms and conditions under which an exploration or mining operation may be conducted.*

The public has very little input into the issuing of permits with respect to mining, with the exception of British Columbia, and Ontario via the Environmental Bill of Rights. Permits under the Mining Act in Ontario and certificates of approval under the Environmental Protection Act and the Ontario Water Resources Act would require public notice on the EBR registry, a minimum 30 day comment period, and that the comments received be considered in the decision-making. Again the major point during mine development for public comment is during the environmental assessment process, especially where CEAA is involved.

See 1(c) and (h); 2(c); 3(h); 4(a)(b)(c); 4(i); 5(e); 6(d); 7(c); 8(c) and (d), 9(c).

13(f) *If information is not disclosed by the mining operation or the government as required by law, what procedures, if any, are available to the public to achieve access to such information?*

Federal

At the federal level there exists an Office of the Information Commissioner, established under the Access to Information Act.

"The purpose of this Act is to extend the present laws of Canada to provide a right of access to information in records under the control of a government institution in accordance with the principles that government information should be available to the public, that necessary exemptions to the right of access should be limited and specific and that decisions on the disclosure of government information should be reviewed independently of government."²⁴⁰

The Access to Information Act gives Canadians, other individuals, and corporations present in Canada the right to apply for and obtain copies of federal government records. "Records" include letters, memos, reports, photographs, films, microforms, plans, drawings, diagrams, maps, sound and video recordings, and machine-readable or computer files. It is important to note that a request for information can be, and often is, denied by a government department. In the event that a request for information is denied, one can request that the information commissioner investigate why it was denied. The Commissioner gathers information from both the department and the complainant and often seeks to mediate a resolution between the two parties. If the complainant is unsatisfied with the result, then they may apply to the Federal Court of Canada for a review of the department's decision denying access to requested information - whether or not the Commissioner supports your complaint. In some cases, the Commissioner may decide to take the case to the Federal Court of Canada himself.

Under the Access to Information Act a government institution cannot disclose any record requested under the Act that contains the trade secrets of a third party, even though there is no definition of "trade secret" contained in the Act.²⁴¹ Although trade secrets are exempt, the head of a government institution is granted the discretion to disclose other financial and scientific information provided by third parties if its disclosure would be in the public interest as it relates to public health, safety and environment, and if the public interest in disclosure outweighs any financial loss or gain to, or prejudice to, the competitive position of a third party.²⁴²

An emerging problem with access to information requests is that the government departments housing requested information are beginning to charge substantial fees in an attempt to cover their internal administrative costs. This is becoming a serious barrier to public access.

Provincial

All provinces have Freedom of Information legislation of their own. The provincial Freedom of Information system is similar to the federal system. Provincial Freedom of Information requests are also becoming increasingly expensive as governments require fees based on the amount of work required to assemble the requested information.

IX. MANAGEMENT SYSTEMS

14(a) *Please identify any environmental management practices that are required by law for companies engaged in mining and exploration.*

There are no environmental management practices for the mining industry required by law in Canada.

14(b) *Please explain the status of ISO 14000 or other voluntary environmental management programs in your country, particularly with respect to the mining industry.*

The Mining Association of Canada has used some of the principles and approaches from the ISO 14000 series in compiling their Guide to the Management of Tailings Facilities.²⁴³

The Canadian mining industry is a major participant in, and advocate of, voluntary environmental management systems. The most significant voluntary environmental program in Canada is the Accelerated Reduction and Elimination of Toxics Program (ARET). ARET participants are from both government and industry. By the end of 1995, 278 facilities from 143 companies in Canada were involved in the ARET program. The Mining Association of Canada has strong membership participation in the Accelerated Reduction and Elimination of Toxics program (ARET) voluntary program, with 31 out of 34 members taking the ARET Challenge. There are many smaller mining companies that are not members of the Mining Association of Canada and not participating in ARET.

The ARET Challenge began in 1994 when the ARET Stakeholders Committee challenged selected Canadian companies as well as government departments and agencies to voluntarily reduce or eliminate their emissions of ARET substances to achieve specific emission/reduction targets by 2000. ARET participants were asked to state their commitments in publicly available action plans.²⁴⁴ They were provided with broad guidance, and encouraged to be flexible in both the development and public presentation of their plans. Under the ARET Challenge participants are asked to identify ARET substances they emit and establish a base year for future comparisons. Only base years after 1987 are acceptable, as it is believed this ensures that proposed reductions are

presented in the context of recent history. If the base year is other than 1993, action plans also include 1993 data to provide a common base of comparison. Action plans also set out the company's emission targets for the year 2000. All ARET action plans are public documents and can be obtained by contacting the ARET Secretariat at Environment Canada, or participating companies and/or government departments.²⁴⁵ Companies which take the ARET Challenge commit to the long term goal of virtually eliminating the emissions of persistent and bioaccumulative substances identified on List A-1, and aim to reduce these emissions by 90 per cent by the year 2000. For other substances, on List A-2, B-1, B-2, and B-3, the target is a 50 per cent reduction in emissions by 2000.²⁴⁶ All substances in the five categories were arrived at by consensus by ARET stakeholders and can be found on Appendix I. Best efforts on reducing any of the ARET-listed substances are welcomed from all participants.

There are numerous problems with ARET including: allowing the baselines to be set too early; lack of third party verification of emission reduction claims; allowing regulation-driven emission reductions to count as voluntary; inconsistent monitoring and reporting methods; lack of meaningful consequences when emission reduction targets are not met; no real cost savings over regulation.²⁴⁷

Government budget cuts, and a well resourced mining industry lobby, have resulted in increased interest in, and implementation of, voluntary environmental measures at both the federal and provincial levels in recent years. Voluntary programs have serious consequences for Canada's environmental regulatory framework. Enforcement records in Canada are poor to begin with and, when combined with decreased department and/or ministry capacity for enforcement, are destined to decline even further.

Some provinces, such as Ontario and Alberta, have deregulated much of their early exploration permitting system and replaced it with voluntary "Codes of Conduct", or no requirements at all.

See 10(g).

14(c) *Please identify any mandatory auditing programs in your country, including any laws requiring the preparation of plans for coming into compliance with applicable environmental laws.*

There are no laws specifically designed for ensuring compliance with environmental laws, other than compliance plans required under specific laws themselves. Canada has a history of allowing voluntary compliance with new environmental regulations and environmental laws, with sometimes less than desirable results over the past two decades. Unlike the approach of United States Environmental Protection Agency, Environment Canada often allows polluters several years to come into compliance with an environmental regulation or law. In practice, many never achieve compliance. This culture of non-enforcement in both the government and industry, including the mining

industry, creates a significant obstacle to the enforcement of environmental laws and regulations.

