

MINING'S MANY FACES

Environmental Mining Law And Policy in Canada



The Canadian Institute for Environmental Law and Policy

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Cover photograph of Luscar Ltd., Cardinal River Mine southwest of Hinton, in Alberta's Eastern Slopes near Jasper National Park, by Sam Gunsch, CPAWS - Edmonton.

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PREFACE

This report's origins are with an initiative launched by the Environmental Law Institute in 1995. The *Pollution Prevention in Mining in the Americas* Project brought together environmental law centres in the United States, Canada, Argentina, Bolivia, Peru, Mexico and Brazil to examine their national environmental laws related to the planning, design, operation and closure of metal mining operations in the Americas.

Given the high level of investment by Canadian mining companies in Latin America over the past decade, and the environmental and social impacts of these activities, the Latin American partners in this project were particularly interested in obtaining a description and assessment of the requirements in place in Canada.

The first phase of the project, the development of responses by the project partners, including the Canadian Institute for Environmental Law and Policy (CIELAP), to a series of common research questions, was completed in fall of 1999 with the support of the U.S. Aid for International Development (USAID).

Canada's International Development Research Centre (IDRC) which had launched a Mining Policy Research Initiative in Latin America in 1998, then agreed to provide resources to CIELAP to develop the Canadian responses to research questions into a publishable report, and to translate its key findings into Spanish. This reflected the lack of comprehensive baseline information on environmental law and policy applicable to metal mining in Canada, and the demand for such materials in Latin America and Canada.

The resulting study, *Mining's Many Faces: Environmental Mining Law and Policy in Canada* is intended to provide an introductory overview of current environmental laws and policies applicable to the metal mining sector, major policy trends, and the politics of mineral development in Canada. It also provides an assessment of the existing regime relative to the requirements of a fair and effective system for the environmental regulation of metal mining activities.

It is our hope that this study will contribute to informed discussion and debate about the future of mineral development in the Americas, and its relationship to environmental, social and economic sustainability.

Anne Mitchell, Executive Director
Canadian Institute for Environmental Law and Policy

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PART ONE: INTRODUCTION & ELEMENTS OF A FAIR REGIME

1.1 Introduction: The Purpose of this Report

The ‘different takes’ on mining on the following page and throughout in this report illustrate the many faces of mining in Canada.

All over the world, mining has been and continues to be a mixed blessing. On the one hand, it generates wealth for companies, communities and countries. And, of course, metals and other mined materials are an integral part of human life on this planet. On the other hand, mining generates huge amounts of waste and pollution, disrupts indigenous livelihoods and local economies, destroys natural habitat and can leave a toxic legacy — acid mine drainage — that persists for hundreds of years.

This report provides an overview of environmentally-focused mining law and policy in Canada, with a special emphasis on metal mining, to shed light on how one of the world’s most mineral-rich countries manages the mixed blessing of virgin mineral extraction. While Canadian government agencies and Canadian mining companies lay claim to progressive and effective laws and practices, the record shows there is more to the story than these sources tell.

In part, it is the purpose of this report to identify gaps and distortions in the ‘official’ version of mining in Canada. It is also the purpose of this report to hold Canadian mining law up to a standard of a fair and effective regime and gauge how well it compares.

1.1.1 Summary of findings

Canadian mining jurisdictions have established regulations and policies which fail to meet the criteria for a fair and effective regime outlined in this report. Rather the existing system is characterized by the following features:

Exploration and Land Access

- ❖ a land access system that provides a *prima facie* privilege to mining rights over all others;
- ❖ an unfinished protected area system, where the security of existing protected areas is under threat from mineral development and the establishment of new areas is complicated by the granting of enhanced security and compensation rights for existing and new mineral tenure.
- ❖ a system that fails to adequately control the environmental impacts of exploration activities, or ensure that environmental damage done by such activities is remediated.

Assessment of Impact of Mining Operations

- ❖ an environmental assessment system that at best seems only able to achieve orders to mitigate environmentally damaging mining activities, rather than providing for a full and fair consideration of the potential environmental, social and economic costs and benefits of projects. The possibility of a decision not to proceed does not appear to be an available option.
- ❖ follow-up and enforcement of conditions imposed through federal and provincial environmental assessment processes are weak or non-existent.

Controls on Mining Operations

- ❖ federal pollution control requirements are limited to discharge regulations which are more than 20 years old and do not apply to all mines. Only Ontario has adopted modern water pollution control regulations in relation to the metal mining sector.
- ❖ reduced enforcement of existing pollution prevention and control requirements through budgetary reductions at the federal and provincial levels.
- ❖ few effective mechanisms for citizen monitoring and enforcement of environmental protection requirements.

Mechanisms to Ensure Industry Responsibility for Mine Closure and Remediation

- ❖ mine closure regimes which have failed to protect the public from the costs of cleaning up abandoned and bankrupt mines, and which are currently being weakened.
- ❖ an increasing readiness on the part of lawmakers to assume public liability for environmental damage caused by mining.

Policies to Stimulate Alternatives to Virgin-Metal Mining

- ❖ policies designed to keep the prices of metals and minerals artificially low, through a combination of externalized environmental and social costs, and direct and indirect subsidies, for the purpose of increasing both domestic consumption and exports of new metals and materials

Mining's "Footprint," Take One

"Most mining operations including the mine, mill, access roads and tailings take up less than five square kilometres. All of Ontario's past and present mines together occupy about 250 square kilometers ¼ only about 0.03 percent of Ontario's total land area."¹

Ontario Mining Association, "Mining In Ontario: A Wealth of Opportunity A Wealth of Benefits," (Toronto: Ontario mining Association, no date), p. 15.

Take Two

"Mines and smelters take up to a tenth of all the energy used [world-wide] each year... the waste left by mining measures in the billions of tonnes... more material is now stripped from the earth by mining than by all the natural erosion of the earth's rivers."

John E. Young, "Mining the Earth," Worldwatch Paper 109, July 1992, p. 5.

Take Three

"What harm is a ten acre mine in a park of 500,000 acres? The mine requires a hydroelectric development, a portable sawmill for pit props, a tailings disposal site, a mining mill site, mill effluent disposal sites, many roads, a camp, barge shipping and tugs on a major lake, loading out works, then a highway through the park all for just a starter. That 10 acre hole influences 100,000 acres of the choicest part of the park."

BC Mining Watch, Fact Sheet #2 — The Impact of Mining on the Environment

Elliot Lake, Take One

"Denison Mines Limited and Rio Algom mined uranium in Elliot Lake for nearly 40 years. With 95 percent of uranium removed from the ore; only traces of naturally occurring uranium, thorium and pyrite remain present in the tailings. Tailings are now under permanent water cover to protect the local watershed."

Ontario Mining Association, "Mining In Ontario: A Wealth of Opportunity A Wealth of Benefits," (Toronto: Ontario Mining Association, no date) p. 12.

Take Two

"There are over 200 million tonnes of radioactive tailings in the Elliot Lake Basin on the north shore of Lake Huron. The International Joint Commission identifies this as the largest single point source of radium in the entire Great Lakes Basin. The tailings are up to 99 per cent of the weight of the original ore and retain up to 85 percent of the ore's original radioactivity... The tailings are also acid-generating... [and] include many toxic chemicals and heavy metals such as acids arsenic, ammonia, nitrates, lead, zinc and cadmium."

Great Lakes United, "Our Lakes Our Health Our Future," A Presentation to the International Joint Commission, September 22-25, 1995, page 27.

1.2 Baseline Presumptions Informing the Analysis

This report builds the basic objectives of a fair and effective mining regime on the following presumptions:

- a) Mining is both an economically beneficial use of land and an environmentally destructive use of land.
- b) For every mine site there are alternative uses of the land the value (economic and otherwise) of which may be equal to or greater than the value of the mine especially when the costs of clean-up and social and environmental disruption are included in the calculation. (See text box on page 10: Mount Washington Copper Mine.)
- c) The mining industry is prone to a high degree of technical and economic risk. The environmental, social and economic costs to the public of technical or economic failure can be and often are extremely high. (See text box on page 12: Mount Nansen Gold Mine.)
- d) It is government's role to put laws in place to give full consideration to all of the social and economic costs, risks and benefits and to control the negative impacts of mining as much as possible.

1.3 Elements of a Fair and Effective Mining Regime

A fair and effective regime would include laws, policies and procedures which would as predictably and consistently as possible provide for the following:

1.3.1 Controls on Exploration and Land Access

An effective and fair regime sets out where society has determined that the ecological, recreational, or cultural value of certain land is greater than any value to be accrued by mining, and provides for clear demarcation of these areas as places where mining is not permitted. Where exploration is permitted an effective regime has controls in place to respect the needs of other users of the land, protect sensitive areas, limit the destruction of natural habitat and protect biodiversity.

Neither Grown Nor Mined

Overhauling materials practice will require policies that steer economies away from forests, mines and petroleum stocks as the primary source of materials and away from landfills and incinerators as cheap disposal options. Businesses and consumers need to be encouraged to reduce dependence on virgin materials and to tap the rich flow of currently wasted resources through product reuse, remanufacturing or sharing or through materials recycling.

Gary Gardner and Payal Sampat, "Forging a Sustainable Materials Economy," State of the World Report 1999, (Washington: WorldWatch Institute, 1999) p.55.

1.3.2 Assessment of Impact of Mining Operations

An effective and fair regime ensures that the short-term economic benefits of mining activities do not create longer-term and costly environmental liabilities. It should provide for full and fair consideration of the social, cultural, economic and ecological values of the site of a proposed mine operation, especially the value ascribed by indigenous peoples. In addition, it should provide for a full assessment of the social, cultural and environmental impacts of a mine, before, during and after operations. It must also provide for public participation in the assessment process, and provide an impartial decision, after the economic and environmental costs and benefits have been assessed, of whether or not a mining project is to proceed.

1.3.3 Controls on Mining Operations - Permits, Approvals, Pollution Prevention and Waste Management

An effective and fair regime provides for laws and regulations adequate to prevent the generation or release of contaminants or wastes which may harm human health or the environment. It must also provide enough resources for the effective monitoring and enforcement of these requirements through all stages of mining from exploration to closure and remediation.

1.3.4 Mechanisms to Ensure Industry Responsibility for Closure, Remediation and Reclamation of Abandoned Mines

An effective and fair regime prevents taxpayers from being left to pay for billions of dollars worth of clean-up costs from closed or abandoned mines. The regime would provide for the internalization of closure and post-closure care costs by mine operators: requirements for closure plans at the time of mine approval and realizable financial assurances for remediation costs in the case of abandonment or bankruptcy (the polluter pays principle).

1.3.5 Policies to Stimulate Alternatives to Virgin-Metal Mining

An effective regime would include resource policies that create incentives to find alternatives to virgin-materials mining. Governments should “consider the economic and policy instruments necessary for the move towards greater mineral efficiency:... incentives for reduction in per capita consumption rates, eco-efficient extraction, production and design and maximizing rates of metals recovery and re-use.”¹ (See text box on page 9: Neither Grown Nor Mined.)

Mount Washington Copper Mine, Vancouver Island, British Columbia

For thousands of years, the Tsolum River on Vancouver Island ran clean and clear from its source near Mount Washington. Flowing to the Courtenay Estuary, the river ran thick with coho, pink, chum and cutthroat salmon and steelhead trout that weighed up to 10.5 kilograms. [In] 1964, the Mt Washington Copper Mining Co. moved into the upper Tsolum watershed and began a small (13 hectare) open-pit copper mine. The company took out 360,000 tonnes of ore and 940,000 tonnes of waste rock in three years of operation. The company went into receivership and abandoned the mine in 1966.

Father Charles Brandt moved to the Tsolum River area in 1965. For the next 30 years he watched the Tsolum River fishery die. A government report states: “After 1966, the coho has declined steadily from 15,000 to a low of 14 in 1987” and concludes “the fisheries resource is believed to have declined predominantly because of Acid Mine Drainage from Mount Washington.” It has been estimated that the loss of the fishery, combined with millions of taxpayer dollars spent for mine clean-up, have cost at least \$60 million so far.

PART TWO: THE POLITICAL AND POLICY ENVIRONMENT FOR MINING REGULATION IN CANADA

2.1 Introduction

The sections that follow describe the political and policy context for mining law and the existing legal regime pertaining to environmental protection and mining in Canada.

The image that emerges is of a legal regime both highly changeful and under a great deal of stress. Change arises from a complex mix of factors: globalization of the economy, deregulation, Canadian federal/provincial relations, the influence of the mining industry on regulators and a prevailing assumption that virgin-materials mining and consumption must not only continue at its present rate, but “grow.”

Pressures on the regime also arise from aboriginal communities, grassroots organizations, national environmental advocacy groups (ENGOs) and other non-government groups. The former groups — government and industry — put one kind of stress on the regime: advocating less regulation, reduced monitoring and enforcement, restricted public participation, exemptions from liability and weaker protection for Canada’s wilderness. These pressures are both direct, through industry demands for changes to regulations and policies, and indirect, by way of government reductions to the budgets and capacities of regulatory agencies.

Industry Feels Pressure Of The Global Economy

“Today, mining countries face special challenges in attracting investment. For one thing, we live in a time of rapid political change. Globalization has revealed new opportunities for investment and has increased competition for mining capital.

“Canada built its modern economy on natural resources. Today, most Canadians live in large cities. They know very little about the natural resource industries, the sources of our material wealth.

“Public attitudes reflect this ignorance. Surveys the MAC [Mining Association of Canada] carried out from 1987 showed that many Canadians had negative attitudes toward mining. In particular, most said they did not trust the industry or its leaders. Mining was described as a dirty, dangerous industry which does not care for the environment. We also polled decision leaders in government and the news media and found even stronger negative stereotypes.

“Government policies began to move in an adverse direction. The result was predictable. Mining investment in Canada fell dramatically. A two-year study of Canada’s business climate for mining, completed in 1992, revealed serious problems. Exploration spending, which had reached a peak of more than a billion Canadian dollars in 1987, fell dramatically to less than half of that figure by 1990. Capital investment in mining, as a share of all investment, had also fallen by 50 percent from earlier years.”

Gordon R. Peeling, President, Mining Association of Canada

The latter groups — ENGO, grassroots and aboriginal — push in the other direction: more public and community participation, better environmental protection, greater industry liability for environmental damage, stronger regulation, enhanced conservation of wilderness and biodiversity and an emphasis on changing consumption patterns to reduce demand for virgin materials.²

2.2 The ‘Big Picture’ Context For Mining In Canada

2.2.1 Globalization

As the world’s economies globalize, national legal systems struggle to accommodate the shift. Canada’s legal system is no exception. One of the first targets of the global economic revolution has been environmental protection law. Branded as either ‘barriers to trade’ or ‘anti-competitive’, laws requiring companies to internalize the environmental costs of their production have lost political favour. There have been few significant new laws strengthening the environmental requirements applicable to the mining or any other industrial sector in Canada over the past few years.³ Instead, the trend has been in the other direction.

2.2.2 Deregulation

The increased mobility of capital that has come with globalization limits government ability to require industries to internalize environmental and other costs. The mining industry, in particular, has been aggressive in its use of threats to move investments away from jurisdictions imposing stringent regulatory standards.

Partly in response to these threats Canadian jurisdictions have recently weakened their environmental protection regimes through revision and repeal of environmental laws and/or by cutting funding to agencies mandated to enforce environmental laws. The two greatest examples of this behaviour in Canada are the provinces of Alberta and Ontario, one-time leaders in environmental protection.⁴ The federal government has also cut back on its ability to enforce its environmental laws through budget cuts to Environment Canada.⁵ British Columbia, a major mining jurisdiction, has held onto its comparatively well-developed environmental protection regime, but it, too, has shown some recent signs of weakening.

2.2.3 Voluntary Action

Instead of regulation, governments and industry associations have focused on voluntary environmental measures at both the federal and provincial levels. “Voluntary” initiatives are programmes individual companies and/or industry associations undertake to achieve some kind of environmental protection objective, most commonly emissions reductions.

An example of a government-sponsored programme is Accelerated Reduction and Elimination of Toxics Program (ARET). 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, with 31 out of 34 members taking the ARET Challenge. There are, however, many smaller mining companies that are not members of the Mining Association of Canada and do not participate in ARET.⁶

Repeated study has shown that voluntary environmental protection initiatives, while effective within some sectors at achieving pollution reduction under some circumstances, cannot replace regulatory regimes. They cannot replace regulation because they cannot be enforced. Studies have shown that industry responds to regulation and the real possibility of enforcement.⁷

It was the perceived threat of more government interference with mining in the late 1980s and early 1990s that gave rise to the mining-industry-initiated voluntary programme called the Whitehorse Mining Initiative (WMI).

The Mining Association of Canada, on behalf of the mining industry, took a suggestion for a multi-stakeholder process to the mines ministers of all senior governments at their annual conference in Whitehorse in September 1992. The ministers agreed to become co-sponsors and trustees of the process and named it the Whitehorse Mining Initiative.

Mount Nansen Gold Mine, Yukon Territory

The Mt. Nansen open-pit gold mine in the Yukon Territory is sitting idle. But the level of the cyanide-, arsenic- and heavy-metal-laden water in the tailings pond continues to rise.

...On May 19, 1999, Yukon Territorial Court fined the company \$300,000 for three contraventions of the Yukon Waters Act. Despite 40 letters and directions from the federal Department of Indian and Northern Affairs (DIAND), the company failed to bring the mine operations into compliance.

...B.Y.G. went into receivership earlier this year. [I]t is questionable whether the \$300,000 in fines will ever be paid, especially since the company still owes the government \$225,000 in outstanding reclamation security payments.

...The mine is located at the headwaters of Dome Creek. Currently, the fish populations in the creek are already severely depleted as a result of the mine's activities.

According to DIAND water resources inspector Gerry Whitley, there also remains the looming possibility that the dam will fail because it was so poorly designed, or that contaminated tailings may seep into groundwater.

Federal Department of Justice, Press Release, May 19, 1999; Amy Steele, May 19, 1999. "Minesite may murder fish," Yukon News; John Hutchion, August 6, 1999. "Tax payers stuck with tab for BYG mine," Yukon News

Mining in Canada Soars

by Patti Lenard

"Canada is recognized around the world as having the most effective explorationists and the most effective mine developers," says Dr. Dale Hull, Director of the Economic Analysis Division of the Minerals and Metals Sector (MMS).

"Canada has become the centre of mine finance around the world. There is a lot of attention being paid to Canada now, and this shows both that we have been convincing in showing that the investment climate has been improving here and that we've had some important discoveries that help a whole lot, like at Voisey's Bay and in the Northwest Territories." In fact, MMS created a series of Investment Promotion Seminars to do just that. The seminars discuss the economic and fiscal developments and the changing policy environment that affect Canada's mining industry and its investment climate. "A few years back, there was a widespread perception that Canada was hostile to investment in mining. A high profile example of this is the Windy Craggy deposit in British Columbia where development was brought to a halt by the provincial government.

"There was also a view that Canada was a high-tax country among mining jurisdictions. What these seminars have done is to help get the message out that Canada's environmental regulations and mineral taxation compare very favourably with our competitors," says Hull.

Judging by the amount of new investment in mining in Canada, it appears as if these efforts have borne some fruit. For example, Canada is now the third largest mining country in the world. By the end of the year, 24 new mines will begin production in Canada, and 25 more are scheduled to begin production next year.

See <http://nrr1.nrcan.gc.ca/source/archive/octnov96/mms.htm>

Representatives of five sectors of society agreed to participate. They were the mining industry, senior governments, labour unions, Aboriginal peoples and the environmental community.

"The Accord adopts a strategic vision for a healthy mining industry in the context of maintaining healthy and diverse ecosystems in Canada, and for sharing opportunities with Aboriginal peoples. It calls for improving the investment climate for investors, streamlining and harmonizing regulatory and tax regimes, ensuring the participation of Aboriginal peoples in all aspects of mining; adopting sound environmental practices; establishing an ecologically based system of protected areas; providing workers with healthy and safe environments and a continued high standard of living; recognition and respect for Aboriginal treaty rights; settling Aboriginal land claims; guaranteeing stakeholder participation where the public interest is affected; and creating a climate for innovative and effective responses to change."⁸

The WHMI is representative of many voluntary initiatives in that, while it involved a good range of stakeholders and resulted in an admirable list of objectives, it has not resulted in significant changes in mining industry practices. At the same time, the industry has continued to press for the weakening of environmental laws, regulations and policies.

2.3 Federal Provincial Relations and Mining

2.3.1 A Note On The Canadian Federal Structure

Canada is a federal state, with a federal government, ten provincial governments and three territorial governments.

"In the Canadian federal state, governmental power is distributed between a central authority and several regional authorities...The central authority and the regional authorities are "coordinate," that is to say, neither is subordinate to the other. The powers of the governing body of a province, such as the Legislature of Ontario, are not granted by the Parliament of Canada and they cannot be taken away, altered or controlled by the Parliament of Canada. And the Legislature of Ontario, even acting in concert with all the other provincial Legislatures, is likewise incompetent to take away, alter or control the powers of the Parliament of Canada."⁹

The Constitution Act of 1867 (as amended) sets out these nonderogable powers. The founders of the country divided these powers with the evident belief that, between the two levels, all aspects of governance for the whole country could be achieved. The powers of the two levels of government are divided, but do coincide in some areas of activity. One such area of activity is mining.

2.3.2 Provincial Powers Regarding Mines and Mining

Within their political boundaries, Canadian provinces have full power over mineral exploration, development, conservation and management.¹⁰ This means provinces have the legal power to control virtually all aspects of mining: exploration and prospecting, claim staking, environmental assessments, approvals, waste management, environmental monitoring and closure, remediation and post-closure monitoring.

These powers make provinces in Canada the governments chiefly responsible for regulating mining activities. There are ten provinces. There are ten different mining regimes. Only Prince Edward Island — Canada's smallest province — has no significant exploration or extraction.¹¹

2.3.3 Federal Powers Regarding Mines and Mining

Although the provinces have primary jurisdiction of natural resources management, the Canadian federal government has powers that may apply directly or indirectly to mining activities as well. Along with the federal parliament's general power to legislate for the "Peace, Order and Good Government" of Canada it also may legislate 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.¹²

The federal government retains responsibility for resources on federal lands found within provinces and in the Yukon and Northwest Territories. Resources within the third territory, Nunavut, are controlled with resource management agreements under the Nunavut Agreement.¹³ All aspects of uranium mining wherever it may occur are subject to the regulatory authority of the federal Atomic Energy Control Board.¹⁴

In spite of these broad potential powers, federal involvement with mining within provincial boundaries most commonly occurs where approvals under federal legislation related to the protection of fish habitat or navigable waterways are required for a proposed project. A federal environmental assessment, under the *Canadian Environmental Assessment Act*, may be required, before these approvals are granted. The federal government has also used its jurisdiction over fisheries to establish regulations limiting discharges from metal mines to waters inhabited by fish. Federal jurisdiction over "Peace Order and Good Government of Canada," criminal law, and international affairs have been used to establish regulations regarding toxic substances under the *Canadian Environmental Protection Act*. However, only one regulation made under this legislation applies to mining operations, controlling air emissions from asbestos mines and mills.¹⁵

2.3.4 The Environmental 'Harmonization' Project

The intersection of provincial and federal jurisdiction over some aspects of mining exploration and operation has given rise to conflict. Provinces object to what they regard as federal interference with matters otherwise wholly under their jurisdiction.

Almost at the same time that some Canadian provinces implemented new environmental laws in the late 1980s and early 1990s, Canadian provincial environment ministers started to talk about 'harmonization.'

Arising initially as a solution to differing standards among Canadian provinces, the Harmonization project soon also came to be understood as a solution to the problem of joint provincial/federal jurisdiction.

The project was initiated in 1992. The Canadian Council of Ministers of the Environment (CCME) — an administrative body comprised of the provincial and federal ministers of the environment — became the central administrative office for the Harmonization project. As the harmonization framework emerged, ENGOs made several objections. They objected to the CCME taking on a quasi-legislative role with no legal authority to do so. The consultations, discussions and agreements within the CCME, although establishing public policy, were not part of the public record. The consensus-based decision-making required at the CCME was a formula for lowest-common-denominator national standards and a regulatory race for the bottom.

Most serious to ENGOs was Harmonization's requirement that the federal government could set national standards only in consultation with the provinces. This, they argued, amounted to an unconstitutional fettering of the federal government's discretion. Finally, ENGOs argued that a federal system such as Canada's was not 'improved' by reducing two levels of competency to one. The best thing about redundant systems, they argued, is that there is a back-up in place if one part of the system fails.¹⁶

The concerns of the ENGO community and others slowed (but did not stop) the process and forced the CCME to address some of the most legally problematic elements of Harmonization. In January 1998, the federal government and all provinces but Quebec signed the *Canada-wide Accord on Environmental Harmonization*. The Harmonization Accord mirrors the federal commitment, made by way of its 1996 speech from the throne, to afford the provinces primary control over natural resources.¹⁷

The implications for mining regulation in Canada of the Harmonization Accord and its numerous subagreements are currently most apparent in its impact on environmental assessment. Other elements of mining regulation may be affected as further subagreements and standards are developed.¹⁸

As for the ENGO prediction that Harmonization would lead to a 'race to the bottom' in environmental protection, it appears in provinces such as Alberta and Ontario — where deregulation has led the government agenda — all the Accord has done is assured them minimal federal interference with this direction.

2.4 Industry Advocacy

The mining industry in Canada is well-established with an organized network of well-funded national and provincial industry associations.¹⁹ As described in more detail above, the mining industry has been a leading advocate for voluntary initiatives. In the early 1990s, as a pre-emptive strike against what it feared would be debilitating government regulation, the industry initiated the Whitehorse Mining Initiative — a multi-stakeholder-consultation-based accord that includes in its objectives biodiversity protection and stakeholder participation, but that also entrenches the predominance of virgin-material mining. Another 'partnership' project initiated by government with participation by industry is MEND (Mine Environment Neutral Drainage) a scientific research programme designed to address acid mine drainage issues.

In the early 1990s, the Mining industry launched a public relations campaign called "Keep Mining In Canada." The campaign sought to:

- ❖ establish processes for land-use planning that respect mineral tenure to ensure both the protection of Canada's natural heritage and access for mineral development;

- ❖ “streamline” federal-provincial environmental regulations;
- ❖ implement an appropriate incentive (i.e. subsidy) to stimulate grassroots mineral exploration;
- ❖ change tax laws on mine reclamation funding (i.e. permit reclamation costs to be written-off against taxes) to encourage new investment; and
- ❖ launch a new initiative to build infrastructure to support mineral development in Northern Canada.²⁰

The federal Natural Resources Department and House of Commons Standing Committee on Natural Resources strongly supported the campaign and the Committee’s 1994 report “Lifting Canadian Mining Off the Rocks” recommended changes to the tax system to encourage mineral exploration and development.²¹

The Standing Committee tabled a second report in November 1996 entitled “Streamlining Environmental Regulation for Mining.”²² The Committee’s recommendations in this report — heavily influenced by industry submissions — included recommendations for:

- ❖ shorter timelines for the granting of approvals for mining operations;
- ❖ limits to consideration of the cumulative effects of mining operations in environmental assessments;
- ❖ devolution of federal environmental assessment and other regulatory responsibilities to the provinces;
- ❖ a review of the impact of environmental assessment requirements on “competitiveness;” and
- ❖ the review of the “no net loss” policy regarding the protection of fish habitat under the federal *Fisheries Act*.

The federal government accepted the bulk of these recommendations in its March 1997 response to the Committee’s report.²³

In addition to these changes the industry has sought guarantees that once exploration has found a viable mine site, that mine will proceed no matter what other values of the land may be compromised or destroyed. In recent years, governments in Alberta, British Columbia and Ontario have provided for compensation for mining claims lost to habitat conservation.²⁴ At the provincial level, the industry has also sought to weaken mine closure and financial assurance requirements. The provision of “exit tickets” — the option of returning mined properties to the crown and thereby escaping any future liability for any damage or danger arising from the sites has also been a major goal of industry campaigns.²⁵

The mining industry has asserted that it can achieve environmental protection with fewer regulations, without financial assurance requirements and without exposing the public to liability for environmental damage. The record — set out in the text boxes throughout this report — shows otherwise. But Canadian governments appear to be persuaded that the mining industry needs regulatory “relief.” The only conclusion that can be drawn is that the powerful mining lobby has been successful in its efforts to improve the ‘investment climate’ for mining in Canada.

Living With The Mines: Impact/Benefit Agreements With Aboriginal Communities

Aboriginal communities in Canada have used a combination of strategic protest, legal proceedings and processes of community empowerment and mobilization ... to force mining companies to deal seriously and fairly with the community leadership. Impact/Benefit Agreements (IBAs) integrate community concerns and participation into the mine development and closure processes to ensure the communities closest to the mine benefit from it. IBAs are contracts signed by the company, community representatives and sometimes governments to specify under what social, economic and environmental conditions the mine will be allowed to operate and establish mechanisms and institutions for monitoring and enforcement.

Innu Nation/MiningWatch Canada, “Between an Rock and a Hard Place: Aboriginal Communities and Mining,” (Ottawa: MiningWatch, September 1999) p. 2.

2.5 Mining and Aboriginal Peoples

Most of Canada's aboriginal communities are in remote, mineral-rich areas. These communities face both challenges of the rapid expansion of the mining frontier into new areas and the ongoing toxic legacy of existing and abandoned mines on their lands. Many community members continue to pursue a traditional life style based on hunting and fishing and maintain a spiritual connection to the land. They are particularly vulnerable to the disruption of the eco-systems and their culture from large-scale mining.

Recent developments in Canadian aboriginal law have afforded some aboriginal communities greater participation rights in mining decisions and ownership rights to minerals in some parts of Canada, in particular the northern territory of Nunavut and areas subject to native land claims.

“The relationship between Aboriginal communities and mining must be understood in the context of the broader movement for self-government and recognition of Aboriginal rights, which has won a series of significant political and legal victories in the last three decades. Aboriginal peoples in Canada ... are the original inhabitants of the land and have never surrendered their fundamental rights to self-determination, nor in many cases, ownership and control over their traditional lands.”²⁶

Diamonds Aren't Our Best Friends

“We have been harvesting on this land and the Bathurst Caribou have been traversing it since before human memory. How can the demands of Diavik [Diamond Mine] for an immediate approval be balanced against this history and these needs today?”

“We have no confidence in the government's old regulatory process. When the mining executives are long gone, and the diamonds are used up, we know we will be left to bear the consequences. That is why we negotiated so much of our agreement-in-principle to protect the environment, our First Nation, and its wildlife harvesting.”

John B. Zoe, "Diamonds Aren't Our Best Friend," op-ed article, Globe & Mail, 2 November, 1999, A21.

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.²⁷

The hard-won recognition of their rights has increased aboriginal communities' involvement in the mixed blessing of mineral development of their traditional lands. This is a benefit but it has taken a toll as communities struggle to negotiate with a culture sometimes at odds with their own. New mechanisms, such as Impact/Benefit Agreements (see text box on preceding page), Environmental Monitors and Technical Liaison Committees provide ways to deal with some of the problems and keep communities involved.

The greatest weight of power between the two interests, mining on the one side, the aboriginal communities on the other, is unquestionably the industry's. So, while it is true that aboriginal communities are having and will continue to have an influence over the mining companies in their midst, the companies wield even greater influence of their own.

2.6 The Environmental Community

This survey of the various factors influencing mining law and policy in Canada notes many recent changes, with the globalization of the economy possibly being the engine driving them all. If that is true, if globalization has driven government and industry to push for deregulation and significant public subsidy of mining activities, then the same force has created the opposite reaction from the environmental community. A decade ago, only a few Canadian environmental organizations dealt with mining issues. Now, many national groups — including the Canadian Environmental Law Association, the Sierra Club, the Canadian Nature Federation, the Canadian Parks and Wilderness Society, the Pembina Institute for Appropriate Devel-

opment — and important regional groups such as the Environmental Mining Council of BC and the Canadian Arctic Resources Committee focus on mining issues. Most recently, MiningWatch, Canada's first national organization solely focused on mining issues opened its office in Ottawa.²⁸

The impact of the environmental community on mining, much like the impact of aboriginal communities, is a project in progress. Most significantly, two court cases brought by environmental groups — discussed below in the section on environmental assessment — have imposed a corrective influence on faulty implementation of the *Canadian Environmental Assessment Act*.

The influence of the environmental and aboriginal communities on mining in Canada is important. So too is what their activities stand for: a strong indication that the system is flawed. Conflict and litigation are symptoms of a system out of balance, and that is not fairly or effectively addressing the needs, values and interests of all of the sectors of Canadian society affected by mining activities.

MiningWatch Canada and Regional Organizations Call for Preventative Measures

September 2, 1999

"The Government of Canada has a duty to ensure that Northerners - and other Canadians - are not stuck paying for massive clean-ups at abandoned mines. That's the view of MiningWatch Canada, the Canadian Arctic Resources Committee and the Yukon Conservation Society, who today jointly called upon the federal government to adopt legally-binding preventative measures to ensure that there is zero public liability with mining operations in northern Canada.

The demand was made after details of another massive federal clean-up were disclosed in Ontario courts late last week for the trouble-ridden former Royal Oak Giant Mine near Yellowknife, NWT.

A similar arrangement for the closed Faro mine in the Yukon was announced last month. "We are calling upon the federal government to live up to its commitments to introduce legislation that enshrines the concept of zero public liability. Mine operators should pay the full cost of closure and reclamation and not be able to off-load this on to the taxpayers of this country. The federal government committed itself to the 'polluter-pays' principle in the Whitehorse Mining Initiative and its sustainable development policies. The 'polluter-pay' principle must be applied to the mining sector," stated Alan Young, Co-Chair of MiningWatch Canada.

PART THREE: THE LEGAL REGIME

3.1 Introduction

The following discussion of mining regulation in Canada progresses as a mine does — from claim staking and exploration to environmental assessment, permitting and approval, operations (monitoring and enforcement) closure and remediation.

It should be noted that all of the activity described below is on behalf of an industry that receives substantial public subsidies. In 1996, the federal government increased the tax incentives to the mining industry and in 1998 the BC government introduced a new \$9 million/year subsidy aimed at increasing exploration in the province while providing a ten year extension of an existing subsidy for mine development. It is projected that these two subsidies in combination will cost taxpayers tens of millions of dollars each year. Prospecting grants are also provided to the mining industry by the Ontario government.³⁰

In addition to these direct subsidies, the federal, provincial and territorial governments indirectly subsidize the industry in a number of ways. These include generous tax write-offs for development and exploration expenses, tax holidays for the early years of mine operations, low-cost energy from provincially-owned utilities and publicly-funded road and rail links to mine sites.³¹ Estimates of the value of these indirect subsidies vary, although they easily run into the hundreds of millions of dollars per year.³²

3.2 Land Access and Mineral Rights

The first step in establishing a mine is for a prospector to find an potential mineral deposit and stake a claim to it. Claim staking is the process for marking land for future mining activity, including exploration. Exploration (the actual process of examining land for potential mineral deposits) can then take place on a staked claim. Exploration can include activities such as drilling, blasting, trenching, road building, overburden removal, “bulk sample” ore extraction of several thousands of tonnes of test ore, and milling on site. Exploration determines the economic viability of a potential mine site. Claim staking, in Canada, establishes the right of access to minerals, should a viable mine be found and approved.