X. REMINING/PRIVATIZATION

15(a) *Are there any specific laws or policies or financial incentives that promote the use of pollution prevention measures in connection with re-mining existing or abandoned mines or privatization of government-owned mines. If so, please identify.*

There are no specific laws, policies or financial incentives that promote pollution prevention measures in connection with re-mining existing, abandoned, or previously government-owned mines. Re-mining an existing or abandoned mine would most likely require an environmental assessment under either federal or provincial assessment processes.

In Ontario, amendments were passed to the Mining Act in 1996 exempting holders of mining claims from liability for pre-existing mine hazards.²⁴⁸ In addition, the amendments also exempted proponents who voluntarily surrender mining lands to the Crown from any future environmental liabilities even if they arise as a result of the proponent's actions.²⁴⁹

XI. LAND USE RESTRICTIONS

16(a) *Are there any laws that prohibit or limit metal mining in certain areas because the areas are so important for their biological or cultural resources that mining would be incompatible with their preservation?*

16(b) *If so, please describe each such law and what areas it protects. (For example, these may include parks, archeological sites, cultural sites, biosphere reserves, wildlife sanctuaries).*

Federal

The National Parks Act protects all National Parks from resource harvesting. If National Parks are established in the district of Thunder Bay in the Province of Ontario or in the districts of St. Barbe and Humber West in the Province of Newfoundland, traditional resource harvesting must be allowed.²⁵⁰ These qualifications are in keeping with Native lands claim agreements (see Introduction). The Parks Act also allows for traditional resource harvesting in National Parks as stipulated under other Acts of Parliament. Thus, in the event that a National Park is established in an area in which Natives have traditionally harvested timber, and have a right to continue to harvest timber under

federal statute, they can continue to do so in keeping with agreed harvest quotas and practices.

Provincial

In Ontario mining and timber harvesting may be permitted in Provincial Parks by regulation. At present, timber harvesting is occurring but there are government policies against mining activities. The Ontario Mining Act contains provisions allowing for interim protection for areas that may be designated as Parks in the future.²⁵¹ These provisions ensure Crown control over the land so as to ensure no long-term leases or licenses of occupation are signed with respect to the lands that may compromise the area's value as parkland. This is accomplished by a Minister's Order under either the Mining Act or the Public Lands Act.²⁵²

16(c) *Is metal mining absolutely prohibited or limited in these areas? If only certain kinds of mining and mining-related activities are prohibited, please identify.*

Federal

Metal mining and exploration activities are absolutely prohibited inside National Parks.

Provincial

The Ontario Parks Act states that prospecting, staking of mining claims and the development of mines in provincial parks is prohibited except by regulation. Consequently, although prohibited under current policy, this language leaves the door open for the Ontario government to allow exploration and mining in provincial parks.²⁵³ There is precedent for this because in 1983 the Cabinet exercised its right to permit mining in parks by passing regulations allowing for exploration and mine development in 23 parks, including five wilderness parks. Thus, subject to permitting under the Mining Act, mine development could occur in these 23 parks.

16(d) *Does the protected area law apply to any types of privately-owned lands? If so, please identify.*

Privately owned lands are not included in protected areas.

In Ontario, provincial policy statements under the Planning Act essentially state that non-renewable resource extraction trumps all other land uses, including on private lands. Thus, a municipality cannot zone lands to exclude mining activities where the lands may hold significant mineral or metal deposits.

16(e) *Is exploration also prohibited or limited in areas under such laws?*

Federal

Exploration is not permitted in National Parks, some provincial parks and in areas in the Northwest and Yukon Territories designated as protected by regulation under the Territorial Lands Act.

Provincial

See (c). In light of the ability to allow mining in provincial parks in Ontario, it is worth noting that the Prospectors and Developers Association of Canada (PDAC) and the Ontario Mining Association are lobbying the Ontario government to allow exploration and mining development to be permitted in Ontario Parks.²⁵⁴ They are calling for “exploration and mining to be permitted activities on all Crown lands with exception of those protected areas scientifically demonstrated to be required for representative purposes”.²⁵⁵

Incompatible Use Areas

17(a) *Are there any laws that prohibit or limit metal mining in certain areas because mining would conflict with the primary use of such areas?*

17(b) *If so, please describe each such law and what areas it protects. (For example, these may include military reserves, urban areas, forest districts dedicated to timber production).*

Federal

In one sense the federal Fisheries Act should work to limit metal mining in certain areas because of the need to protect fish habitat in order to maintain fish-based local economies. This, however, is not always the case in part because of various Department of Fisheries and Oceans policies that allow for compensation in lieu of the destruction of fish habitat. “Compensation” can be monetary and/or the creation of new fish habitat. Also see “letters of advice” under 1(a)(b).

The Territorial Lands Act can prohibit or limit mining in certain areas if it has negative impacts on the traditional lifestyle of Natives. Thus, if mining activities were negatively impacting Native hunting grounds for example, then they could be limited or prohibited by regulation under the Territorial Lands Act.

Provincial

Some provincial jurisdictions in Canada retain greater control over the mining process throughout the mining cycle because of conflict with competing uses in the mined area. British Columbia has enacted a “Forest Practices Code” which aims at greater environmental sensitivity during exploration and mining activities in British Columbia

forests. In Newfoundland the Archeological Investigation Permit Regulations, which require archeological surveys be conducted prior to drilling or other site altering activities in Labrador, also limit the effect of mining in areas of importance to the Native people of Labrador.

In Ontario there are provisions under the Mining Act to withdraw from staking and prospecting lands which are considered of natural and scientific interest.²⁵⁶

17(c) *Is metal mining absolutely prohibited or limited in these areas? If only certain kinds of mining and mining-related activities are prohibited, please identify.*

Outside of National Parks, some Provincial Parks, Native Reserves and possibly areas under Land Claim, and areas in the Northwest Territories delegated by regulation under the Territorial Lands Act, metal mining is not prohibited, or limited, anywhere in Canada.

17(d) *Does the law apply to any types of privately-owned lands? If so, please identify.*

The Fisheries Act applies on all lands, public and private, as do all environmental laws at both the federal and provincial levels.

17(e) *Is exploration also prohibited or limited in areas under such laws?*

Outside of National Parks, exploration activities are not necessarily “limited” anywhere on public lands, but can be slower when coupled with responsibilities such things as archeological surveys, as is the case in Labrador.

Exploration activities would be difficult to undertake on privately owned lands without the consent of the landowner.

Areas Determined Unsuited for Mining

18(a) *Are there any laws that create a procedure that can be used by government officials or citizens to prohibit or limit metal mining in other areas on a case-by-case basis where the areas are “unsuitable” for mining?*

Under the Territorial Lands Act the Governor in Council may, where deemed necessary for the protection of the ecological balance or physical characteristics of any area in the Yukon Territory or the Northwest Territories, set apart and appropriate any territorial lands in that area as a land management zone.²⁵⁷ Any such action must be done in consultation with Territorial governments. This law potentially allows the federal Cabinet to designate by regulation lands to be set aside for ecological reasons in the Territories, and provides control over what mining activities can occur within designated land management zones.

18(b) *If so, please describe each such law and its procedure.*

See (a).

18(c) *Does the law allow the prohibition or limitation of metal mining from an area that is so ecologically sensitive or fragile that mining would produce irreparable injury if it occurs even under the strictest standards?*

Yes. See (a).

18(d) *Does the law allow the prohibition or limitation of metal mining from an area where the ore body or surrounding rock contain so much naturally-occurring toxic materials or acid-forming materials that mining will produce irreparable injury even if it occurs under the strictest standards?*

Under the Territorial Lands Act this may be a possibility if the federal government was to determine such toxics or acid-forming materials would cause irreparable damage to an area they wanted to protect for its ecological, historical, cultural significance, or other public purpose.

18(e) *Does the process apply to any privately-owned lands? If so, please identify.*

The Territorial Lands Act only applies to Crown lands in the Northwest and Yukon Territories.

18(f) *Does the process allow exploration to be prohibited or limited?*

The Territorial Lands Act does have this potential in the event that the land management zone was of such ecological significance or importance to Native lifestyle as to warrant the exclusion of exploration activities.

It should be noted that although the federal government has regulated the activities allowed on some lands in the Territories, and withdrawn lands from prospecting and mining, this is not an everyday occurrence.

In general, areas protected under the Territorial Lands Act, the National Parks Act, and some Provincial Park Acts are exceptions to the general rule of free entry.

For example, a recent federal court case launched by a coalition of national and regional environmental groups against the approval of the Cheviot Coal mine on the edge of Jasper National Park helps reveal the difficulty in stopping a mine in an ecologically sensitive area. Jasper National Park is a UN delegated World Heritage Site and home to

numerous species endangered or at risk. Essentially, the only redress is through a court challenge aimed at the quality and rigour of the environmental assessment process, and not the ecological value of the land in any direct sense. Even though the mine proponents and governments admitted that there will be unmitigable damage to grizzly bear populations and other large carnivores, as well as rare species of fish and ducks, the mine was given approval to proceed to development. Despite UNESCO's diplomatic efforts to convince the Canadian and Alberta governments to not approve the mine, it continues on the course toward development. The environmental coalition lost their case in Federal Court, but has appealed to the Federal Appeal Court.

XII. INSTITUTIONAL ORGANIZATIONS

19(a) *Briefly identify and describe each government agency responsible for implementing the environmental laws and policies discussed above.*

Federal

Environment Canada – Canadian Environmental Assessment Act, Canadian Environmental Protection Act, Metal Mining Liquid Effluent Regulations, Accelerated Reduction/Elimination of Toxics Program.

Description

Environment Canada is responsible for most federal environmental legislation and regulations, with the exception of the general provisions under the Fisheries Act and the responsibilities the Department of Indian and Northern Affairs have for the Northern Territories. Although having fairly substantial legislative responsibilities, Environment Canada has had its budget decreased by one-third. These cuts are having serious implications for Environment Canada delivering on its legislative and regulatory responsibilities, especially enforcement.

Canadian Environmental Assessment Agency – responsible for administering the Canadian Environmental Assessment Act.

Description

See Introduction and 8(c).

Department of Fisheries and Oceans – Fisheries Act, Navigable Waters Protection Act.

Description

DFO is responsible for the environmentally powerful Fisheries Act. Like Environment Canada, DFO has suffered a significant reduction in its operating budget over the past three years and arguably its legislative responsibilities now outweigh its financial ability to meet them. Recent lawsuits won by environmental groups regarding the non-enforcement of the Fisheries Act and Navigable Waters Protection Act have helped make this point clear.

Office of the Auditor General – Commissioner of Environment and Sustainable Development.

Description

The Auditor General is a Parliamentary Officer who audits government operations and provides the information that helps Parliament hold the government to account for its stewardship of public funds. The Commissioner of Environment and Sustainable Development was established by amendment to the Auditor General Act in 1995 and is charged with setting up an office to expand and carry out the environmental auditing of government departments originally established by the Auditor General over the past decade.

Department of Indian Affairs and Northern Development (DIAND) – Yukon Quartz Mining Act, Yukon Placer Mining Act, Canada Mining Regulations, Territorial Lands Act, the Indian Act.

Description

DIAND is responsible for Native affairs, the Northwest and Yukon Territories and the Arctic. DIAND assumes a substantial environmental agenda respecting all northern territories, including the Arctic. DIAND is the only federal department not to have its funding cut over the past three years.

Department of Canadian Heritage – National Parks Act.

Description

The Department of Heritage is responsible for protecting culture, heritage, parks and promoting multiculturalism and Canadian unity. After the last federal election (April 1997), a new Secretary of State for Parks was established. The Secretary of State is in

charge of overseeing the operation of the national parks system, however the Minister of Canadian Heritage ultimately has legislative responsibility.

Office of the Information Commissioner – Access to Information Act,

Description

The Office of the Information Commissioner is established under the Access to Information Act and exists to conduct requests for information by the public.

Natural Resources Canada – Mine Environmental Neutral Drainage Program.

Description

Natural Resources Canada has no legislated mandate for the environmental regulation of mining, but operates as an advocate for mining interests within the federal bureaucracy. They are responsible for providing technical assistance to the mining industry (e.g. MEND) and for the undertaking the Geological Survey of Canada.