Environmental protection concerns that arise from exploration and claim staking activities are twofold. First, at the general level, concerns arise around the “free entry” system (described below) which presently privileges mining interests above all other possible uses of a piece of land. Second, at the level of specific sites, concerns arise from questions of whether or not fragile ecosystems are adequately protected from potentially destructive activity.

3.3 Ownership and Access to Mineral Resources

3.3.1 Who Owns Mineral Resources In Canada?

The Crown (i.e. federal and provincial governments) owns 90% of Canadian lands. Mineral rights, with the exceptions noted below, belong to whoever owns the land. The Crown, therefore, also owns most mineral rights in Canada. Through the processes of exploration and claim staking, the crown transfers those rights to miners.

Where both the mineral rights and surface rights are privately owned, which is rare in Canada, the common law determines the rights and duties between prospectors and landowners.³³ If surface rights are privately held but have been severed from the mineral rights of the land, mining legislation overrides the common law. This means that mineral development can take place on lands where the surface rights are privately held, even over the objections of the owner or occupier of the land.³⁴

3.3.2 Access to Public Mineral Resources

3.3.2-1 Free Entry

With the exceptions of the provinces of Alberta, Nova Scotia and Prince Edward Island, Canada operates a “free entry” system with respect to Mineral resources on public lands.

“The general principle informing “free entry” is that the Crown’s mineral resources are available on a first come, first served basis. Those who seek minerals are permitted to explore and claim tenure of the sub-surface rights for that purpose... The concept was brought into law in England in the 18th century and was carried with Europeans to manage gold rushes in California and eventually British Columbia in Canada ... [originally] the free entry tenure played a role as an incentive for opening up new land for settlement and development. This is still the case today in remote areas... Areas like [Windy Craggy — see below] are used extensively by less visible renewable resource users, including first nations, guide outfitters, recreational and commercial fishers and backcountry tourism operators. None of these legitimate land users enjoy the privileges of tenure in the way a mineral exploration company or prospector does.”³⁵

The mining industry maintains that the “free entry” system is essential to maintaining the confidence of investors in the industry, and encouraging the discovery and development of new mineral deposits (see text box). Environmental organizations, on the other hand, point out that “free entry” privileges mineral development above all other potential uses of public land, regardless of whether higher and better uses may be possible.³⁶

3.3.3 Where is Mineral Exploration Not Permitted In Canada?

The essential meaning of the “free entry” system for access to public lands for mining is that wherever claim staking and exploration are not expressly prohibited, these activities are allowed. Such prohibitions exist within national parks under the jurisdiction of the federal government. Most parks under provincial jurisdiction have similar prohibitions, but these limitations may be overridden by regulations made by a provincial cabinet. Limitations on entry may also exist on aboriginal lands and lands subject to aboriginal land claims. All other public lands are open for mineral development.

3.3.3-1 Federal

The *National Parks Act*³⁷ protects all national parks from resource harvesting with the exception of traditional resource harvesting under some native land claims. Therefore, mineral exploration and development is not permitted in National Parks.

Canada’s Metals and Minerals Policy

“For the mineral and metals industry to continue to make its important contribution to the Canadian Economy, new mineral deposits must be discovered. As well, for Canada to realize the full potential of its mineral endowment, the industry, within specified limits, must have access to the widest possible land base for exploration purposes.”

The Mineral and Metals Policy of the Government of Canada, p. 14.

Under the *Territorial Lands Act* the Governor in Council³⁸ 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.³⁹ 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.

It should be noted that while the federal government has regulated the activities allowed on some lands in the Territories and withdrawn lands from prospecting and mining, this is quite exceptional. The general rule is free entry.

3.3.3-2 Provincial

Limitations on mineral prospecting, staking and exploration vary from province to province. Exploration activities are usually allowed on public lands except for areas designated as provincial parks. Even in these areas, the provincial cabinet generally has the discretion to permit mineral exploration and development if it chooses to do so. The province of Ontario provides a good example of how provinces may remove areas of provincial parks from protection from mineral development.

3.3.3-2.1 Ontario

The Ontario *Provincial Parks Act* states that prospecting, staking of mining claims and the development of mines in provincial parks is prohibited except by regulation.⁴⁰ This language leaves the door open for the Ontario government to allow exploration and mining in provincial parks.⁴¹

For a long time, there was a genuine danger that this may occur. 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. Subject to permitting under the *Mining Act*, mine development could occur in these 23 parks.⁴²

Ontario's Living Legacy

"We will send a strong message to the world that Ontario is the destination of choice for mineral investment dollars...

As part of Ontario's Living Legacy, we will work with the Ministry of Natural Resources to define areas of high mineral potential within proposed parks and protected areas. We are developing regulation for environmentally sensitive exploration on these lands and putting in place a process to deregulate significant finds out of parks...

1999-2000 Business Plan, Ontario Ministry of Northern Development and Mines

Now, that danger has been fully realized by the province's March 1999 "Living Legacy" program (see text box).

Begun as the "Lands for Life" planning process which "focused on completing a system of parks and protected areas, recognizing the land use needs of resource-based industries," the resulting Living Legacy land use strategy "formally recognizes that environmentally-sensitive exploration is compatible in some protected areas where provincially significant mineral potential is located."⁴³ And, where the mineral potential indicates a mine would be profitable, the province will put in place a process to deregulate significant finds out of parks. As well, the Living Legacy program provides guaranteed tenure of existing mining rights in new parks.⁴⁴

These arrangements appear to be the result of the Prospectors and Developers Association of Canada (PDAC) and the Ontario Mining Association lobbying the Ontario government to allow exploration

and mining development to be permitted in Ontario Parks.⁴⁵ The Association called 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.”⁴⁶

3.3.4 The Establishment of New Protected Areas Where Mineral Claims Exist

The Ontario ‘Lands for Life’ story, and the Windy Craggy saga in British Columbia, highlight the growing controversies regarding the status of mineral tenure in new protected areas.

The Mining industry argues that in order to maintain a positive investment climate, mineral tenure must be secure. In particular, mining developments within protected areas must be permitted to proceed or, failing that, compensation paid to the holders of mineral tenure for their expenses and foregone profits.

Environmental organizations, on the other hand, point out that such arrangements have the potential to make the creation of new protected areas prohibitively expensive. This is a particularly serious problem given that Canada’s system of protected areas remains incomplete (see below). The industry’s claims to rights of compensation for foregone profits have also been challenged. The Environmental Mining Council of British Columbia, for example, has noted that:

“There are limits to the rights granted free miners under Canadian law. Rights to public resources such as mineral claims are contractual and subject to limitations. It is inaccurate to refer to policy changes in allocation of public resources as “takings.” In Canadian law, changes in public policy which affect land values do not as a matter of law require compensation. Public rights have as much status as private rights at this level. In a case like Windy Craggy, some level of compensation — investment dollars less depreciation plus costs to mitigate any damage done — would be fair even if not required by law. Compensation should not be paid for future profits, nor should the public be forced to “buy back its own assets.”⁴⁷

3.4 Regulatory Controls on Prospecting, Staking and Exploration Activities

Claim staking and exploration are two distinct steps. Claim staking is the process of marking land for future mining activity, including exploration. Exploration, on the other hand, involves the actual physical examination of the claimed area for its potential for development as a mine. This can include activities such as overburden removal, ore extraction and milling on site.

Canada Has Not Completed Its Endangered Spaces Project

In November, 1992, all ministers of the environment, wildlife, parks and forests from all the provinces, territories and the federal government signed a document called The Tri-Council Commitment on Protected Areas. This committed every jurisdiction in Canada to completing a network of protected areas (with no logging, mining, hydroelectric or oil and gas development) representing all their natural regions by the year 2000.

This year also happens to mark the end of a 10-year campaign by the World Wildlife Fund for Endangered Spaces. The Endangered Spaces Campaign was born out of the urgent need to address the accelerating loss of Canada’s wild places. Until then, conservationists had traditionally been concerned about saving endangered wildlife. But it was becoming clear that we could not save species without saving their spaces. Everyone from the Auditor-General to our Governor-General agreed that time was running out to protect at least representative samples of our country in a natural condition. The Tri-Council Commitment in effect meant that the Endangered Spaces goal had become official public policy in Canada. The question was not whether governments were committed to accomplishing that goal, but how it was to be done by the year 2000.

So much for the commitment on paper. How are we doing on the ground?

The good news is that so far we have added more than 1,000 new parks, wilderness areas and ecological reserves that have doubled the amount of protected area in Canada from 3.2 per cent in 1989 to 6.4 per cent as of July 1, 1999. The bad news is that, even with that kind of progress, we are still less than half way to meeting the Endangered Spaces goal with less than seven months left in the campaign.

John Turner, former Prime Minister of Canada, Globe & Mail Op-ed Article, Wednesday, December 8, 1999

3.4.1 Prospecting and Staking

Throughout Canada it is generally true that there are no environmental controls attached to staking claims. Some jurisdictions require 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.⁴⁸ Other jurisdictions, such as Alberta, require no license, and allow any individual to engage in prospecting activities.

Staking activities generally do not have major environmental impacts, as they simply involve marking the boundaries of the staked area. In some jurisdictions claims may be staked through aerial photographs rather than physically marking a site. Their primary significance is legal, as staking a claim is the first step in establishing a right to mine an area.

3.4.2 Exploration Activities

In contrast to staking, extensive surface disturbance can accompany exploration activities, including clearing, mechanical stripping, bulk sampling, drilling and blasting, moving heavy equipment, such as drilling rigs, and building trails. Some — but not all — Canadian jurisdictions have legal mechanisms in place to control the environment effects of exploration activities. These controls have been significantly weakened in a number of provinces, particularly Ontario and Alberta, over the past few years.

3.4.2-1 Federal

1996 amendments to the *Yukon Quartz Mining Act*⁴⁹ and the *Yukon Placer Mining Act*⁵⁰ 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.⁵¹ Exceeding any threshold for a Class moves the activity into a higher Class with more stringent approval requirements.

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.⁵²

Permits may be required under section 35 the *Fisheries Act* for exploration activities if they involve the harmful alteration or destruction of fish habitat. This may also trigger a federal environmental assessment of the exploration activities under the *Canadian Environmental Assessment Act*.

3.4.2-2 British Columbia

Approval requirements regarding exploration activities vary widely among the provinces. Some provinces require exploration plans and specific approvals of exploration activities, while in others these activities are almost completely unregulated. Environmental assessments are not required for exploration activities at the provincial level.

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. 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. To the extent that acid forming materials can be predicted, British Columbia requires this to be outlined in the exploration plan and mitigation measures put in place to address the problem. Finally, in 1998 British Columbia adopted a “Mineral Exploration Code” regarding the environmental impacts of activities on mineral claims. This complements and is intended to achieve equivalency with the overarching “Forest Practices Code” which deals primarily with the environment impacts of the forest industry in Crown forests.⁵³

British Columbia has legislated provisions requiring financial assurance to ensure compliance with an exploration permit.⁵⁴ Their application, however, is at the discretion of the Chief Mine Inspector.⁵⁵

3.4.2-3 Alberta

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.⁵⁶ These activities were previously regulated under Alberta’s *Environmental Protection and Enhancement Act*. Alberta formerly allowed for public input in the exploration permitting process but this is no longer the case.

3.4.2-4 Ontario

Prior to 1996, permits under the *Public Lands Act*⁵⁷ were required for exploration activities in Ontario. However, these provisions were repealed in that year, and in their place the Act provides that permits are required only if prescribed by regulation.⁵⁸ Since then, one such regulation has been passed.⁵⁹ But for a few small ecologically significant locations identified in the regulation, plans and permits are not required specifically for mineral exploration purposes on public lands until the point of advanced exploration.⁶⁰

For advanced exploration activities, public notice and closure plans may be required by the Director of Mine Rehabilitation under the *Mining Act*.⁶¹ Financial assurances may also be required under the Act in relation to advanced exploration projects. However, the requirements of the *Mining Act* regarding closure plans and financial assurances regarding advanced exploration projects and mine operations were significantly weakened through the same January 1996 package of legislative amendments which removed the permit requirements for exploration on public lands under the *Public Lands Act*.⁶²

3.4.2-5 Other Provinces

Newfoundland requires a security deposit in conjunction with exploration activities as metal and mineral exploration is linked by legislation to the Archeological Investigation Permit Regulations. These regulations are very important to the archeological recovery of native culture.

3.4.2-6 Aboriginal Lands

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.⁶³ Lands that are subject to aboriginal land claims (i.e. lands which are not covered by treaty and over which aboriginal people make a claim of ownership) present an even more complex problem. Mineral claims or tenure on such lands may not be considered secure and their status may become part of settlement agreement negotiations.⁶⁴

3.4.3 Industry Perspective On Land Access Issues

The Investment Climate For Exploration In Canada With An Emphasis On Land Access and Land Tenure Issues — Brief Submitted to the Energy & Mines Ministers' Conference Charlottetown, P.E.I., September 12-15, 1999

Prepared by the Prospectors and Developers Assoc. on Behalf of the Canadian Mineral Industry Federation

The policy and regulatory regimes are expressions of the political sophistication, stability and public priorities of a country, and are the primary means through which a government can affect its investment climate, either positively or negatively.

Canada, with its large land mass, diverse geological environments and history of mineral production in a variety of commodities is well known for its considerable geological endowment. Recent discoveries of global significance attest to its continuing geological potential, which remains a very important factor in our ability to attract exploration investment. Canada's mineral industry developed on the basis of a sophisticated and efficient policy and regulatory regime which for many years represented an important competitive advantage in attracting exploration investment.

Important elements included:

- ◆ a simple and efficient process of land access;
- ◆ a highly dependable system of land acquisition and title;
- ◆ an efficient permitting process that included an inherent right to mine;
- ◆ stability of laws and regulations;
- ◆ one of the leading geoscience databases and support systems in the world.

Over the past few decades this ... policy and regulatory regime has been subject to a gradual but significant erosion due to the reactions of our governments to evolving public priorities and deepening conflicts over public land use. The unfortunate result is that what used to be our competitive advantages have either been neutralized or even transformed into impediments, at a time when the global competition for investment capital has intensified.

For a number of years now the Canadian mineral industry has been grappling with an increasingly complex and inefficient regulatory regime, a geological survey system that has been severely curtailed by continuing budget cuts and increasing uncertainty about maintaining access to land, security of title and obtaining a license to mine. What has enabled Canada to continue to attract investment under these conditions is the geological potential which has not changed and the reputation of the Canadian mineral industry.

Without significant improvements to our policy and regulatory regime, it cannot be assumed that adequate investment levels can be reestablished to sustain our domestic industry, particularly in a time of intensifying global competition. Increasingly at risk here is our domestic exploration and mining infrastructure, including the service, support and transportation sectors providing local and export benefits.

For full report, see <http://www.pdac.ca/pdac/mmc99.htm#Factors Affecting>

B.C.'s only winter range for Dall sheep. In this pristine wilderness are found thriving populations of mountain goats, wolf, moose, gyrfalcons, eagles and salmon.”

The province undertook a CORE (Commissioner on Resources and the Environment) investigation of the proposed mine. The report determined the project presented severe threats to fisheries because there was no technology available that could prevent acid tailings escapes. At least three governments — B.C., Canada and the United States — were ultimately all involved in trying to save the Tatshenshini. Eventually, even the United Nations engaged in the debate.

3.4.4 Another Perspective On Land Access — The Windy Craggy Saga

The story of the Windy Craggy mine proposal in B.C.'s Tatshenshini watershed is unique in Canada. Geddes Resources staked its claim on Windy Craggy Mountain in the remote northwestern corner of British Columbia in the late 1950s. After almost thirty years of exploration Geddes applied to mine the site.

Public opposition to the mine arose immediately. Pristine and magnificent itself, Windy Craggy bordered Glacier Bay National Park in Alaska, designated as a World Heritage Site by UNESCO in December 1992. One group, Tatshenshini Wild, described the area: “The Tatshenshini, North America's wildest river, threads 160 miles through 2.8 million acres of the continent's most spectacular [landscape]. This is a place with species and spaces unique to the planet, including the world's largest non-polar ice fields ... and a distinct ecological community found nowhere else in North America. Here also are one of the highest denning populations of grizzlies in the world, Canada's only populations of the rare silver-blue glacier bear and

Windy Craggy contained one of the most significant metal deposits in North America. It also showed a tremendous potential for acid mine drainage and was situated in one of the most earthquake prone regions in North America. The largest quake ever recorded in Canada occurred only 75 miles away, caused mountain peaks to shoot up 50 feet and glaciers to advance a half mile in five minutes. Whatever containment could be engineered for the huge quantity of sulphide-bearing tailings, there would always be the chance that seismic activity would rupture the containment.

In June 1993 the BC Government determined Windy Craggy was environmentally too hazardous and decided to protect the wilderness values of Tatshenshini as a Class A Park. Geddes' mining permit was revoked.

In December 1994 the United Nations Education, Scientific and Cultural Organization (UNESCO) designated Tatshenshini as a World Heritage Site.

3.4.4-1 Two Ways To Value A Mountain

Here are two takes on the economic significance of Windy Craggy. The example of Windy Craggy is often cited as the signal event that soured the Canadian mining investment climate in the early 90s (see Take One).⁶⁵

The second "take" describes the estimated economic value of an undisturbed Tatshenshini, a calculation, as discussed in the section on environmental assessment, that is not often made in evaluations of the environmental and economic impacts of mining in Canada.