Provincial

Ontario

Ministry of Environment – Environmental Protection Act, Environmental Assessment Act, Environmental Bill of Rights, Metal Mining Sector Regulations, Ontario Water Resources Act.

Description

The Ontario Ministry of the Environment is responsible for environmental legislation and regulation in Ontario. The current provincial government has cut its budget by 37% and has made several key changes in the legislation and regulation, making it very difficult for the department to successfully fulfill its mandate.²⁵⁸ Historically a driving force for environmental protection in Ontario through such leading edge programs as the Municipal/Industrial Strategy for Abatement, its mandate has been significantly undermined by the present government.

Environmental Appeal Board

Description

Provides the public the opportunity to appeal an administrative decision made by the Ontario government with respect to the environment. It operates in a quasi-judicial manner but reports to the Minister of the Environment.

Environmental Assessment Board

Description

Any member of the public may request a hearing before the Environmental Assessment Board prior to the Minister of the Environment approving any assessment under the Ontario Environmental Assessment Act.²⁵⁹ It provides citizens with the opportunity to challenge major projects and land-use planning decisions. The board reports to the Minister of the Environment.

Ministry of Northern Development and Mines – Mining Act.

Description

The Ministry is responsible for promoting the interests of Northern Ontario and administering the Mining Act. The Ministry of Northern Development and Mines is a central advocate for the mining industry within the provincial government. The Ministry also provides technical assistance to the mining industry through the development of geophysical studies and mapping services.

Ministry of Natural Resources – Ontario Parks Act and Public Lands Act.

Description

The Ministry of Natural Resources regulates Ontario's resource extraction industries, including mining, the operation of gravel pits and quarries, commercial hunting and fishing and logging.²⁶⁰

Serious budget cuts over the past two years have reduced the Ministry of Natural Resources funding by 26% and eliminated 43% of its staff.²⁶¹ Over 2,000 positions were lost as a result of budget cuts. Like the Ministry of the Environment, it no longer has the staff to maintain its mandate to protect the province's environment and natural resources.

British Columbia

Ministry of Energy and Mines – Mines Act.

Description

Energy and Mines is responsible for the development of energy, mineral and metal resources in British Columbia. It regulates and inspects the exploration and production operations of British Columbia's oil, gas and mining industries. The Ministry is also responsible for British Columbia's Geological Survey.

Ministry of Environment, Lands and Parks – Waste Management Act, BC Environmental Assessment Act, Mines Act.

Description

The Ministry of Environment, Lands and Parks is responsible for the management, protection and enhancement of British Columbia's environment. Its mandate includes the protection, conservation and management of provincial fish, wildlife, water, land and air resources; the management and allocation of Crown land; and the protection and management of provincial parks, recreation areas and ecological reserves.

Newfoundland and Labrador

Department of Culture and Tourism -- Archeological Investigation Permit Regulations.

Description

Responsible for the part of the Newfoundland and Labrador economy that is under threat from mining exploration and mine development. The Department of Culture and Tourism is charged with various responsibilities including: transforming the province's natural and cultural attractions into opportunities for employment and revenue generation; administering, managing and planning a system of provincial parks, wilderness reserves and ecological reserves; protecting, preserving and developing the historic resources of the province.

Alberta

Department of Environmental Protection – Environmental Protection and Enhancement Act, environmental assessment regulation.

Description

The Ministry consists of two reporting agencies (Environmental Appeal Board and Natural Resources Conservation Board) as well as the Department of Environmental Protection. It is responsible for protecting water resources, air, forests, public land, fish, wildlife and parks.

Alberta Utilities and Energy Board – environmental assessments of coal mines and energy projects.

Description

Quasi-judicial board charged with carrying out the environmental assessment of energy projects, including coal mines. The Alberta Utilities and Energy Board is also responsible for the permitting process leading to coal mine development.

19(b) *If your country has a federal system of government, briefly describe the division of responsibility between the federal and other levels of government.*

See Introduction.

BIBLIOGRAPHY

Auditor General of Ontario. *1997 Provincial Auditor's Report*, Government of Ontario, Toronto, Ontario.

Barton, Barry J. *Canadian Mining Law*, Canadian Institute of Resources Law, University of Calgary, Calgary, Alberta, 1993.

Barton, Barry J., Barbara Roulston and Nancy Strantz. *Reference Guide to Mining Legislation in Canada*, Working Paper 8, The Canadian Institute of Resources Law, University of Calgary, Calgary, Alberta, September 1985.

Castrilli, Joseph F. "Environmental Control of the Mining Industry in Canada and Chile: A Comparative Review of Legal and Regulatory Requirements", The Canadian Environmental Law Association, October 1997.

Chambers, Colin. "Cheviot Coal Mine – Case Study" prepared for Federal Workshop on the Environmental Regulation of Mining, Canadian Environmental Network Mining Caucus, February 1998.

Commissioner of Environment and Sustainable Development. *1998 Report of the Commissioner of the Environment and Sustainable Development*, Office of the Auditor General, Government of Canada, Ottawa. Also available on the Web at: <http://www.oag>.

DeMarco, Jerry. "Summary of Presentation by Sierra Legal Defence Fund", Standing Committee on Environment and Sustainable Development Harmonization Hearings, Sierra Legal Defence Standing Committee Submission, February 24, 1998.

Environmental Mining Council of British Columbia, "The Mining Rights Amendment Act", Website: <http://www.miningwatch.org/emcbc/Default.htm>.

Estrin, David and John Swaigen, *Environment on Trial* (3rd. Edition), Canadian Institute for Environmental Law and Policy, Emond Montgomery Publications Limited, Toronto: 1993.

Flemming, John M. "A Review of Regulations Affecting the Mining Sector in Newfoundland and Labrador" for a Federal Review of Environmental Regulations Affecting Mining, Resource Concepts, March 1998.

Gallon, Gary. "Voluntary Environmental Measures: The Canadian Experience", Canadian Institute for Business and the Environment, Montreal, May 1997.

Gardiner, Elizabeth. "A Guide to the Management of Tailings Facilities", presented at the Canadian Institute of Mining, Metallurgy and Petroleum Annual Meeting in Montreal, Mining Association of Canada, May 7, 1998.

Hryciuk, Dennis. "New Rules Give Mining Companies Freer Reign", Edmonton Journal, December 15, 1997, A6.

MEND 2000 Program Office, Mineral Technology Branch, CANMET, Minerals and Metals Sector. "MEND 2000: Progress through Partnerships", Natural Resources Canada, Website: <http://catalog.NRCan.gc.ca:8082/cgi-bin/e/search.cgi>.