3.5 Environmental Assessment And Approvals

Mining activities in Canada may be subject to two types of approvals, a general environmental assessment approval and/or licensing or permitting requirements under mining and environmental protection legislation. Environmental assessments and specific permits may be required by both the federal and provincial governments, depending on the circumstances and nature of the proposed mining operation.

3.5.1 Environmental Assessment

Environmental assessment is the legal mechanism which evaluates the environmental, economic, social and cultural impacts of a project. Sometimes, but not always, a new mining project will undergo an environmental assessment before it begins operations.

The Economic Significance of Windy Craggy: Take One

"Minerals belong to the people," said Gary Livingstone, president of the Mining Association of B.C.. "The government forgets that. The Tat's off limits now, and the government won't allow the people to take that wealth."

At the time the area was expropriated, Geddes estimated that it hosted \$1.5 billion in copper alone. "The irony is that the politicians think they're doing the right thing," Livingstone added.

Investment is still shying away from mining exploration in B.C. by Michael Kelly November 4, 1998
<http://www.osg.net/news/tt-981104n2.htm>

Take Two

The value of the fisheries:
"The Alsek and the Tatshenshini Rivers support ... fisheries valued in excess of \$8.5 million annually. Lynn Canal (into which the slurry pipeline effluent would be dumped) sustains harvests of salmon, bottomfish, and other fisheries resources valued at \$41 million annually..."

The value of the mine:
"The Overall expected value of the mining alternative to the province is estimated at minus \$360 million."

The value of a pristine mountain:
"The expected return to the Province for selecting the preservation alternative is \$410 million."

All data from Tatshenshini Wild, "Tatshenshini/Alsek North America's Wildest River," Briefing Document, 1993.

The basic concepts behind environmental assessment are simply stated:

- “(i) early identification and evaluation of all potential environmental consequences of a proposed undertaking;
- (ii) decision-making that both guarantees the adequacy of this process and reconciles to the greatest extent possible the proponents development desires with environmental protection and preservation.”⁶⁶

Most Canadian jurisdictions have laws and/or regulations providing for environmental assessment. How the regimes apply to mines and mining activities varies considerably from jurisdiction to jurisdiction. The environmental assessment process itself, on the cusp of its fourth decade in Canada, is inconsistent and unpredictable. The inconsistency arises not so much from how the laws are drafted (although the complexities of some Acts certainly contribute to the uncertainty of their application) but, rather, from how they are applied. For example, this is what one practitioner has to say about the federal environmental assessment process.

“After weighing the impacts and costs to creatures, plants and human communities, an EA gives a public agency or public representatives all the evidence they need to make an informed decision: a go or no-go. ‘That’s it. It’s no more compelling than that,’ notes Rodney Northey, the author of a guide to [the federal environmental assessment act]. ‘But we haven’t got a process that makes it that simple. It’s only been made complicated because politicians don’t want to live with the consequences that many projects shouldn’t proceed.’ ”⁶⁷

3.5.2 Federal Environmental Assessment Legislation

The *Canadian Environmental Assessment Act*⁶⁸ establishes an assessment regime that, when certain criteria are met, requires all public and private proponents of projects to complete an environmental assessment of their proposed project prior to receiving federal government approval to proceed.

CEAA is presently undergoing review. The Minister of the Environment has identified a long list of issues pertinent to the Act, many of which are relevant to the question of how well the Canadian environmental assessment regime achieves its objectives (see text box next page).

3.5.2-1 How Does CEAA Work?

Although the principles underlying environmental assessment are simple enough, CEAA itself is a complex piece of legislation. Simply determining whether or not CEAA applies (see discussion below) can be an undertaking fraught with uncertainty.

Once it has been ascertained that the legislation applies, then the assessment of the environmental impacts of a project must include:

- ❖ 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);
- ❖ the significance of the environmental effects of the project;
- ❖ comments from the public;

- ❖ technically and economically feasible measures to mitigate significant adverse effects associated with the project;
- ❖ other matters deemed relevant by the Responsible Authority, such as the need for the project and possible alternatives to the project.⁶⁹

More comprehensive assessments must also consider:

- ❖ the purpose of the project;
- ❖ alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;
- ❖ the need for, and the requirements of, any follow-up program in respect of the project, and;
- ❖ 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.⁷⁰

3.5.2-2 Where and When CEEA Applies

The Act applies to projects for which the federal government has a decision-making authority, whether as proponent, land manager, source of funding or as regulator. In the case of mining projects, CEEA is most often triggered when aspects of a mine's operations will require a permit under the *Fisheries Acts* (altering fish habitat, or depositing deleterious substances into waters frequented by fish) or the *Navigable Waters Protection Act* (building a bridge over a navigable waterway to provide access to a mine site). Permits cannot be issued under these statutes until an environmental assessment under CEEA has been completed.

3.5.2-3 Different Types of Assessment Under CEEA

If a project comes under the federal environmental assessment act, there are a number of variables still to apply. One variable is the type of assessment which may apply to the project. CEEA 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 outstanding environmental issues or public concern, a public review is invoked. The vast majority of assessments under CEEA (approximately 99%) have been self-directed.⁷¹

There are four types of environmental assessment under CEEA. Only three have been used so far. Of these three, the most basic EA is a "screening." "Screenings" are reports that account for the items in the first bulleted list on pages 27-28. These reports are filed with the Environmental Assessment Agency and are available to the public for review.

Reviewing CEEA — What Has Been Selected As Important

The discussion paper on environmental assessment review identifies, among others, the following key issues:

- ◆ the complexity of the process;
- ◆ the need for harmonization of federal, provincial and Aboriginal assessment processes;
- ◆ uncertainty over the role of environmental assessment-whether it is merely a part of a process for granting permits or a more dynamic tool that can contribute to decision making and sustainable development;
- ◆ the lack of consistency in the process, both across federal departments and across different jurisdictions;
- ◆ for larger and more complex projects, the length, cost and unpredictable nature of the federal environmental process which may result in delays, cost increases, litigation and impacts on competitiveness;
- ◆ the impact of, and prospect for, litigation during the process;
- ◆ the lack of the follow-up and monitoring that could promote higher quality environmental assessments;
- ◆ methodological challenges, such as scoping and the determination of cumulative environmental effects;
- ◆ the limited opportunities for meaningful public involvement, particularly in screenings and comprehensive studies;
- ◆ the challenge of involving Aboriginal people and the First Nations in the environmental assessment process in a way they deem meaningful.

Discussion Paper for Public Consultation at URL: <http://www.ceaa.gc.ca/>

The next kind is the more detailed and rigorous Comprehensive Study which must account for the items in both bulleted lists on pages 27-28. 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. To date, of the hundreds of mine projects in Canada that have come under CEAA, only two — the Cardinal River Coal Cheviot Mine and the Voisey's Bay mine — have been subject to a Panel Review. Less than twenty have been subject to a comprehensive study.

This mention of the numbers of comprehensive studies and panel reviews does not necessarily shed light one way or the other on the adequacy of the EA process. It is conceivable that the lower-level assessments were adequate to the task of evaluating the environmental impacts of the mine projects. The numbers are worth keeping in mind, however, when evaluating industry claims of the 'regulatory burden' imposed by the Canadian *Environmental Assessment Act*.

All legally binding decisions under CEAA are made by federal ministers or the federal cabinet. This means there is no guarantee of independent decision-making.⁷² A Review Panel's recommendations are only advisory. The government has discretion regarding whether to implement the Panel's recommendations.

CEAA Regulations

Regulations under CEAA determine which projects are assessed and the level of assessment required:

The Inclusion List Regulations specify what physical activities not related to physical works require assessment, providing there is a CEAA trigger. The triggers are one, some or all of: 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.



The Exclusion List Regulations specify the physical works exempt from assessment under CEAA because they are deemed to have insignificant environmental effects.



The Comprehensive Study List Regulations designate projects likely to have significant environmental effects and which require comprehensive environmental impact studies before receiving federal approvals.



The Law List Regulations specify the sections of various federal statutes (e.g. the Fisheries Act, the Navigable Waters Protection Act) under which an application for a permit triggers a federal environmental assessment.

3.5.2-4 Scoping

The "Responsible Authority" — defined by the Act as 'a federal authority that is required to ensure that an environmental assessment of a project is conducted' — in practice usually the agency which would grant the permits required under the legislation which triggered the the environmental assessment⁷³ — has the responsibility of "scoping" a project. "Scoping" sets the limits of what will be assessed. What are the proper limits to set for a meaningful environmental assessment has been a point of contention, and a subject of litigation, in Canada. Responsible Authorities have tended to set very narrow limits on assessments, focussing on one aspect of the project itself (a bridge, for example) and the effects of its construction and use and not on the larger purpose (a forestry project, for example) the assessed component is being built to serve.

3.5.2-5 Aboriginal Lands

Under CEAA, 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. However, no regulations dealing with this situation have been passed. There is no way of knowing, then, 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.⁷⁴

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.⁷⁵

3.5.2-6 Public Participation

The principle of public participation in government decision-making arises from basic tenets of democracy. If government decisions will affect their interests, citizens in a democracy are — or at least should be — entitled to the opportunity to state their interests before the decision-maker. Canadian environmental assessment has included this concept in the role of intervenors, parties before a hearing who represent a valid interest affected by the proposed project.

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 result is usually no meaningful public scrutiny of screenings.⁷⁶

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 Environmental Impact Statement. This process is used by proponents as a way to develop positive relations with parties 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 or Comprehensive Study.

Scoping and the Courts: The Sunpine Decision

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 — The Mainline 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. The court referred the projects back to the government for a proper environmental assessment.

In October 1999, on appeal by the Government of Canada, the Federal Court of Appeal upheld the Trial Division's ruling that the permits were invalid. However, the higher court disagreed with the Trial Judge's interpretation of the "scoping" sections of the Act. The Appeal Court found that the Act did not require the Responsible Authority to set a scope for the project that included the entire forestry development.

The judge said, "I conclude, as a matter of statutory interpretation, that once the responsible authority scoped each project under subsection 15(1), subsection 15(3) did not require that the environmental assessment include construction, operation, modification, decommissioning, abandonment or other undertaking outside the scope of the projects.... I emphasize that it is within the discretion of the responsible authority to determine the scope of factors to be taken into consideration pursuant to paragraph 16(1)(a). Provided the responsible authority does not decline to exercise its discretion by misinterpreting paragraph 16(1)(a) and subsection 16(3), it is open to it to include or exclude other projects - in this case Mainline Road or forestry operations as it considers appropriate. (Friends of the West Country Assn. v. Canada, Federal Court of Appeal, 1999, 248 N.R. 25 [F.C.A.])

Unless this case is further appealed to the Supreme Court of Canada and that court challenges this interpretation of these sections of CEAA, Responsible Authorities may continue to narrowly construe the scope of an environmental assessment under the Act.

The Nasty Game

Due to the popularity of the Berger inquiry and the influence the Canadian Arctic Resource Committee (a public interest group representing northern concerns) most of the projects that got "EARPed" were largely northern or rural. These included an exploratory drilling well in Lancaster Sound, oil and gas developments in the Beaufort Sea and uranium mines in northern Saskatchewan. Meanwhile significant developments such as funding for the Westray Mine, the reduction of the Atlantic cod fleet and the construction of the Mirabel Airport, a fiscal disaster of white elephant proportions, conveniently escaped scrutiny.

...And cabinet ministers continued to undermine the whole process by bluntly informing panels that a "no-go" decision was unacceptable. During the lengthy and controversial hearings studying low-level military flights over Labrador and eastern Quebec, the Minister of the Environment even lectured the panel that they couldn't rule against more flying and so on. For these and other reasons, the Innu still call the process "a nasty game."

Andrew Nikiforuk, "The Nasty Game: The Failure of Environmental Assessment in Canada, (Toronto: The Walter & Duncan Gordon Foundation, January 1997) at <http://www.wwfcanada.org/spaces-news>

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. 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.⁷⁷

3.5.2-7 Post Environmental Assessment Monitoring

If it is accepted that an environmental assessment is the first, best chance to limit the environmental impact of a project, then it reasonably follows that what limits and mitigation mechanisms are imposed by an assessment will be put in place. It also follows that some provision would be made for follow-up to ensure compliance. However, in Canada, this almost never happens.

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.⁷⁸ 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."⁷⁹ 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.⁸⁰ This gap in the regulatory framework notwithstanding, the Responsible Authority Guide proposes that a follow-up program should be implemented under some circumstances.⁸¹

In practice, the monitoring of mitigation provisions has been poor. The federal Commissioner for Environment and Sustainable Development emphasized in his 1998 Report that mitigation measures under CEAA 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.⁸²

3.5.2-8 An Exception — The BHP Diamond Mine Monitoring Agreement

A unique monitoring arrangement grew out of the environmental assessment for the BHP diamond mine. 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.

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.⁸³

3.5.3 Provincial Environmental Assessment Requirements

In addition to the federal requirements under CEAA, 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. Ontario and British Columbia have the free-standing

*Ontario Environmental Assessment Act*⁸⁴ (OEAA) and The *British Columbia Environmental Assessment Act*⁸⁵ (BCEAA) respectively whereas the Province of Alberta’s environmental assessment process is based on regulations made under its Environmental Protection and Enhancement Act.⁸⁶ Environmental assessment processes at the provincial level vary greatly.

3.5.3-1 Ontario

Ontario was the first province to enact free-standing environmental assessment legislation, with the adoption of the *Environmental Assessment Act* in 1975.⁸⁷ The original Act established requirements for the consideration of the need for undertakings under review, and the examination of alternatives to proposed projects. The Act also made provision of public participation in the environmental assessment process, and for decision-making by an independent, quasi-judicial tribunal called the Environmental Assessment Board.

Agency Mandate

The mandate of the Agency as set out in the Environmental Agreement is:

- ◆ 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.

Kevin O'Reilly, The BHP Independent Environmental Monitoring Agency as a Management Tool. Can also be found at <http://www.carc.org/rndtable/vbpanels.html#1>

Unfortunately the Act's application was limited to undertakings by public agencies. Private sector projects, such as the development of a mine, could only be reviewed under the Act if specifically designated for review by the provincial cabinet. Only one mining project has ever been designed for review under the Act, and this happened in the early 1980s.⁸⁸ Public infrastructure to support a mine, such as roads and power corridors through public land, may, however, be subject to review under the Act.⁸⁹ As with the federal CEAA, other approvals may not be granted to a project until the environmental assessment process under the *Environmental Assessment Act* is complete.

The environmental assessment process has been substantially weakened over the past five years. An important 'watchdog' agency, the Environmental Assessment Advisory Committee, was disbanded in 1995.⁹⁰ In addition, key provisions in the Act — including the requirements for the analysis for the 'need' for and 'alternatives to' a proposed project — were placed entirely at the discretion of the Minister of the Environment through amendments adopted in 1996.⁹¹

3.5.3-2 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. Mining projects captured under the Environmental Assessment Reviewable Projects Regulation include the establishment of new, or significant modification to existing coal mines, mineral mines, sand and gravel operations, placer mines, stone and industrial mineral quarries, and off-shore mines.⁹²

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.⁹³ Under these proposed changes several recent mine projects in British Columbia would not have been included under the EA process.⁹⁴

When the Act does apply, 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 the 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.⁹⁵ The Minister 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. The final decision is made by Cabinet prior to the Minister 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.⁹⁶ The Minister 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.

Shoddy Assessment of Road's Impact Serves No One Well

By Alan Young, *Victoria Times Colonist*, Wed. June 7, 1998, p. A15.

In March 1998, the provincial government approved in principle the Tulsequah Chief mine and a 160-kilometre access road, located on a tributary of the undeveloped Taku River. The mine is just upstream from the Alaskan border in northern B.C. But there's a problem. Despite government and industry's claims of a rigorous 3 1/2-year environmental assessment, the process was both flawed and incomplete. This ill-considered provincial government decision has left the public with:

1. A number of serious unresolved issues remaining about the Tulsequah Chief environment assessment;
2. A degradation of the standards for environmental assessment which hurts everyone in the province;
3. The need for intervention by federal authorities to protect the public interest, wildlife and fisheries.

Clearly, the Tulsequah Chief decision was flawed. The B.C. government granted the project approval, despite the fact that the final project recommendations did not fully meet the project specifications, as required under the B.C. Environmental Assessment Act. Required studies that were never done include wildlife movement corridors and baseline studies on water quality, sediment and trace metals. Wildlife studies that were done lacked depth and substance. After 31-2 years of "process," and with deficiencies noted by several project committee members, only 48 hours were allowed to review and approve the voluminous recommendations drafted by the environmental assessment office in Victoria. The government then approved it five days later. Moving so quickly to authorize an incomplete assessment sets a poor precedent for the first mine to be fully reviewed under the new act.

The primary concern about this project is the long-term cumulative impact of the 160-km access road on fish and wildlife in this previously road-free area, in one of the province's top 10 habitats for grizzly bear and salmon. The government didn't see fit to assess the potential cumulative environmental impacts of the inevitable future resource extraction along this road. The approved road route directly intersects the winter habitat for a fragile caribou herd, which is the subject of an expensive, extensive population recovery program. More than 7,000 scientific studies have documented that roads and associated development adversely impact wildlife. Why would this road be any different? Is a small mine and a big road worth the damage? A poor process serves no one....

It is not just conservation groups that are concerned about the current state of environmental assessment and protection in Canada. ...On May 26, Brian Emmett, the commissioner for the environment and sustainable development, charged in his report that the federal government is failing to enforce environmental laws, including the Canadian Environmental Assessment Act. Emmett specifically mentioned that the act fails to definitively explain the assessment of cumulative impacts, which was one of the short-comings of the Tulsequah Chief assessment.

There's little wonder that Canadians have little faith in government to protect fish, wildlife, and forests, when assessments like Tulsequah Chief can be approved with a nudge from province and a wink from the feds. ...

Under the Canadian Environmental Assessment Act, that decision is now up to David Anderson, the federal minister of fisheries and oceans. It is ironic that Anderson is asking the Alaskans to not catch Canadian coho, while the Alaskans are asking B.C. to ensure that our mine approval doesn't adversely affect one of our best salmon runs. Anderson would be well advised to subject the Tulsequah Chief mine and access road to a thorough federal review, as the provincial process was clearly inadequate. It is essential that the integrity of the environmental assessment process be protected. Sooner or later, the impact of a mining project in a far flung corner of the province will reach everyone, even those in Victoria. And then we'll realize that an ineffective, slipshod environmental assessment is not in anyone's best interests.

3.5.4 Post-Assessment Monitoring

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.⁹⁷ 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.⁹⁸ 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.⁹⁹

Where a project approval certificate is in place and the project is in contravention of the certificate, the Minister may order that activities cease and/or mitigation measures be implemented.¹⁰⁰

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 B.C. Supreme Court.¹⁰¹ 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.¹⁰² The Minister can still make an order regarding 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.¹⁰³

3.5.5 Environmental Assessment And Harmonization

The potential for overlap between federal and provincial environmental assessment processes has been a significant source of federal-provincial conflict since the passage of CEAA. As a result, The *Canada-wide Accord on Environmental Harmonization* adopted in January 1998, included a Sub-Agreement on Environmental Assessment. The Sub-Agreement is to be implemented through a series of bilateral agreements between the federal government and each province. Such agreements were in place between the federal government and all of the western provinces by the end of 1999.

Prior to the development of bilateral agreements, provinces had 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.¹⁰⁴ 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.¹⁰⁵

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 (see below), 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.

“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’...”¹⁰⁶

The sub-agreement's “single-window” approach to EA based on a “lead party” being responsible for the administration of the assessment process is equal to the federal government reigning in CEAA and allowing the provinces to largely determine their own EA process. Had the Cheviot EA been done under such an 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.¹⁰⁷

Considering the narrow definition of “directly affected” under Alberta's environmental assessment regulations in the Alberta assessment process, it becomes difficult to conceive how environmental assessment will not get weaker in some Canadian provinces.

The federal Minister of the Environment commenced the five-year review of CEAA in December, 1999 and intends to complete the review during 2000.¹⁰⁸ The incorporation of the themes of the federal provincial harmonization process into the Act has been identified by the government as a major focus for the review.¹⁰⁹

3.5.6 How Joint Environmental Assessment Works — The Cheviot Mine

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.

In March 1996, Cardinal River Coals Ltd.(CRC) announced plans to develop a huge open-pit coal mine in the Rocky Mountain foothills, south of Hinton, Alberta. The proposed Cheviot mine area is 23 km by 3.5 km, and is located just 2.8 km from Jasper National Park, a United Nations World Heritage Site. CRC required approvals under both provincial and federal law for the construction, operation and decommissioning of the Cheviot open-pit coal mine — triggering a Joint Federal/Alberta Environmental Assessment Panel to review the Cheviot Project.¹¹⁰

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. 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. The inclusion of CEAA principles helped make Alberta's limited and exclusionary EA process more accountable to public and environmental concerns.

The environmental assessment held to evaluate the effects of the Cheviot Mine found that there would be serious and long-lasting detrimental effects on wildlife populations, particularly the vulnerable grizzly bear population and the Harlequin Duck.

The overall review of the Cheviot project by the Joint Panel produced an assessment of the mine which failed to fulfill federal requirements under CEAA (see next paragraph). 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 running the hearings more in keeping with the AEUB process, the weaker provincial EA process dominated. In the opinion of a coalition of environmental groups, the result was seriously flawed. They took their objections to the Federal Court of Canada.

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

Cheviot EA Submissions

Among other submissions made at the environmental assessment, conservation groups noted:

- ◆ There are few areas on the east slopes of the Rockies that have such extensive alpine and high subalpine meadows combined with important wildlife habitat, old growth forests and productive riparian systems.
- ◆ Consolidated Coal, one of the owners of Cardinal River Coals, has an environmental record that is noteworthy in that all directors were required to pay a \$200,000 fine in 1994 for failing to reclaim a mine in New Mexico. There is a raft of allegations, convictions and poor practices outlined in press clippings and court documents

*Alberta Wilderness Association,
<http://www.web.net/~awa/cheviot/highlights.htm>*

mines and forestry.¹¹¹ 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.¹¹² The coalition won its appeal.

“The Federal Court has ruled in favour of 5 Canadian conservation organizations that challenged the federal approval of the Cheviot open-pit coal adjacent to Jasper National Park. The ruling sets major new precedents for Canadian environmental law. Justice Douglas Campbell found that the joint federal-provincial environmental review did not comply with the Canadian Environmental Assessment Act (CEAA). He struck down the federal authorization for the mine that had been issued under the Fisheries Act. And he ruled that the permanent dumping of millions of tonnes of waste rock on migratory bird habitat does fall under the *Migratory Bird Convention Act*, which prohibits the deposit of substances harmful to migratory birds.”¹¹³

The Cheviot Mine litigation underscores the crucial role of intervenors in the environmental assessment process. But for the participation of the coalition of environmental organizations, a seriously flawed environmental assessment would have provided the authorization for an environmentally disastrous project.

3.6 Approval, Operating and Closure Requirements

Mining is a tremendously risky business. Strictly in terms of investment and return, mining is and has always been subject to the vicissitudes of commodity prices. Low gold prices for the past decade, for example, have substantially increased the risk (and ruination) of gold mine operations.¹¹⁴ In this and practically every other respect mining is dangerous. The physical risk to employees, although better than in the past, is still quite high.¹¹⁵

Ottawa, NWT to Pay For Giant Clean Up

The federal government and the Government of the Northwest Territories are planning to take financial responsibility for cleaning up 260,000 tons of dangerous arsenic dust buried deep in the abandoned tunnels of the Giant Mine owned by insolvent Royal Oak Mines Inc.

...The mine has been in operation for about 50 years. Under water licenses ... owners and operators of the Giant mine have stored the arsenic trioxide generated by refining gold in underground storage facilities....the proposed sales agreement contemplates that DIAND and the territorial government will assume liability for the environmental obligations.

...The cost of cleaning up the piles of poison is estimated at \$50-million to \$250 million, though one observer puts the price tag at \$1-Billion.

A. Robinson, *Globe & Mail*, August 28, 1999.

The environmental impacts of mining operations are enormous and the consequences of failures of structures such as tailings dams potentially calamitous. It is estimated, for example, that the Canadian mineral industry generates 1 million tonnes of waste rock and 950,000 tonnes of tailings *per day*, totaling 650 million tonnes of waste per year.¹¹⁶ This is more than twenty times the amount of municipal solid waste generated by each year by all of the residences, industries, commercial establishments, institutions and farms in Canada combined.¹¹⁷

Mine operations are a major source of water pollution. Minewater and waste mill slurry may be extremely acid or alkaline, and may contain suspended solids, residual mine-mill chemicals, heavy metals, ammonia, and in the case of uranium mines, radioactive substances. Run-off from abandoned tailings may be acidic, and contain dissolved solids and heavy metals due to Acid Mine Drainage (AMD — see box). Cyanide collection reservoirs and contaminated tailings left behind by heap-leaching, a new technology for extracting gold from very low-grade ores using cyanide solutions, pose major threats to wildlife and groundwater.¹¹⁸

In addition, ore extraction and concentration operations, refining and smelting, and tailings areas are major sources of air pollution. It has

been estimated that over 60,000 tonnes of particulate emissions originate from Canadian mine tailings each year, while the metal smelting sector is a leading source of emissions of a range of heavy metals, including cadmium, mercury, lead, nickel, and arsenic, and acid rain precursors, such as sulphur dioxide.¹¹⁹

Given the dangers and distant and recent history of the destructive effects of mining operations, in Canada, one would expect that it would be and should be heavily regulated. Several elements are required to make this regulation effective. Regulatory oversight must be triggered by environmental assessment (discussed in the previous section), approvals, permits and other legal mechanisms. These instruments in their turn must be made effective by consistent monitoring and enforcement of compliance. The sections that follow describe these mechanisms and their enforcement as law and practice presently require in Canada.

Finally, because mining impacts public goods — air, water, land — effective regulation includes opportunities for public involvement: a say when decisions are being made, and recourse when government monitoring and enforcement fails to protect the public interest in a clean environment.

3.6.1 Permits and Approvals

In addition to any environmental assessment requirements which may apply to a mining operation, additional permits and approvals are usually required under other laws before a mine can commence operations. These requirements vary from province to province.

Generally there are two permit streams for mining operations. The first stream is required under provincial mining legislation and applies to mine operations and tailings disposal. The second stream arises from environmental legislation (both provincial and federal) and applies to air, water and waste management (excluding tailings and waste rock). Mining permits are usually granted by provincial mines ministries, while permits to use public lands and water, and to discharge wastes 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.

3.6.1-1 Federal

Federally the most important permits come under the *Fisheries Act*¹²⁰ and deal with the harmful alteration, disruption or destruction of fish habitat. If a mine proposal requires any of these activities — such as the Diavik Diamond mine whose operation requires an entire lake be drained¹²¹ — then the proponent must apply for a permit under the *Fisheries Act*. Permits may also be required under the *Navigable Waterways Protection Act* if the development of a mine will interfere with a navigable waterway.

A mine requires a license under the *Yukon Quartz Mining Act* prior to commencing operation in the Yukon Territory. In the Territories permits under the *Water Act* are required for a mine to begin operation. 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.

Acid Mine Drainage

AMD occurs when sulphide-bearing minerals in rock are exposed to air and water, changing the sulphide sulphur to sulphuric acid. This acid dissolves heavy metals such as lead, zinc, copper, arsenic, selenium, mercury and cadmium into ground and surface water. Naturally-occurring bacteria can significantly increase the rate of this reaction. AMD and heavy metals pollution can poison ground and drinking water. AMD can destroy aquatic life and habitat. Ore bodies commonly mined that pose AMD risk are: gold, silver, copper, iron, zinc, lead (or multi-metal combinations) and coal.

BC Mining Watch, Fact Sheet #1, "Acid Mine Drainage: The Perpetual Pollution Machine."

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.¹²²

3.6.1-2 Ontario

In Ontario, general approval for a mine, including issues relating to design, operation, tailings disposal and waste disposal, is granted by the Minister of Northern Development and Mines under the *Mining Act*. The development of a mine closure plan is a major component of these requirements.

Environmental approvals for a mine are the responsibility of the Minister of the Environment through permitting processes in the *Environmental Protection Act* (EPA) and the *Ontario Water Resources Act* (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. Water taking approvals may be required under the OWRA to draw water from lakes or rivers, as well as certificates of approval for the discharge of mine effluent.¹²³

Under both the EPA and OWRA, the Ministry of the Environment has the discretion to refuse applications for approvals or to impose any conditions on them that it believes to be in the public interest. In practice, however, applications for approvals are almost never refused. The specific terms and conditions included in approvals are largely discretionary, being based on non-binding guidelines issued by the Ministry.¹²⁴ Regulatory standards do exist for a limited range of hazardous air pollutants,¹²⁵ and for water discharges the requirements of the MISA program (see below), must be met.

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*' 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. 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.

The Ontario 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.¹²⁶

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.¹²⁷

3.6.1-3 British Columbia

In British Columbia, “commencement of any work in, on, or about a mine” requires a permit under the *Mines Act*.¹²⁸ There is a general requirement that an application for a permit to commence work on a mine must include a plan with the district mines inspector detailing the proposed work and a program for the protection and reclamation of the land and watercourses affected by the mine.¹²⁹

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.¹³⁰

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.

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.

In B.C., the principle environmental statute is the Waste Management Act (WMA),¹³¹ administered by the Ministry of Environment, Lands and Parks. This statute contains many similar provisions for the issuing of permits for air and water discharges as Ontario’s EPA. As with Ontario these approvals such approvals are required in addition to a permit under the Mines Act. Like the Ontario EPA, the WMA provides for the establishment of an Appeal Board to hear appeals by applicants and holders of approvals regarding the Ministry’s refusal to issue approvals or its imposition of terms or conditions on an approval.¹³²

3.6.2 Pollution Prevention And Control Regulations

In addition to requirements for specific permits, the federal government and some provinces have adopted pollution prevention and control regulations which apply to mining operations apply irrespective of permit requirements.

3.6.2-1 Federal

The *Federal Fisheries Act* contains a general prohibition on the deposit of “deleterious substances” into waters “frequented by fish,” except where these discharges are permitted by regulation.¹³³ Regulations were promulgated under the *Fisheries Act* relating specifically to the control of water pollution in the mining industry in 1977. The Metal Mining Liquid Effluent Regulations¹³⁴ (MMLERs) applied 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 discharge limits on substances determined to be deleterious substances under the *Fisheries Act*. The substances include arsenic, copper, lead, nickel, zinc, total suspended matter and radium 226.¹³⁵

Mining facilities are required to comply with the MMLERs regardless of any terms and conditions imposed in permits issued under provincial legislation. In practice, the requirements of the MMLERs are incorpo-

rated into provincial water pollution control permits issued for the mine. The MMLERs require mine operators to install and maintain facilities that the Minister deems proper for sampling and analyzing effluents under the regulations.¹³⁶

Proposed amendments to the MMLERs will introduce an acute lethality test similar to the Ontario MISA regulations for metal mines (see below).¹³⁷ If enacted, these amendments will set very high standards for effluent quality from metal mines in Canada.¹³⁸

The federal *Canadian Environmental Protection Act* (CEPA) provides the federal government the authority to regulate the import, export, use, storage, processing, sale, release into the environment and disposal of substances designated as “toxic” for the purposes of the Act.¹³⁹ Pollution prevention¹⁴⁰ and emergency planning¹⁴¹ can also be required by the federal Minister of the Environment in relation to “toxic” substances.

Forty-four substances, including the minerals and metals asbestos, mercury, lead, cadmium, chromium, arsenic, and nickel and their compounds have been declared “toxic” for the purposes of CEPA. However, with respect to the mining the federal government has only used this authority to establish regulations controlling air releases of asbestos from asbestos mines and mills.¹⁴² These regulations were first issued under the federal *Clean Air Act* in 1977, and have not been significantly updated since then.

3.6.2-2 Ontario

Among the most significant requirements imposed on mining operations at the provincial level are Ontario’s Metal Mining Sector Regulations¹⁴³ established under the *Environmental Protection Act* as part of the Municipal/Industrial Abatement strategy (MISA). The MISA program was launched in 1986 and completed in 1995. Under the MISA program discharge regulations have been established for nine industrial sectors, including metal mining.¹⁴⁴

As with other sectors, the MISA metal mining sector regulations establish maximum effluent concentration limits for the sector as a whole and total loading limits for individual mines. Maximum contaminant concentrations for substances, sampling and monitoring regimens, and reporting requirements are also established by the regulation.¹⁴⁵ A key requirement under the Metal Mining Sector Regulations is that mine effluent be non-toxic to Rainbow Trout and *Daphnia magna* (water fleas). 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.¹⁴⁶ The MISA regulations cover both toxic (e.g. heavy metals) and conventional pollutants.

The MISA Metal Mining Regulations in Ontario pertain only to mine effluent and not leachate from tailings or from closed or abandoned mines. 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 addition to the MISA regulations, 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.

A number of metal mining operations in Northern Ontario have had difficulty meeting the MISA requirements applicable to their sector, particularly the acute toxicity requirements and have sought to weaken the regulations.¹⁴⁷ No other province has adopted discharge standards for the mining sector comparable to the Ontario MISA requirements.

3.6.2-3 British Columbia

In British Columbia a 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.¹⁴⁸ 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.¹⁴⁹

3.6.3 Mine Closure Plans and Financial Assurances

Metal mining is a temporary land use, but one that may have enduring effects long after operations have ceased. Abandoned mines can pose a serious danger to human health and safety and the environment. Tailings dam failures, for example, can result in the contamination of water supplies with heavy metals and other toxic substances, destroy fish and wildlife populations and their habitat, and threaten downstream communities with flooding.¹⁵⁰

There are thought to be more than 10,000 abandoned mines in Canada, and at least 6,000 abandoned tailings sites. It is estimated that less than 20% of the lands disturbed by abandoned metal mines have ever been reclaimed.¹⁵¹ The Mining Association of Canada has placed the cost of remediating abandoned mine sites in Canada at \$6 billion,¹⁵² a cost which is likely to have to be carried by Canadian taxpayers.

Policy On Acid Mine Drainage Management in British Columbia

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 include:

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.

Acid Mine Drainage is one of the most serious environmental effects associated with abandoned mine wastes and tailings. In 1991 it was estimated that there are 351 million tonnes of waste rock, 511 million tonnes of sulphide tailings more than 55 tonnes of other sources with the potential to cause AMD in Canada.¹⁵³

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 as part of the mine approval process under their mining legislation. Closure plans have traditionally been required to be accompanied by realizable financial assurances, such as cash or bonds, to ensure that funds are available for mine closure and remediation in the event of bankruptcy or abandonment by the owner or operator.

Requirements for closure plans and financial assurances have come under attack by the mining industry over the past few years as being excessive. As a result, Ontario has significantly weakened its mine closure requirements, and there are pressures on British Columbia to move in the same direction. The industry has also sought 'exit tickets' through which responsibility for a mine site, and any future liabilities associated with it would revert to the Crown once a closure plan has been completed.