Miner, Richard B. (ed.) *Mining Law: From Staking to Production*, The Law Society of Upper Canada, Toronto, Ontario, April 1985.

Muldoon, Federal Court Justice. *NEWS RELEASE: Government of Canada Responds to Friend's of the Oldman River NAFTA Submission*, Friends of the Oldman River, July 20, 1998.

Northey, Rodney, Josephina D. Erzetic, Steven Rowe, Betsy A. Harvie and Franklin Gertler. *The Canadian Environmental Assessment Act: Putting the New Regime Into Practice*, The Canadian Environmental Defence Fund, January 1995.

Nikiforuk, Andrew. *The Nasty Game: The Failure of Environmental Assessment in Canada* (1997).

Prospectors and Developers Association of Canada and the Ontario Mining Association. "A New Approach For Mineral Development and Conservation of Biodiversity in Ontario", Lands for Life Submission, February 1998.

Reid, Stafford. "Statutes Relevant to Environmental Emergency Response in British Columbia", Resource Stewardship Branch Website, BC Environment, Lands and Parks; <http://www.env.gov.bc.ca/eeeb/statutes/statute.html>

Sierra Legal Defence Fund, *Digging Up Trouble: The Legacy of Mining in British Columbia*, May 1998.

Standing Committee on Environment and Sustainable Development. *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!*, Third Report, Ottawa, Canada, May 1998.

Standing Committee on Environment and Sustainable Development, *Harmonization and Environmental Protection: An Analysis of the Harmonization Initiative of the Canadian Council of Ministers of the Environment*, December 1997, First Report, House of Commons, Ottawa. Also available on the Parliamentary Website at: <http://www.parl.gc.ca>.

Winfield, Mark and Greg Jenish, *Ontario's Environment and the Common Sense Revolution: A Second Year Report*, Canadian Institute for Environmental Law and Policy, July 1997.

Winfield, Mark and Greg Jenish, *Ontario's Environment and the Common Sense Revolution: A Third Year Report*, Canadian Institute for Environmental Law and Policy, June 1998.

Winfield, Mark S., Glenna J. Ford and Gordon P. Crann. *Achieving the Holy Grail? A Legal and Political Analysis of Ontario's Environmental Bill of Rights*, Canadian Institute for Environmental Law and Policy, July 1995.

STATUTES AND REGULATIONS

Access to Information Act, Revised Statutes of Canada 1985, Chapter 111.

British Columbia Environmental Assessment Act, Revised Statutes of British Columbia 1996, Chapter 119.

Canadian Environmental Assessment Act (CEAA), Statutes of Canada 1995

- *Comprehensive Study List Regulations*, Section 16.

Canadian Environmental Protection Act (CEPA), Statutes of Canada 1988, Chapter 22.

Environmental Protection Act, Revised Statutes of Ontario 1990, Chapter E-19.

- *Effluent Monitoring and Effluent Limits-Metal Mining Sector O. Reg. 560/94*.

Environmental Assessment Act, Statutes of Ontario 1990, Chapter E-18.

Fisheries Act, Revised Statutes of Canada 1985, Chapter F-14.

- *Metal Mining Liquid Effluent Regulations (C.R.C., c. 819)*

Mines Act, Revised Statutes of British Columbia 1996, Volume 8, Chapter 293.

Mining Act, Revised Statutes of Ontario 1990, Chapter M.14.

Navigable Waters Protection Act, Revised Statutes of Canada 1985, Chapter N-19.

National Parks Act, Revised Statutes of Canada 1985, Chapter N-13.

Territorial Lands Act, Statutes of Canada 1985, Chapter T-6.

Waste Management Act, Revised Statutes of British Columbia 1996, Chapter 482.

Yukon Quartz Mining Act, Statutes of Canada 1996, Chapter 27.

Yukon Placer Mining Act, Statutes of Canada 1996, Chapter 27.

- *Mining Land Use Regulations*

PROPOSED LEGISLATION

Bill C-32, *An Act Respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development*, First Reading
March 12, 1998.

¹ Barry J. Barton, *Canadian Mining Law*, Canadian Institute of Resources Law, Calgary, 1993, Pg. 7

² *Ibid.*, 10.

³ *Ibid.*, 8.

⁴ *Ibid.*, 28.

⁵ *Ibid.*, 28-9.

⁶ *Ibid.*, 32.

⁷ *Ibid.*, 193.

⁸ *Ibid.*, 192.

⁹ *Ibid.*

¹⁰ David Estrin and John Swaigen, *Environment on Trial* (3rd Edition), Canadian Institute for Environmental Law and Policy, Emond Montgomery Publications Limited, Toronto: 1993, 553.

¹¹ *Ibid.*

¹² *Ibid.*, 65.

¹³ *Fisheries Act*, Revised Statutes of Canada 1985, Chapter F-14, section 34.

¹⁴ *Ibid.*, section 36.

¹⁵ AQUAMIN Working Groups 7 and 8, Assessment of the Aquatic Effects of Mining in Canada: AQUAMIN Final Report, April 30, 1996, 2.

¹⁶ Jerry DeMarco, *Summary of Presentation by Sierra Legal Defence Fund*, Standing Committee on Environment and Sustainable Development Harmonization Hearings, Standing Committee Submission, 2.

¹⁷ *Navigable Waters Protection Act*, Revised Statutes of Canada 1985, Chapter N-19, 5(a-c).

¹⁸ Joseph F. Castrilli, *Environmental Control of the Mining Industry in Canada and Chile: A Comparative Review of Legal and Regulatory Requirements*, The Canadian Environmental Law Association, October 1997, 30.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Canadian Environmental Assessment Act* (CEAA), Statutes of Canada 1995, Chapter N-22.

²³ Rod Northey et al., *The Canadian Environmental Assessment Act: Putting the New Regime Into Practice*, The Canadian Environmental Defence Fund, January 1995, 3.

²⁴ *Ibid.*, 2-5.

²⁵ CEAA, Section 16(1).

²⁶ *Ibid.*, Section 16(2).

²⁷ Northey et al., 4-5.

²⁸ Northey et al., 30.

²⁹ *Ibid.*

³⁰ *Ibid.*, 30-31.

³¹ *Ibid.*, 33.

³² CEAA, Section 48(1).

³³ *Ibid.*, 121.