3.6.3-1 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 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.¹⁵⁴ 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.¹⁵⁵

3.6.3-2 Ontario

Under amendments to the *Mining Act* adopted in 1989, closure plans were required to be submitted to, and approved by, the Director of Mine Rehabilitation prior to a mine going into production. The amendments to the Act also required the provision of realizable financial assurances, such as cash, bonds or letters of credit, in relation to a closure plan, and annual reports on the plan's implementation.¹⁵⁶

However, 1996 amendments to the *Mining Act*¹⁵⁷ significantly weakened these closure and reclamation provisions. Specifically, the amendments eliminated the requirement that closure plans be approved by the Ministry of Northern Development and Mines, permitting companies to approve their own closure plans. The requirements that companies post realizable financial securities to cover the cost of closure in the event of bankruptcy were also altered.¹⁵⁸ Under the new provisions, the government will introduce a "corporate financial test" calculated on a company's credit rating. 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.¹⁵⁹ The requirement to provide annual reports on the implementation of closure plans to the Ministry has also been removed. Companies who voluntarily surrender to the Crown mining lands after reclamation activities are complete are exempt from any future liabilities, even if the company is at fault.¹⁶⁰

In addition to these legislative and regulatory changes, the Mine Remediation Branch of the Ontario Ministry of Northern Development and Mines has been severely affected by budgetary reductions. The Branch's budget was reduced by \$1.3 million/year and fourteen of its seventeen inspectors were laid off in the fall of 1995.¹⁶¹

3.6.3-3 British Columbia

British Columbia also requires reclamation planning be detailed in a mine plan. In British Columbia, the *Mines Act* specifies reclamation standards for the disposal or impoundment of waste, including the minimization of acid mine drainage.¹⁶² 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.

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 reclamation activities after operations have ceased.¹⁶³ 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.¹⁶⁴ British Columbia has recently proposed legal reforms which will be a substantial withdrawal from ensuring industry liability for environmental damage (see text box on following page).

3.6.3-4 Alberta

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.

3.7 Abandoned and Orphaned Mine Rehabilitation

In Canada mining has left — through bankruptcy, "orphan mines" and reversion to the Crown — an undistinguished legacy of hazardous mine sites. There are thought to be more than 6000 such sites in the province of Ontario alone,¹⁶⁵ with potential clean-up costs estimated at between \$300 million¹⁶⁶ and \$3 billion dollars.¹⁶⁷

Abandoned mine sites may require care in perpetuity to control acid mine drainage and maintain tailings dams and impoundments. The collapse of a tailings dam at the Matachewan Mine in Northern Ontario in 1990 contaminated the water supply for three communities with lead and other toxic substances. The provincial government incurred clean-up costs of approximately \$2 million. The mine had ceased operations in the 1950's.¹⁶⁸

Acid mine drainage does not arise from *illegal* mining operations. The best-run mines in the world can drain acid. Present technology can contain AMD, neutralize acid runoff with lime and treat or contain the neutralized slurry. However, no one knows how long the clock needs to run for these remedial treatments. Estimates for the Equity mine indicate that at least \$150,000,000 will be spent on clean-up. As for cost in years, our great-grandchildren may still be puzzling over the extraordinary legacy of Equity Silver. Indeed, the perspective of one hundred years from now could make Equity Silver (operating for 14 years) and Mount Washington Copper (operating for three years) look like the same mistake: long term environmental and economic health squandered for the sake of short-term economic gain.

Placer Dome Equity Silver Mine, British Columbia

Placer Dome's Equity Silver mine operated from 1980 to 1994. That operation deposited 42 million tonnes of tailings and 80 million tonnes of waste rock in three acid-generating dumps. The tailings are kept behind a large dam and under water cover. The waste rock dumps have been covered with a \$5 million compacted glacial till layer in an effort to slow down the infiltration of water and oxygen that would feed the Acid Mine Drainage process.

The Equity Mine is at the top of two watersheds, where streams flow into lakes on either drainage and from there into the Bulkley River. Four kilometres of streams and nearly one hundred hectares of wetlands have been lost to the minesite, tailings impoundments, waste rock dumps and runoff collection systems. Contamination of the local lake and stream sediments has been documented.

The acid-drainage from the Equity mine flowed into Buck Creek in 1982 until a partial containment system was constructed. Again in 1983 AMD affected water quality in Buck Creek and Goosley Lake. In 1983 the company plead guilty to destruction of fish habitat and was fined \$12,000. Later that year a huge collection system including ponds, sumps and ditches linked with a series of pumping stations was put in place. This system directed AMD to the treatment plant which neutralizes the acidity of the drainage with powdered lime that settles the heavy metals into a sludge. The heavy-metal-laced sludge is stored in the remaining "main zone" pit left empty after mineral excavation. Storage volumes may exceed the capacity after a few centuries.

Equity Silver was required (under the BC Mines Act) to post a bond for maintenance of an AMD problem in perpetuity. The bond now stands at \$25 million to guarantee payment of costs for this site. The cost of collection and treatment for 1997 was \$1.5 million. The risk of heavy metal contamination over time still stays with the watershed and the people downstream. It is conservatively estimated that Equity mine will have to be maintained and monitored for AMD for centuries.

In Canada there is no national program similar to the Superfund Program in the United States to pay for the clean-up of abandoned and orphaned mines and other contaminated sites and to pursue responsible parties in a systemic way.¹⁶⁹ Rather, where clean-up and reclamation work has been done, it has been paid for through the general tax revenues of the federal and provincial governments. In late 1999, for example, the Ontario Ministry of Northern Development and Mines announced that \$27 million would be made available to deal with primarily physical dangers (unfenced sites, collapsed tunnels and so on).¹⁷⁰ These are funds which could otherwise have been spent on schools, hospitals and other services, had adequate measures been in place to prevent the abandonment of unremediated mine sites.

Proposals have been made by environmental and conservation groups to reallocate some of the direct or indirect subsidies provided to the mining industry for the purpose of remediating abandoned mines. However, governments have taken no action on these suggestions.¹⁷¹

The value of Canada's legacy of abandoned and acid-leaking mines must be the powerful hindsight they afford us. The mining industry's assurances about its ability to protect the environment are insufficient in the face of this evidence on the ground — and in the water.

3.8 Monitoring and Enforcement

Compliance with permits and regulations are monitored and enforced by the respective government Ministries (provincial) and/or Departments (federal) responsible for their issuance or administration. The administration and enforcement of federal pollution control requirements are often delegated to provincial governments through administrative agreements. However, the provincial record of performance under these agreements is very weak.¹⁷²

Moreover, all levels of government have reduced the enforcement capacities of their departments responsible for mining and environmental protection over the past five years. At both the provincial and federal levels, departments charged with environmental protection do not have the financial resources required to enforce their regulatory responsibilities.¹⁷³

3.8.1 Federal

The *Fisheries Act* contains provisions to fine those who fail to comply. Violations of the *Fisheries Act* are common, but 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 in the *Fisheries Act*, anyone who is guilty of an offence under the Act is punishable on summary conviction and can be fined up to three hundred thousand dollars.¹⁷⁴ Any subsequent offence may result in a fine up to three hundred thousand dollars and/or a six-month prison term.¹⁷⁵ 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.¹⁷⁶

If a corporation is charged under the *Fisheries Act*, the Act allows that any officer, director or agent of the corporation who participated in the commission of the offence is guilty of the offence and is liable on conviction to the punishment provided for the offence, whether or not the corporation has been prosecuted.¹⁷⁷ 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 the 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.”¹⁷⁸

The Act also stipulates that one half of any fine under the *Fisheries Act* resulting from a private prosecution (see below) is required to be paid to the private prosecutor.¹⁷⁹ 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.¹⁸⁰

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At December’s Contaminated Sites Implementation Committee meeting, organized by the Ministry of the Environment Lands and Parks (MELP), the Ministry of Energy and Mines presented a proposal to exempt mines from the Contaminated Sites Regime (Part 4) of the Waste Management Act (WMA), and from retroactive liability under the pollution abatement and pollution prevention order provisions (ss. 31 and 33) of the WMA. This proposal arises from recommendation of the Business Council of BC to the Business Taskforce on Streamlining Regulations.

Here is a preliminary view of what this change would mean:

- ◆ An unduly limited role for MELP in the regulation of environmental harm from mining practices. By restricting MELP’s authority to request site investigations and issue remediation orders, the authority of the Environment Ministry to regulate for environmental quality will be seriously hampered.
- ◆ Governmental accountability would be reduced. This proposal would result in the Ministry of Energy and Mines being the primary environmental regulator for on-site generation of contaminants from mines, while at the same time being the primary ministry responsible for promoting economic development in the mining sector in BC. Further, virtually every requirement with respect to mine permits under s. 10 of the Mines Act is discretionary; indeed, the chief inspector may even waive the requirement to obtain a permit (s. 10(2)).
- ◆ Greater potential public burden for mine site cleanup. With the loss of retroactive, and joint and several liability under the contaminated sites regime, in favour of sole reliance on the negotiated bonding requirements of the Mines Act, there is potential for a much greater public burden for the cost of cleaning up mine site contamination.
- ◆ No clear, consistent standards for site remediation. The WMA establishes criteria and standards to which a contaminated site must be remediated; the Mines Act contains no similar consistent criteria, and leaves much to the discretion of changeable policy, regional mines officials and companies.
- ◆ Limited opportunity for public input. The permit process under s. 10 of the Mines Act contains no right of public consultation or input. In contrast, s. 27.5 of the WMA contains specific guidance for public consultation regarding site remediation, and the requirements of the Public Notification Regulation under the WMA apply to all permits or approvals issued by MELP.
- ◆ Limited opportunity to appeal unsatisfactory decisions. Similarly, there is no right of appeal for a permit issued under s. 10 of the Mines Act, whereas s. 44 of the WMA provides for appeal of decisions of managers and directors to the Environmental Appeal Board. The only remedy available under the Mines Act process would be to commence a more costly and cumbersome judicial review to the Supreme Court.

This proposal is being touted as a solution to regulatory overlap, which could just as easily be resolved through administrative and policy mechanisms developed between MELP and MEM. If public and environmental rights were a priority, and streamlining was a real concern, then the Mines Act reclamation permit process could be rolled into the MELP contaminated sites regime, because it has less discretion, clearly articulated standards, and better public process. Nevertheless, we think that regulatory changes are not required and would only serve to exacerbate the problems and increase public risk and distrust.

Environment Canada's operating budget was reduced by 30% in the 1995 federal budget.¹⁸¹ Law enforcement functions were specifically protected from these reductions. However, a report by the House of Commons Standing Committee on the Environment and Sustainable Development, tabled in May 1998, concluded that Canada's environmental laws, including CEPA, and the *Fisheries Act*, were not being enforced effectively, due to a combination of a lack of political will, and lack of adequate resources.¹⁸²

Environment Canada has entered into a number of administrative agreements with provincial governments delegating to them primary responsibility for the enforcement of specific federal laws and regulations including regulations made under CEPA and the *Fisheries Act*. Independent assessments of the performance of provincial governments under these agreements have been consistently poor.¹⁸³ Despite this, the significance of such arrangements is likely to expand under the January 1998 *Canada-Wide Accord on Environmental Harmonization*.

3.8.2 Ontario

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.¹⁸⁴ The government may also prosecute on the basis that any emission has an 'adverse effect' on the receiving environment.¹⁸⁵ Mining companies can also be convicted for non-compliance with effluent standards set under the OWRA.

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.¹⁸⁶

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

Ontario's EPA provides for 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 involves hazardous waste or liquid industrial waste, they are subject to a fine of up to \$50,000 per day and up to a year in jail.¹⁸⁷ Corporations can be fined up to \$250,000 per day for the same offences. For many other offences committed under the Act, individuals may be fined up to \$20,000 per day and corporations up to \$100,000 per day. These maximum fines may be increased by the amount of monetary benefit that the individual or corporation obtained by committing the offence.¹⁸⁸

Under the *Ontario Water Resources 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 \$20,000 on a first conviction and not more than \$50,000 on each subsequent conviction.¹⁸⁹ 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 \$100,000 on a first conviction and \$200,000 on each subsequent conviction.¹⁹⁰

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.¹⁹¹ 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 an offence under the Act and on conviction is liable to a fine of not more than \$10,000.¹⁹²

The environmental law enforcement capacity of the Ontario Ministry of the Environment has been severely affected by budgetary reductions since 1995. By the end of the 1999/000 fiscal year, the Ministry will have lost 38% of its operating budget against a 1994/95 base year.¹⁹³ Among other things, these reductions have resulted in the lay-off of 28% of the staff of the Ministry's Investigations and Enforcement Branch. The level of fines obtained for environmental offences in the province has fallen from over \$3 million per year in 1995, to less than \$900,000 in 1998.¹⁹⁴ The Ministry of Northern Development and Mines has suffered similar reductions in its capacity to monitor and enforce environmental requirements related to mining operations.¹⁹⁵

3.8.3 British Columbia

Under section 39(3) of the British Columbia *Mines Act* failure to comply with the provisions of the Act and its regulations is punishable by a fine of not more than \$100,000 and/or a one-year prison term.¹⁹⁶ 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.¹⁹⁷

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.¹⁹⁸

Like all other federal and provincial environmental agencies in Canada, the British Columbia Ministry of Environment, Lands and Parks has suffered significant reductions in its operating budget and personnel resources over the past few years. The Ministry has lost 21% of its staff since the 1996/97 fiscal year, and a July 1999 survey of Ministry employees found that 90% of Ministry staff stated that permits are not adequately inspected, monitored or enforced.¹⁹⁹

3.9 Public Participation in Environmental Law Enforcement

3.9.1 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.

3.9.1-1 Federal

Under CEPA²⁰⁰ 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. 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. 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.

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.

At any stage of the Minister's investigation of the alleged offence, she may, in addition to or in lieu of continuing the investigation, 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.

3.9.1-2 Ontario

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.²⁰¹ The names and addresses of the applicants, and any other personal information about them, are protected from public disclosure.²⁰² 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.²⁰³

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.²⁰⁴ 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.²⁰⁵ 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.²⁰⁶

3.9.2 Private Prosecutions

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.²⁰⁷ Quebec, which uses a Civil Code, is the exception.

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. Private prosecutions have had some success in getting governments to enforce their environmental laws.²⁰⁸ They suffer, however, from some significant limitations such as 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.

In British Columbia, the Attorney General has a policy of intervening in all private prosecutions, and a practice of staying (suspending) the vast majority of them.²⁰⁹

3.9.3 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.²¹⁰ The consent of the Attorney General is not required to pursue a citizen suit. Most importantly, however, in citizen suits the standard of proof is based on a “balance of probabilities” and not the more onerous “beyond a reasonable doubt” standard applied in prosecutions.²¹¹

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*.²¹² The revised CEPA, adopted in September 1999, also includes a citizen suit provision.²¹³ However, all of these provisions are subject to extensive procedural requirements, and in some cases provide extraordinary defenses to respondents. This has made their use very rare. In fact, no successful actions have been brought under any Canadian citizen suit provisions to date.

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. Traditional cost awards (where the unsuccessful party in a suit is liable for some or all of the legal costs of the other party) do not apply to unsuccessful private prosecutions.²¹⁴

3.10 Public Access to Information

The public right to access to information is analogous and similar to the public right to enforce public laws (see above). Because public goods are affected by mining activities, the public has a right to know how and to what extent. The sections that follow describe the various programmes and legal mechanisms that serve the public right to know.

Generally, all information submitted to government regarding a proposed or existing mine for an environmental assessment is available to the public. However other types of information, such as permitting and discharge information, may have to be acquired through Access to Information requests at both the federal and provincial levels.

3.10.1 Information About Mine Pollution and Discharges

3.10.1-1 Federal — The NPRI

If a mining operation manufactures, processes or otherwise uses any of substances listed under the National Pollutant Release Inventory (NPRI) 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. The NPRI, established by Ministerial Order under the *Canadian Environmental Protection Act*,²¹⁵ requires that on-site releases to air, water and land, transfers off site in wastes and the recovery, reuse and recycling of 246 listed substances be publicly reported. The NPRI is a nation wide, publicly accessible inventory of pollutant releases and transfers in Canada. Emission release data is submitted to the Environment Canada, which then releases the information to the public annually. Although releases and transfers of pollutants directly related to mineral extraction are exempted from reporting to the NPRI, releases and transfers related to refining,

processing or smelting are required to be reported to the inventory.²¹⁶

Aside from the data in the NPRI, and as relates to specific projects, 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 an environmental assessment. This information is provided to the public free of charge.

3.10.1-2 Ontario — Municipal/Industrial Strategy for Abatement

Under the Metal Mining Regulations in Ontario, there are public reporting requirements. Operators are required to provide annual discharge reports. In addition, a member of the public has the option of requesting specific discharge data from a provincial Ministry. If an informal request is refused the individual has the option of filing a request under Freedom of Information legislation.

3.10.2 Other Sources Of Information about Mining Activities

3.10.2-1 Federal Environmental Assessment Index

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.²¹⁷ Provincial governments with environmental assessment processes also make this information available to the public.

3.10.2-2 Federal Freedom of Information Legislation

The *Access to Information Act* gives Canadians,²¹⁸ other individuals, and corporations 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. Important information about pollution discharges, such as monitoring reports under the MMLERS sometimes can only be obtained through freedom of information requests.

A request for information can be, and often is, denied by a government department. When 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 a complainant is unsatisfied with the result, then he or she may apply to the Federal Court of Canada for a review of the department’s decision — whether or not the Commissioner supports the complaint. In some cases, the Commissioner may decide to take the case to the Federal Court of Canada.

3.10.2-3 Provincial Freedom of Information Legislation

Most provinces have Freedom of Information legislation of their own. The provincial Freedom of Information system is similar to the federal system, although in most provinces, the Information and Privacy Commissioner, who is usually an officer of the Legislative Assembly, has the power to order government agencies to release records if withheld in a manner inconsistent with the legislation.²¹⁹ In the past few years, provincial Freedom of Information requests are becoming increasingly expensive as governments require fees based on the amount of work required to assemble the requested information.²²⁰

3.10.3 New Forms Of Environmental Accountability

One of the most significant developments in Canadian environmental law and policy of the past decade has been the establishment of new institutional mechanisms to ensure the accountability of governments for the consequences of their environmental laws and policies.

3.10.3-1 The Environmental Commissioner of Ontario

The *Ontario Environmental Bill of Rights*, enacted in 1993, established the Office of the Environmental Commissioner as an office of the legislative assembly, similar to the Provincial Auditor. The Commissioner is mandated to report annually to the legislature and the public on the government's implementation of the EBR, and its overall environmental performance.²²¹ Ontario's first Environmental Commissioner was appointed in 1994, and has tabled a number of reports critical of the government's environmental policies.²²²

3.10.3-2 The Federal Commissioner of the Environment and Sustainable Development

A similar office was created at the federal level through amendments to the *Auditor General Act*, adopted in 1995. These amendments established the position of the Commissioner for the Environment and Sustainable Development with a mandate to report annually to Parliament and the public on the government of Canada's environmental performance.²²³

3.11 Policies to Stimulate Alternatives to Mining

3.11.1 Minerals and Sustainability

The scale of the environmental impacts of the mining industry requires that its role be examined in the context of the wider issue of environmental sustainability. It has been suggested, for example, that a 50% reduction in worldwide new materials consumption will be needed to arrest global environmental degradation, and that to achieve it, industrial countries need to aim for a 90% reduction. The current rates of materials consumption are considered unsustainable, not so much due to shortages of materials themselves, but rather due to the extent of the environmental costs associated with their extraction and processing.²²⁴

Dealing with the environmental damage caused by mining will require significant changes in the way in which minerals are used. It seems clear that the environmental damage from continued growth in new mineral production will eventually outweigh the benefits of increased material supplies, if it has not done so already.²²⁵

A less destructive approach would be to maximize the conservation of mineral stocks already circulating in the global economy, thereby reducing both the demand for new materials, and the environmental damage done to produce them. The world's industrial nations, including Canada, are the leading users of minerals,

and offer the most obvious opportunities for cutting demand for new materials. These nations need to move towards more materials-efficient economies, which will enable them to meet the needs of their citizens while using environmental resources less intensively.²²⁶

Unfortunately, Canada's 1996 federal Minerals and Metal Policy attempts to move Canada in the opposite direction, stating clearly: "While the pace in growth in demand *dictates* that virgin materials will remain the primary source of mineral and metal commodities, another important source is recycled materials [emphasis added]."²²⁷ That is, the federal government assumes that consumption will (and must) increase and that the primary source of feedstock for this increasing consumption is virgin materials. The understanding that these presumptions are the opposite of a sustainable materials economy²²⁸ appears to have escaped the federal government.

Rather, Canadian federal and provincial governments have adopted policies designed to keep the prices of metals and minerals artificially low, through a combination of externalized environmental and social costs, and direct and indirect subsidies. This is intended to increase both domestic consumption and exports of new metals and materials.²²⁹

A 1995 study completed for the Canadian Council of Ministers of the Environment, for example, concluded that the tax expenditures provided by the federal and provincial governments to support the development and production of basic materials introduce significant distortions into the materials market. In particular they provide a bias against the use of recycled materials.²³⁰ There is also growing concern that the currently mining and metals policy framework reinforces Canada's economic dependence on primary commodity exports. As such, the policy erects barriers to moving toward a more skills, knowledge and information-based economy.²³¹

PART FOUR: SUMMARY AND CONCLUSION

4.1 How Does the Canadian Regime Measure Up?

Recall the five points made in the early sections of this report that described the elements of a fair and effective mining regime:

4.1.1 Controls on Exploration and Land Access

The discussion around these points reveal that, in Canada's major metal mining jurisdictions — B.C., Ontario and lands under federal authority — the “default position” for staking a mining claim is “free access.” That is, wherever staking and exploration are not expressly prohibited, they are permitted. Because clear rights to mine arise from claim staking, the “free access” policy amounts to a presumption that, whatever else the land might be good for, mining rights will trump those uses.

Mining in national parks in Canada is clearly prohibited through the *National Parks Act*. The level of protection provided through provincial parks legislation is less clear. With the approval of the provincial cabinet, mining may in fact be permitted within provincial parks. The past few years have seen some disturbing trends. British Columbia has adopted legislation providing for compensation in the event that staked land becomes enclosed in a new park. Ontario has stated as part of its March 1999 “Living Legacy” program, that existing mineral tenure within new parks is to be secure and that it is willing to “deregulate” (which is to say, remove) parts of new parks where viable mineral deposits are found.

The situation regarding mining activities on lands which are held by aboriginal peoples through treaties or land-claims settlement agreements is complex and varies with the particular treaty or settlement agreement. Lands that are subject to aboriginal land claims (i.e. lands which are not covered by treaty and over which aboriginal people make a claim of ownership) present an even more complex problem. Mineral claims or tenure on such lands may not be considered secure and their status may become part of settlement agreement negotiations.

The conflict between the mining industry's desire for “free entry” to public lands for mineral development and those seeking to complete a system of protected areas within Canada has intensified in the past few years. These tensions have been further heightened by recent developments in Ontario and British Columbia. These have made the creation of new protected areas in locations where mineral rights have already been established very difficult, and indicate that even when areas are added to provincial parks, they are not secure from mineral exploration and development.

Mineral exploration activities themselves can have significant environmental impacts, including clearing, mechanical stripping, bulk sampling, drilling and blasting, moving heavy equipment and drilling rigs, and building trails. Traditionally, permits have been required for the conduct of exploration activities on public lands in Canada. However, over the past few years, a number of provinces, including Ontario and Alberta, have removed permit requirements for exploration work.

4.1.2 Assessment Of Impact Of Mining Operations

Environmental impact assessments of proposed mining projects may be required by either or both of the federal or provincial levels of government in Canada. Federal assessments, under the *Canadian Environmental Assessment Act* (CEAA) are triggered by requirements for federal approvals for a mining activity to proceed, most often under the *Fisheries Act* for the alteration or destruction of fish habitat, or for interference with a navigable waterway under the *Navigable Waters Protection Act*. A Federal assessment may also be triggered if the undertaking is on federal lands, or receives federal funding.

The comprehensiveness of a federal environmental assessment depends on the nature of individual projects and can range from relatively cursory “screenings” to full “comprehensive” assessments which include a full examination of environmental impacts of the project, and often include public hearings before an independent review panel. Federal approvals for an undertaking cannot be granted until the CEAA review process is completed.

Provincial environmental impact assessment requirements vary in their application to mining projects. In British Columbia, for example, environmental assessments are required for major mining projects. In Ontario, it would take a special designation by the provincial cabinet for a mine to be subject to an environmental assessment.

As noted earlier, a mining project can be subject to both federal and provincial environmental assessment requirements.

Environmental impact assessments of proposed mining operations have emerged as a major point of conflict between the mining industry on one hand, and environmental organizations and aboriginal communities on the other. The industry has generally sought processes which limit the scope and length of assessments, and which provide “certainty” of outcome (i.e. a guarantee of approval), while others have sought full investigations of the potential impacts of mining operations, with the real possibility of a “no-go” decision.

This conflict has escalated into litigation over the approval of a number of major mining projects under CEAA over the past few years. Environmental and aboriginal groups have argued, with some success, that the federal government is failing to apply the Act properly to mining operations and that projects are being approved without adequate scrutiny or understanding of their full costs and benefits.

In addition, follow-up monitoring and enforcement of conditions imposed through federal and provincial environmental assessment processes have been, with a few exceptions, extremely weak.

4.1.3 Controls on Mining Operations — Permits, Approvals, Pollution Prevention and Waste Management

A mining operation in Canada typically requires a number of specific permits under federal and provincial legislation in addition to environmental assessment approvals. At the federal level this can include requirements for permits to alter or destroy fish habitat under the *Fisheries Act*. At the provincial level, specific permits are usually required under mining legislation. Waste management and closure planning have been a major focus of these requirements. Further specific approvals may be required for water use and air and water pollution under water resources management and environmental protection legislation. There is generally a high degree of discretion provided to officials regarding the content of these approvals under the relevant legislation. In the case of major undertakings, like mines, efforts are usually made to integrate all of the approval requirements through the environmental assessment process.

Specific regulatory controls or standards for mining operations in Canada are limited. At the federal level, the Metal Mining Liquid Effluent Regulations (MMLERS), adopted in 1977, apply to metal mines opened after that date, although not to gold mines, regardless of levels of discharges provided for in provincial approvals or permits. The MMLERS are now significantly out of date, and are in the process of being revised and modernized.

The federal *Canadian Environmental Protection Act* (CEPA) gives the federal government the authority to regulate the use, generation, release and disposal of substances designated as “toxic” for the purposes of the Act. Pollution prevention and emergency planning can also be required in relation to “toxic” substances. Forty-four substances, including asbestos, mercury, lead, cadmium, chromium, arsenic, and nickel and their compounds have been declared “toxic” for the purposes of CEPA. However, the federal government has only established regulations for air releases of asbestos from asbestos mines and mills for the mining industry. As with the MMLERS, these regulations date from the 1970s.

At the provincial level, the most important regulatory standard-setting program in Canada for metal mining has been the government of Ontario’s Municipal Industrial Strategy for Abatement (MISA). The MISA program was initiated in 1986, and the adoption of water discharge regulations for nine industrial sectors, including metal mining, under the program was completed in 1995.

The MISA program established discharge standards for both conventional (e.g. biological and chemical oxygen demand, total suspended solids and nutrients) and toxic (e.g. persistent organic pollutants and heavy metals) pollutants. The MISA regulations also included requirements that facility effluents not be acutely toxic to fish and water fleas, and for chronic toxicity monitoring.

A number of metal mining operations in Northern Ontario have had difficulty meeting the MISA requirements applicable to their sector, particularly the acute toxicity requirements and have sought to weaken the regulations. No other province has adopted standards for the mining sector comparable to the Ontario MISA requirements.

Significant penalties for violations are available under Canadian federal and provincial environmental legislation applicable to the metal mining industry. However, over the past four years major budgetary reductions to environmental agencies at the federal and provincial levels have had a negative impact on their monitoring and enforcement activities. These impacts have been particularly severe in Ontario in the period following the 1995 provincial election.

Federal and some provincial and territorial legislation includes provisions for ‘citizen suits’ in relation to actual or potential violations of environmental laws. However, these provisions are subject to procedural requirements that make them difficult, if not impossible to use. Citizens may undertake private prosecutions of alleged violations of environmental laws, although such actions required the collection of detailed evidence, and are ultimately subject to oversight by the relevant Provincial Attorney-General.

Citizens may be able to obtain information about pollutant releases and transfers from mining operations through the National Pollutant Release Inventory, although facility reporting requirements are subject to some significant limitations under the program. The Ontario MISA program also requires the public release of data from facilities on an annual basis. Further information on pollutant discharges sometimes can be obtained through the use of freedom of information legislation at the federal and provincial levels.

4.1.4 Mechanisms to Ensure Industry Responsibility for Closure, Remediation and Reclamation of Abandoned Mines

Estimates to clean up the Giant Gold Mine in the Northwest Territories — just one of thousands of abandoned and environmentally hazardous mines in Canada — are in the range of \$250 million to over \$1 billion.

All provinces and territories in Canada require closure plans upon application for a permit under their mining laws. British Columbia's requirements under the Health Safety and Reclamation Code for Mines, and Ontario's provisions under the 1989 Bill 71 amendments to the *Mining Act* were strong mine closure regimes.

The mining industry has attacked these provisions in the past few years. As a result, in Ontario amendments to the mine closure provisions of the *Mining Act*, adopted in 1996, permit mine operators to “self-certify” their closure plans, rather than seeking the approval of the Ministry of Northern Development and Mines. Amendments also eliminated the requirements that realizable financial assurances be provided by mine operators in support of their closure plans and permit mine owners to return closed mining properties, and their accompanying liabilities, to the Crown. There have been pressures for similar changes to the mine closure regime in British Columbia.

In addition to these legislative and regulatory changes, the capacity of provincial government agencies to oversee and monitor the mine closure process has been severely affected by budgetary reductions and the resulting losses of personnel and capacity.

The costs of the remediation of abandoned mines have fallen on the general taxpayer. No measures, such as a surtax on operating mines or the use of metals, have been taken to generate revenues for this purpose. Canadian governments have ignored proposals that some of the direct and indirect subsidies that the industry receives be reallocated for the purpose of abandoned mine rehabilitation.

4.1.5 Policies to Stimulate Alternatives to Virgin-Metal Mining

Canadian federal and provincial governments have adopted policies designed to keep the prices of metals and minerals artificially low, through a combination of externalized environmental and social costs, and direct and indirect subsidies. This is intended to increase both domestic consumption and exports of new metals and materials. These policies are in direct contradiction to the internationally recognized need to reduce demand for new metals and materials for reasons of environmental sustainability, and to emphasize the reuse and recycling of existing material stocks, particularly in industrial countries.

4.2 Conclusion

Government and mining industry assertions aside, Canada's system of environmental laws affecting mining have failed to strike a fair balance between the interests of the mining industry and the interests of the public. Significant reforms to strengthen the existing regime at the federal and provincial levels are required to protect the environmental and economic interests of Canadians. Governments must move Canada toward a sustainable approach in the extraction and use of metals and other materials.

ENDNOTES

¹ Alan Young, “Public Interest Perspectives on Canadian Environmental Mining Issues: a discussion paper”, (Ottawa: Friends of the Earth, 1997), p. 15.

² See, for example, John E. Young, “Mining the Earth,” WorldWatch paper 109 (Washington: WorldWatch Institute, 1992)

³ The most recent federal environmental initiative to impose new environmental requirements on the mining industry, for example, was the coming into force of the *Canadian Environmental Assessment Act* in 1995. Prior to the enactment of CEAA, no new environmental requirements had been imposed on the industry by the federal government since the late 1970’s.

⁴ See, for example, M. Winfield and G. Jenish, Ontario’s Environment and the ‘Common Sense Revolution:’ A Four Year Report (Toronto: CIELAP, October 1999); T. Marr-Liang, Downsizing, De-Regulation and Regionalization: The Weakening of the Alberta Government’s Role in Environmental Protection (Drayton Valley, Alberta: Pembina Institute for Appropriate Development, March 1997).

⁵ 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.

⁶ For a detailed assessment of mining industry progress under ARET see *Critique of the Mining Association of Canada’s Environmental Progress Report, 1999* (Ottawa: MiningWatch Canada, January 2000)

⁷ See, for example, R.B. Gibson, ed., *Voluntary Initiatives: The New Politics of Corporate Greening* (Peterborough: Broadview Press, 1999).

⁸ The Whitehorse Mining Initiative Leadership Council Accord, FINAL REPORT, October, 1994

⁹ Peter Hogg, *Constitutional Law of Canada*, 2nd ed. (Toronto: Carswell Publishers, 1985), p. 80

¹⁰ Barry J. Barton, *Canadian Mining Law*, Canadian Institute of Resources Law, Calgary, 1993, p. 7

¹¹ See Natural Resource Canada’s web site at URL: <http://www.nrcan.gc.ca/mms> for total exploration investment and expenditures.

¹² Constitution Act, 1982, s.91.

¹³ Nunavut Act, S.C. 1993, Chap. 28, as amended.

¹⁴ Barton, p. 8.

¹⁵ Asbestos Mines and Mills Release Regulations, 1977, SOR/90-341

¹⁶ M. Winfield and P. Muldoon, Brief to the House of Commons Standing Committee on Environment and Sustainable Development Regarding the Canadian Council of Ministers of the Environment Environmental ‘Harmonization’ initiative (Toronto: CIELAP and Canadian Environmental Law Association, October 1997).

¹⁷ On February 27, 1996, the Governor General of Canada read the following, establishing for that sitting of parliament the government’s legislative and policy objectives. “The Government is prepared to withdraw from its functions in such areas as labour market training, *forestry*, *mining*, and recreation, that are more appropriately the responsibility of others, including provincial governments, local authorities or the private sector. The federal government will propose to the provinces *a much strengthened process to work in partnership, focussing on such priorities as food inspection, environmental management, social housing, tourism and freshwater fish habitat.*” House Of Commons, Tuesday, February 27, 1996, Second Session-35TH Parliament-Opening [emphasis added]. See http://www.parl.gc.ca/francais/hansard/001_96-02-27/001GO1E.html.

¹⁸ “Guide to the Canada-wide Accord on Environmental Harmonization”, Environment Canada Web site, http://www.mbnet.mb.ca/ccme/3e_priorities/3ea_harmonization/3ea1_%20accord/3ea1a.html. See also <http://www.ccme.ca/> — the CCME web site and, for environmental assessment subagreements, <http://www.ceaa.gc.ca/> — the Canadian Environmental Assessment Agency web site.

¹⁹ Chief among these are the Mining Association of Canada (MAC) (www.mining.ca/), the Mining Associations of British Columbia (www.mining.bc.ca/) and Ontario (www.oma.on.ca/) and the Prospectors and Developers Association of Canada (www.pdac.ca/).