³⁴ *Ibid.*, 121-22.

³⁵ Barton, 80.

³⁶ Ministry of Aboriginal Affairs Province of British Columbia, "Aboriginal Rights and the Delgamuukw Decision", at website: <http://www.aaf.gov.bc.ca/aaf/pubs/abrights.htm>, 1.

³⁷ "Guide to the Canada-wide Accord on Environmental Harmonization", Environment Canada Website, http://www.mbnet.mb.ca/ccme/3e_priorities/3ea_harmonization/3ea1_%20accord/3ea1a.html

³⁸ *Pollution Prevention: A Federal Strategy for Action*, Environment Canada, June 1995, at website: http://www.ec.gc.ca/pollution/strategy/pl_t_e.htm.

³⁹ The Friends of the West Country, "Sunpine Decision Appealed", Media Release, September 28, 1998.

⁴⁰ Dennis Hryciuk, "Review of logging road's impact must go ahead; Federal Court upholds ruling

-
- on Rocky Mountain House project”, *Edmonton Journal*, November 25, 1998, A6.
- ⁴¹ Andrew Nikiforuk, *The Nasty Game: The Failure of Environmental Assessment in Canada* (1997).
- ⁴² Federal Court Justice Muldoon, NEWS RELEASE: Government of Canada Responds to Friends of the Oldman River NAFTA Submission, Friends of the Oldman River, July 20, 1998.
- ⁴³ Estrin and Swaigen, 194.
- ⁴⁴ Ibid.
- ⁴⁵ Estrin and Swaigen, 193.
- ⁴⁶ Ibid., 194.
- ⁴⁷ Ibid.
- ⁴⁸ Ibid.
- ⁴⁹ Castrilli, 24.
- ⁵⁰ Ibid.
- ⁵¹ Ibid., 23.
- ⁵² Ibid., 2.
- ⁵³ Ibid, 25.
- ⁵⁴ Environmental Mining Council of British Columbia, “British Columbia Environmental Assessment Act Changes”, *Environmental Action Mining Alert*, November 12, 1998. Can be found at: <http://www.miningwatch.org/emcbc/Default.htm>
- ⁵⁵ Ibid.
- ⁵⁶ Castrilli, 24.
- ⁵⁷ Ibid., 26.
- ⁵⁸ Ibid.
- ⁵⁹ Northey et al., 80-81.
- ⁶⁰ Ibid.
- ⁶¹ Castrilli, 23.
- ⁶² Ibid., 26.
- ⁶³ Northey et al., 106.
- ⁶⁴ *Comprehensive Study List Regulations*, Section 16.
- ⁶⁵ Northey et al., 92.
- ⁶⁶ Estrin and Swaigen, 553.
- ⁶⁷ Ibid.
- ⁶⁸ Castrilli, 25.
- ⁶⁹ Canadian Press, “Government Panel Failed in Reviews of Mine”, March 1, 1999.
- ⁷⁰ Ibid.
- ⁷¹ Rod Northey, *Evidence*, Standing Committee on Environment and Sustainable Development, October 28, 1997.
- ⁷² Standing Committee on Environment and Sustainable Development, *Harmonization and Environmental Protection: An Analysis of the Harmonization Initiative of the Canadian Council of Ministers of the Environment*, December 1997, House of Commons, Ottawa, 13.
- ⁷³ Castrilli, 22.
- ⁷⁴ Ibid.
- ⁷⁵ Rod Northey, Canada-wide Accord on Environmental Harmonization Hearings, Evidence before the Standing Committee on Environment and Sustainable Development, Tuesday October 28, 1997.
- ⁷⁶ Sub-agreement on Environmental Assessment, Draft Text, Canada-wide Accord on Environmental Harmonization, Section 4.3.
- ⁷⁷ Northey et al., 116.
- ⁷⁸ Ibid.
- ⁷⁹ Estrin and Swaigen, 209.
- ⁸⁰ Northey et al., 133.
- ⁸¹ Andrew Nikiforuk, *The Nasty Game: The Failure of Environmental Assessment in Canada*, January, 1997, 12.
- ⁸² Ibid.
- ⁸³ Northey et al., 133-34.
- ⁸⁴ Estrin and Swaigen, 207.
- ⁸⁵ Ibid., 208.

-
- ⁸⁶ Ibid.
- ⁸⁷ Sierra Legal Defence Fund, *Digging Up Trouble: The Legacy of Mining in British Columbia*, May 1998, 12.
- ⁸⁸ Estrin and Swaigen, 212-13.
- ⁸⁹ Sierra Legal Defence Fund, *Digging Up Trouble*, 13.
- ⁹⁰ CEAA, Section 2(1)(a) and (b).
- ⁹¹ CEAA, Section 16(2c).
- ⁹² Northey et al., 79.
- ⁹³ Ibid.
- ⁹⁴ Northey et al., 106-7.
- ⁹⁵ *1998 Report of the Commissioner of the Environment and Sustainable Development*, Government of Canada, Chapter 6, Paragraphs 6.86-6.89.
- ⁹⁶ Ibid.
- ⁹⁷ Ibid.
- ⁹⁸ Kevin O'Reilly, *The BHP Independent Environmental Monitoring Agency as a Management Tool*, prepared for the Labrador Inuit Association for the Voisey's Bay Environmental Assessment Panel, Canadian Arctic Resources Committee, Ottawa, October 1998. Can also be found at <http://www.carc.org/rndtable/vbpanels.html#1>.
- ⁹⁹ Ibid. All bulleted points taken from the preceding report by Kevin O'Reilly.
- ¹⁰⁰ Ibid.
- ¹⁰¹ Ibid.
- ¹⁰² British Columbia Environmental Assessment Act, Revised Statutes of British Columbia 1995, Chapter 119, section 67(1).
- ¹⁰³ Ibid., section 68(1).
- ¹⁰⁴ Ibid., section 68(1)(a).
- ¹⁰⁵ Ibid., section 68(1)(b).
- ¹⁰⁶ Ibid., section 69(1).
- ¹⁰⁷ Ibid., section 70(1).
- ¹⁰⁸ Ibid., section 70(2).
- ¹⁰⁹ *1997 Provincial Auditor's Report*, Government of Ontario, Paragraph 3.07.
- ¹¹⁰ Castrilli, 10.
- ¹¹¹ Mark S. Winfield, Glenna J. Ford and Gordon P. Crann. *Achieving the Holy Grail?: A Legal and Political Analysis of Ontario's Environmental Bill of Rights*, Canadian Institute for Environmental Law and Policy, 42.
- ¹¹² Jerry DeMarco, *Summary of Presentation by Sierra Legal Defense Fund*, Standing Committee on Environment and Sustainable Development Harmonization Hearings, Standing Committee Submission, 3.
- ¹¹³ Winfield, Ford and Crann, 43.
- ¹¹⁴ Ibid., 42.
- ¹¹⁵ Ibid., 44-5.
- ¹¹⁶ Ibid., 45.
- ¹¹⁷ *Canadian Environmental Protection Act*, Statutes of Canada 1988, Chapter 22, section 108(1).
- ¹¹⁸ Ibid., section 108(2).
- ¹¹⁹ Ibid., section 109(1).
- ¹²⁰ Ibid., section 109(2).
- ¹²¹ Ibid., section 109(3) and (4).
- ¹²² Ibid, section 110.
- ¹²³ Winfield, Ford and Crann, 39.
- ¹²⁴ Ibid.
- ¹²⁵ Ibid., 38.
- ¹²⁶ Ibid., 39.
- ¹²⁷ Ibid., 39.
- ¹²⁸ Ibid., 40.
- ¹²⁹ Ibid., 40.
- ¹³⁰ Estrin and Swaigen, 553.
- ¹³¹ CEAA, Section 13.

-
- ¹³² Estrin and Swaigen, 200.
- ¹³³ *Yukon Quartz Mining Land Use Regulations*, Canada Gazette, Part I (PDF format), Volume 132, No. 30, July 25, 1998, 82.
- ¹³⁴ *Ibid.*, 83.
- ¹³⁵ *Ibid.*
- ¹³⁶ *Ibid.*
- ¹³⁷ *Ibid.*
- ¹³⁸ *Ibid.*
- ¹³⁹ *Yukon Quartz Mining Land Use Regulations*, Proposed Regulatory Text, Canada Gazette, Part I (PDF format), Volume 132, No. 30, July 25, 1998, Section 18.
- ¹⁴⁰ Sierra Legal Defence Fund, 13.
- ¹⁴¹ Mines Act, Chapter 293, Revised Statutes of British Columbia 1996, Volume 8, Section 10(2).
- ¹⁴² John M. Flemming, *Review of Regulations Affecting the Mining Sector in Newfoundland and Labrador Resource Concepts*, for Federal Review of Environmental Regulations Affecting Mining, March, 1998, 12.
- ¹⁴³ Dennis Hryciuk, "New Rules Give Mining Companies Freer Reign", *Edmonton Journal*, December 15, 1997, A6.
- ¹⁴⁴ Mark Winfield and Greg Jenish, *Ontario's Environment and the Common Sense Revolution: A Second Year Report*, Canadian Institute for Environmental Law and Policy, 106.
- ¹⁴⁵ *Yukon Quartz Mining Act*, Statutes of Canada 1996, Chapter 27, Sections 148 and 149.
- ¹⁴⁶ *Mines Act*, Revised Statutes of British Columbia 1996, Volume 8, Chapter 293, Section 10(7).
- ¹⁴⁷ *Yukon Quartz Mining Act*, Section 143.
- ¹⁴⁸ Barton, 18.
- ¹⁴⁹ *Mines Act*, Revised Statutes of British Columbia 1996, Volume 8, Chapter 293, Section 10(2).
- ¹⁵⁰ *Ibid.*, Section 10(1).
- ¹⁵¹ Sierra Legal Defence Fund, 13.
- ¹⁵² *Ibid.*
- ¹⁵³ *Ontario Mining Act*, Revised Statutes of Ontario 1990, Chapter M.14, Section 139(1).
- ¹⁵⁴ *Ibid.*, Sections 141(1) and (2).
- ¹⁵⁵ *Mines Act*, Revised Statutes of British Columbia 1996, Volume 8, Chapter 293, Section 10(6).
- ¹⁵⁶ *Ibid.*, Section 10(7).
- ¹⁵⁷ *Ibid.*, Section 144(4a).
- ¹⁵⁸ *Ibid.*, Section 144(4b).
- ¹⁵⁹ *Ibid.*, Section 144(5).
- ¹⁶⁰ Sierra Legal Defence Fund, 13.
- ¹⁶¹ *Ibid.*
- ¹⁶² Health, Safety Code and Reclamation Code for Mines in British Columbia, Dams and Waste Emplacements, Part IX, Section 9.2.1(1). Ministry of Energy and Mines, Website:
- ¹⁶³ *Ibid.*, Section 9.2.1 (3) and 9.2.2.
- ¹⁶⁴ *Ibid.*, Section 10.1.2 (3d) and (3f).
- ¹⁶⁵ *Ontario Mining Act*, Section 142(1) and (2).
- ¹⁶⁶ *Mines Act of British Columbia*, Section 10(4).
- ¹⁶⁷ Winfield, Year 2 Report, 106.
- ¹⁶⁸ *Ibid.*
- ¹⁶⁹ *Ibid.*
- ¹⁷⁰ *Ontario Mining Act*, Section 142(1) and (2).
- ¹⁷¹ Sierra Legal Defence Fund, 13.
- ¹⁷² *Mines Act of British Columbia*, Sections 27 and 36.
- ¹⁷³ *Ibid.*, Section 10(6) and (7).
- ¹⁷⁴ The following points are taken from the Policy for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia, Ministry of Energy and Mines and Ministry of Environment, Lands and Parks, July 1998.
- ¹⁷⁵ Sierra Legal Defence Fund, 13.
- ¹⁷⁶ *Ibid.*
- ¹⁷⁷ *Ibid.*, 14.
- ¹⁷⁸ Castrilli, 46.

-
- ¹⁷⁹ Barton, 24.
- ¹⁸⁰ Sierra Legal Defence Fund, 13.
- ¹⁸¹ *Mining Act*, Chapter M.14, Section 147(1) and (2).
- ¹⁸² Bill C-32, *An Act Respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development*, First Reading March 12, 1998, Minister of the Environment, Ottawa, 136.
- ¹⁸³ Castrilli, 30.
- ¹⁸⁴ Stafford Reid, Resource Stewardship Branch Website, BC Environment, Lands and Parks; <http://www.env.gov.bc.ca/eeeb/statutes/statute.html>
- ¹⁸⁵ Bill C-32, 136.
- ¹⁸⁶ *Waste Management Act*, Revised Statutes of British Columbia 1996, Chapter 482, Section 12(2)(a).
- ¹⁸⁷ Bill C-32, 136.
- ¹⁸⁸ Environmental Mining Council of British Columbia, "The Mining Rights Amendment Act", Website: <http://www.miningwatch.org/emcbc/Default.htm>.
- ¹⁸⁹ Winfield and Jenish, Year 2 Report, 106.
- ¹⁹⁰ Castrilli, 13.
- ¹⁹¹ Winfield and Jenish, Year 2 Report, 106.
- ¹⁹² *Mines Act*, Section 10(4a).
- ¹⁹³ Flemming, 13.
- ¹⁹⁴ Castrilli, 35.
- ¹⁹⁵ *Ibid.*, 37.
- ¹⁹⁶ *Yukon Quartz Mining Act*, Section 139(3) and (4).
- ¹⁹⁷ Winfield, Ford and Crann, 20.
- ¹⁹⁸ Castrilli, 38-39.
- ¹⁹⁹ Winfield, Ford and Crann, 27.
- ²⁰⁰ *Ibid.*, 29.
- ²⁰¹ *Ibid.*
- ²⁰² Standing Committee on Environment and Sustainable Development, *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!*, Third Report, May 1998, Recommendations 3 and 23.
- ²⁰³ Estrin and Swaigen, 522
- ²⁰⁴ *Ibid.*
- ²⁰⁵ *Ibid.*
- ²⁰⁶ *Fisheries Act*, Revised Statutes of Canada 1985, Chapter F-14, section 78(2).
- ²⁰⁷ *Ibid.*, section 79.
- ²⁰⁸ Estrin and Swaigen, 522.
- ²⁰⁹ *Ibid.*
- ²¹⁰ Castrilli, 37.
- ²¹¹ Estrin and Swaigen, 455.
- ²¹² *Ibid.*
- ²¹³ *Environmental Protection Act*, Revised Statutes of Ontario 1990, Chapter E-19, section 190(1).
- ²¹⁴ *Ontario Water Resources Act*, Revised Statutes of Ontario 1990, Chapter O-40, section 108(1).
- ²¹⁵ *Ibid.*, section 108(2).
- ²¹⁶ *Mines Act*, section 39(3).
- ²¹⁷ *Mines Act*, section 39(4).
- ²¹⁸ Barton, 18.
- ²¹⁹ *Yukon Quartz Mining Act*, Section 143 (1c).
- ²²⁰ Estrin and Swaigen, 453.
- ²²¹ *Ibid.*
- ²²² *Ibid.*
- ²²³ *Ibid.*
- ²²⁴ Barton, 23.
- ²²⁵ *Ibid.*, 25-26.
- ²²⁶ Sierra Legal Defence Fund, 7.
- ²²⁷ Environmental Mining Council of British Columbia, website.
- ²²⁸ Sierra Legal Defence Fund, *Digging Up Trouble*, 46.

-
- ²²⁹ Bill C-32, Schedule 1, 218.
- ²³⁰ Castrilli, 30.
- ²³¹ Metal Mining Liquid Effluent Regulations (C.R.C., c. 819), Section 5(2).
- ²³² Estrin and Swaigen, 523.
- ²³³ Ontario Environmental Protection Act, Effluent Monitoring and Effluent Limits – Metal Mining Sector Regulation, 560/94, s. 6 and 7.
- ²³⁴ *Ibid.*, s.19.
- ²³⁵ Metal Mining Liquid Effluent Regulations (C.R.C., c. 819), Section 6(a).
- ²³⁶ Ontario Environmental Protection Act, Effluent Monitoring and Effluent Limits-Metal Mining Sector O. Reg. 560/94, Sections 34 and 35.
- ²³⁷ *MEND 2000: Progress through Partnerships*, MEND 2000 Program Office, Mineral Technology Branch, CANMET, Minerals and Metals Sector, Natural Resources Canada, Website: <http://catalog.NRCan.gc.ca:8082/cgi-bin/e/search.cgi>.
- ²³⁸ Sierra Legal Defence Fund, 13.
- ²³⁹ Colin Chambers, *Cheviot Coal Mine – Case Study*, prepared for Federal Workshop on the Environmental Regulation of Mining, Canadian Environmental Network Mining Caucus, 2.
- ²⁴⁰ Access to Information Act, Revised Statutes of Canada 1985, Chapter 111, Subsection 2(1)
- ²⁴¹ Estrin and Swaigen, 627.
- ²⁴² *Ibid.*
- ²⁴³ Elizabeth Gardiner, *A Guide to the Management of Tailings Facilities*, presented at the Canadian Institute of Mining, Metallurgy and Petroleum Annual Meeting, Montreal, May 7, 1998.
- ²⁴⁴ ARET Secretariat, *Environmental Leaders 2: Accelerated Reduction/Elimination of Toxics Progress Report*, National Office of Pollution Prevention, Environment Canada, January 1997, Chapter 1.
- ²⁴⁵ *Ibid.*
- ²⁴⁶ *Ibid.*
- ²⁴⁷ Gary Gallon, *Voluntary Environmental Measures: The Canadian Experience*, Canadian Institute for Business and the Environment, Montreal, May 1997.
- ²⁴⁸ Winfield and Jenish, Year 2 Report, 107.
- ²⁴⁹ *Ibid.*
- ²⁵⁰ National Parks Act, Revised Statutes of Canada 1985, Chapter N-13, Section 7(a) and (b).
- ²⁵¹ Estrin and Swaigen, 292.
- ²⁵² *Ibid.*
- ²⁵³ *Ibid.*, 285.
- ²⁵⁴ Prospectors and Developers Association of Canada and the Ontario Mining Association, *A New Approach For Mineral Development and Conservation of Biodiversity in Ontario*, Lands for Life Submission, Principle 4, 6.
- ²⁵⁵ *Ibid.*, Principle 1,3.
- ²⁵⁶ Estrin and Swaigen, 296.
- ²⁵⁷ *Territorial Lands Act*, Statutes of Canada 1985, Chapter T-6, s. 24.
- ²⁵⁸ Winfield and Jenish, Year 2 Report, 2.
- ²⁵⁹ Estrin and Swaigen, 37.
- ²⁶⁰ *Ibid.* 35.
- ²⁶¹ Winfield and Jenish, Year 2 Report, 37