²⁰ Mining Association of Canada, “Ten Point Plan to Keep Mining in Canada” in “A Future Denied?” supplement to *Report on Business Magazine*, September 1995.

²¹ Standing Committee on Natural Resources, *Lifting Canadian Mining Off the Rocks* (Ottawa: House of Commons, December 1994).

²² Standing Committee on Natural Resources *Streamlining Environmental Regulation for Mining* (Ottawa: House of Commons, November 1996).

²³ Natural Resources Canada, The Federal Government’s Response to the Final Report of the Standing Committee on Natural Resources: Streamlining Environmental Regulation for Mining (Ottawa: Minister of Supply and Services, March 1997).

²⁴ See for example, the Windy Craggy case in British Columbia, and the “Living Legacy” program in Ontario described elsewhere in this report.

²⁵ See for example, the amendments to the Part VII of the Ontario *Mining Act*, made through Bill 26, the *Savings and Restructuring Act*, 1996, S.O. 1996.

²⁶ Innu Nation/MiningWatch Canada, "Between a Rock And A Hard Place," (Ottawa: MiningWatch, 1999) p. 2.

²⁷ Barton, p. 80.

²⁸ See: Canadian Environmental Law Association: www.web.net/~cela; Canadian Arctic Resources Committee: www.carc.org; MiningWatch: www.minewatch.org (site under construction as of January 2000); Environmental Mining Council of BC: <http://emcbc.miningwatch.org/emcbc/>; Canadian Parks And Wilderness (CPAWS): www.cpaws.org; Sierra Club: www.sierraclub.ca; Canadian Nature Federation: www.cnf.ca; Pembina Institute: www.pembina.org.

³⁰ See, for prospectors' subsidies: Ontario Prospectors' Assistance Program R.R.O. 1990, Reg. 887. The long-standing \$2million/year Ontario Prospectors Assistance Program (OPAP) was initiated to stimulate prospecting and grassroots exploration activities in Ontario, by providing financial assistance to qualified individuals in order to discover the new mines of tomorrow. See <http://www.gov.on.ca/MNDM/MINES/MG/OPAP/opover.htm>. Operation "Treasure Hunt" was announced in March 1999, and is a two-year, \$19 million Ontario Ministry of Northern Development and Mines initiative to "use state-of-the-art geophysical and geochemical technologies to uncover exciting new mineral exploration and investment opportunities in Ontario. The program budget is \$19 million over two years, of which \$17.8 million is for services and \$1.2 million is for salaries. 1999-00 budget: approximately \$9 million for services and \$0.6 million for salaries. 2000-01 budget: approximately \$8.8 million for services and \$0.6 million for salaries.

³¹ See, for example, P.Muldoon and M.Winfield, *Brief to the House of Commons Standing Committee on Natural Resources Regarding Mining and Canada's Environment* (Toronto: CIELAP and CELA, April 1996), pp.15-17. See also B.Lloyd and C. Daniel, *At Work in the Natural World: Forestry and Mining* (Toronto/Guelph: CIELAP and Ontario Environmental Network, Environmental Agenda for Ontario Project, April 1999).

³² See, for example, M.LeBlanc and F.Valliancourt, "Regional Distribution of Federal Corporate Tax Expenditures," *Choices Public Finance*, Vol.1., No13, November 1995.

³³ Barton, p. 193.

³⁴ Estrin and Swaigen, *Environment on Trial* (3rd. ed), p.553.

³⁵ Environmental Mining Council of BC, "More Precious than Gold... Mineral Development and the Protection of Biological Diversity in Canada," (Vancouver: World Wildlife Fund, 1998) p. 7.

³⁶ See generally, Environmental Mining Council of BC, "More Precious than Gold..."

³⁷ R.S.C., 1985 Chap. N-14, as amended.

³⁸ In Canada, the term "Governor in Council" refers to the Cabinet of Ministers, the individual members of government who lead the various ministry offices, such as the Minister of the Environment, and the Minister of Industry and Trade.

³⁹ Territorial Lands Act, s. 24.

⁴⁰ R.S.O. c.P-34, s. 20.

⁴¹ Estrin and Swaigen, *Environment on Trial*, p. 285.

⁴² O. Reg. 954, *Mining In Provincial Parks*.

⁴³ 1999-2000 Business Plan, Ontario Ministry of Northern Development and Mines at <http://www.gov.on.ca/MBS/english/press/plans99/ndm.html>.

⁴⁴ *Ibid.*

⁴⁵ 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.

⁴⁶ *Ibid.*, Principle 1,3.

⁴⁷ Environmental Mining Council of BC, "More Precious than Gold," above, at page 10.

⁴⁸ Barton, p. 23

⁴⁹ R.S.C. 1985, Chap. Y-4.

⁵⁰ R.S.C. 1985, Chap. Y-5.

⁵¹ *Yukon Quartz Mining Land Use Regulations*, Canada Gazette, Part I, Volume 132, No. 30, July 25, 1998, p. 1818. 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. 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. Class III activities require the advance submission and approval by the Chief Inspector of a detailed operating plan. Class IV activities require an operating plan and require public notification and, in some cases, public consultation. Class IV activities involve bulk sampling and are considered the beginning of production. The thresholds for the four Classes are: a) the number of persons in a campsite, b) the number of cubic metres of trenching, c) the number of square metres of stripping, d) the number of kilometres of road construction, vehicle weights and the number of kilometres travelled and e) the capacity of fuel storage facilities.

⁵² Yukon Quartz Mining Act, s. 143.

⁵³ Forest Practices Code of British Columbia Act, S.B.C. Chap.159, October 1998.

⁵⁴ Barton, p. 18.

⁵⁵ *Mines Act*, s. 10(4a).

⁵⁶ Dennis Hryciuk, “New Rules Give Mining Companies Freer Reign,” *Edmonton Journal*, December 15, 1997, A6.

⁵⁷ R.S.O. 1990 c. P.43.

⁵⁸ See Bill 26, *The Savings and Restructuring Act*, 1996.

⁵⁹ Since 1996, one regulation, O.Reg. 349/98, has been passed requiring permits for “disruptive mineral exploration activities” undertaken between May 15 and September 15 in five specific regions within the province: Lake Temagami Skyline and the bed of Lake Temagami; Makobe Headwaters; Anvil Lake/Willow Island Creek Headwaters; Montreal River Wetlands and Lahay Lake.

⁶⁰ Mark Winfield and Greg Jenish, *Ontario’s Environment and the Common Sense Revolution: A Second Year Report*, Canadian Institute for Environmental Law and Policy, p. 106.

⁶¹ *Ontario Mining Act*, Revised Statutes of Ontario 1990, Chapter M.14, Section 139(1). 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 (10,000 tonnes), the installation of a mill for test purposes or any other prescribed work.” The Director of Mine Rehabilitation must be notified prior to the advanced exploration stage and *may* require one or both of: (i) public notice; (ii) the submission of a proposed closure plan. If the Director has not written to the proponent within 30 days, the proponent can proceed. Whether or not a closure plan was required at the advanced exploration stage, the proponent must submit an annual report 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 current Ontario government’s reforms.

⁶² See *The Savings and Restructuring Act*, 1996, S.O. 1996.

⁶³ Barton, p. 80.

⁶⁴ See, for example, J.Gray, “Many fingers in Voisey’s Bay pie,” *The Globe and Mail*, September 22, 1997, regarding aboriginal land claims and the Voisey’s Bay development in Labrador.

⁶⁵ For example, the following is an excerpt from an address delivered in London, England on March 31, 1998. “These problems were of several kinds. First, there was rapid increase in the creation of parks and other protected areas, substantially reducing the land available for exploitation. Second, in allocating these lands, governments made arbitrary decisions, the most notorious example being the Windy Craggy deposit” Gordon R. Peeling, President, The Mining Association of Canada, “Canada and the Challenge of Attracting Investment in Mining,” at <http://www.mining.ca/english/publications/london.html>.

⁶⁶ R. Cotton and D.P. Emond in “Environmental Impact Assessment,” in J. Swaigen ed., *Environmental Rights in Canada*, 1981, 245, at p. 247, cited in *Friends of the West Country Assn. v. Canada* [1998] 4 F.C. 340 at 361.

⁶⁷ Andrew Nikiforuk, “The Nasty Game:” *The Failure of Environmental Assessment in Canada*, (Toronto: The Walter & Duncan Gordon Foundation, January 1977) at <http://www.wwfcanada.org/spaces-news/>

⁶⁸ *Canadian Environmental Assessment Act*, SC 1992, c. 37.

⁶⁹ CEEA, s. 16(1).

⁷⁰ *Ibid.*, Section 16(2).

⁷¹ Rod Northey et al., *The Canadian Environmental Assessment Act: Putting the New Regime Into Practice*, The Canadian Environmental Defense Fund, January 1995, 3.

⁷² Northey et al., p. 4-5.

⁷³ In the case of a permit to alter or destroy fish habitat under s.35 of the *Fisheries Act*, this would be the Department of Fisheries and Oceans.

⁷⁴ *Ibid.*, p. 33.

⁷⁵ CEEA, Section 48(1).

⁷⁶ 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. The clause permitting the referral on the basis of public concern does not provide any guidance on the possible objects of concern. Again, it is entirely at the Minister’s discretion what constitutes sufficient “public concern.”

⁷⁷ 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.

⁷⁸ CEEA defines a follow-up program as a program for: “verifying the accuracy of the environmental assessment of a project”, and “determining the effectiveness of any measures taken to mitigate the adverse environmental effects of a project.” CEEA, Section 2(1)(a) and (b).

⁷⁹ CEEA, Section 16(2)(c)

⁸⁰ Northey et al., p. 79.

⁸¹ A follow up program is recommended where: the project involves a new or unproven technology, involves new or unproven mitigation measures, an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting, 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. Northey et al., *ibid*.

⁸² *1998 Report of the Commissioner of the Environment and Sustainable Development*, Government of Canada, Chapter 6, Paragraphs 6.86-6.89. Of 187 projects examined, 48 should have had follow-up according to Agency criteria, yet none of these 48 was identified for follow-up. 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. The Commissioner recommended that the follow-up of environmental effects monitoring required under CEAA be strengthened.

⁸³ *Ibid*.

⁸⁴ R.S.O. 1990, c. E-18.

⁸⁵ R.S.B.C. 1996 C. E-119.

⁸⁶ A. Reg. 111/93, 112/93.

⁸⁷ R.S.O. 1990 c. E.18.

⁸⁸ Estrin and Swaigen, p. 553. "Although private sector activities are generally exempt from this statute, the proposed Onakawana lignite mine in northwestern Ontario was designated under the act in the early 1980s."

⁸⁹ Estrin and Swaigen, *ibid*.

⁹⁰ See, M. Winfield and G. Jenish, Ontario's Environment and the 'Common Sense Revolution: A First Year Report (Toronto: CIELAP, June 1996)

⁹¹ See Bill 76, The Environmental Assessment Consultation and Improvements Act, 1996.

⁹² *Ibid.*, p. 25.

⁹³ Thresholds for new coal mines were increased from 100,000 tonnes/year to 250,000 tonnes/year. 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. For more information see Environmental Mining Council of British Columbia, "British Columbia Environmental Assessment Act Changes," *Environmental Action Mining Alert*, November 12, 1998. URL: <http://www.miningwatch.org/emcbc/Default.htm>

⁹⁴ Castrilli, *op. cit.*, p. 24.

⁹⁵ *Ibid.*, p. 26.

⁹⁶ Castrilli, *op. cit.*, p. 26.

⁹⁷ British Columbia Environmental Assessment Act, Revised Statutes of British Columbia 1995, Chapter 119, section 67(1).

⁹⁸ *Ibid.*, s. 68(1).

⁹⁹ *Ibid.*, s. 68(1)(a).

¹⁰⁰ *Ibid.*, s. 68(1)(b).

¹⁰¹ The Minister may apply 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. *Ibid.*, s. 69(1)

¹⁰² *Ibid.*, s. 70(1).

¹⁰³ *Ibid.*, s. 70(2).

¹⁰⁴ Castrilli, 22.

¹⁰⁵ *Ibid*.

¹⁰⁶ Rod Northey, Canada-wide Accord on Environmental Harmonization Hearings, Evidence before the Standing Committee on Environment and Sustainable Development, Tuesday October 28, 1997.

¹⁰⁷ 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. Sub-agreement on Environmental Assessment, Canada-wide Accord on Environmental Harmonization, Section 4.3. For full text see: http://www.ccme.ca/3e_priorities/3ea_harmonization/3ea5.html.

¹⁰⁸ See http://199.212.18.103/discussion/discussion_e.htm for public discussion paper of CEAA review.

¹⁰⁹ *Ibid*.

¹¹⁰ Alberta Wilderness Association, <http://www.web.net/~awa/cheviot/cheviot.htm>

¹¹¹ Canadian Press, "Government Panel Failed in Reviews of Mine", March 1, 1999

¹¹² *Ibid*.

¹¹³ Alberta Wilderness Association, "New Hope to Protect Cardinal Divide: Judge Quashes Permit for Cheviot Mine" Press Release, April 9, 1999.

¹¹⁴ See, for example, A. Robinson "A gold bonanza: the Miners" *The Globe and Mail*, September 29, 1999.

¹¹⁵ See, for example, D. Jobb, "Mining still this country's most dangerous job," *Halifax Chronicle Herald*, May 5, 1997.

- ¹¹⁶ Government of Canada, *The State of Canada's Environment*, (Ottawa: Minister of Supply and Services, 1991), pg.11-19.
- ¹¹⁷ Total municipal solid waste generation in Canada is estimated to be approximately 30 million tonnes per year.
- ¹¹⁸ See P.Muldoon and M.Winfield, Brief to the House of Commons Standing Committee on Natural Resources Regarding Mining and Canada's Environment (Toronto: CELA and CIELAP, April 1996), pp.5-7.
- ¹¹⁹ *Ibid.*, pp.8-10.
- ¹²⁰ R.S.C. 1985, Chap. F-14, as amended.
- ¹²¹ On Diavik see A.Robinson, "Ottawa rejects NWT Diamond mine permit," *The Globe and Mail*, January 20, 2000.
- ¹²² *Yukon Quartz Mining Act*, Section 139(3) and (4).
- ¹²³ On Environmental Approvals in Ontario generally see Estrin and Swain, *Environment on Trail* (3rd ed), pp.442-444.
- ¹²⁴ *Ibid.*
- ¹²⁵ See Ontario Regulation 347.
- ¹²⁶ Environmental Bill of Rights, Chapter 28, S.O. 1993, s.38.
- ¹²⁷ *Ibid.*, s.41.
- ¹²⁸ R.S.B.C. 1996 c. 293.
- ¹²⁹ Sierra Legal Defence Fund, 13.
- ¹³⁰ *Ibid.*
- ¹³¹ R.S.B.C. 1996 c.482.
- ¹³² Castrilli, pp.38-39.
- ¹³³ The Fisheries Act, s.36.
- ¹³⁴ C.R.C. c. 819.
- ¹³⁵ Castrilli, p. 35.
- ¹³⁶ Metal Mining Liquid Effluent Regulations (C.R.C., c. 819), Section 6(a).
- ¹³⁷ Some heavy metals, including mercury, arsenic, cadmium, lead and nickel have been declared "toxic" substances under the *Canadian Environmental Protection Act* (CEPA). A declaration of "toxicity" under the Act, which was first enacted in 1988, permits the federal government to make regulations controlling the use, generation or release of these substances into the environment. However, no regulations controlling the use or release of these substances from mining operations have been made to date. A revised version of CEPA, enacted in September 1999, permits the Minister of the Environment to require that facilities that use, generate, manufacture or release substances declared "toxic" for the purposes of the Act develop and implement pollution prevention plans in relation to these substances. Facilities may be required to develop emergency plans for these substances as well.
- ¹³⁸ See http://www3.ec.gc.ca/eem/english/aquamin_overview.htm for an overview of the process, AQUAMIN, that developed the new MMERs.
- ¹³⁹ Canadian Environmental Protection Act, 1999, s.93.
- ¹⁴⁰ *Ibid.*, s.56.
- ¹⁴¹ *Ibid.*, ss.199 and 200.
- ¹⁴² The provisions of the *Clean Air Act* under which these regulations were originally made were incorporated into the *Canadian Environmental Protection Act* when it was enacted in 1988.
- ¹⁴³ O. Reg. 560/94.
- ¹⁴⁴ The other sectors covered by the program include: electric power generation; organic chemicals; inorganic chemicals, metal casting; pulp and paper; petroleum refining; and non-metallic minerals. A total of 190 facilities are covered by the MISA program.
- ¹⁴⁵ Ontario Environmental Protection Act, Effluent Monitoring and Effluent — Metal Mining Sector Regulation, 560/94, s. 6 and 7.
- ¹⁴⁶ *Ibid.*, s.19.
- ¹⁴⁷ See M.Winfield and G.Jenish, *Ontario's Environment and the 'Common Sense Revolution: A Four Year Report* (Toronto: CIELAP, October 1999), p.5-3 - 5-4.
- ¹⁴⁸ Health, Safety Code and Reclamation Code for Mines in British Columbia, Dams and Waste Emplacements, Part IX.
- ¹⁴⁹ *Ibid.*, Section 10.1.2 (3d) and (3f).
- ¹⁵⁰ An October 1990 tailings dam failure at a Northern Ontario mine abandoned in 1954 resulted in the release of 150,000 cubic meters of mine tailings, contaminating the Montreal River and Davidson Creek with heavy metals and other toxic substances, destroying fish habitat and requiring downstream residents to use bottled water for washing and drinking. See K.Vincent, "Tonnes of toxic tailings pouring into Ontario river," *The Globe and Mail*, October 1990.
- ¹⁵¹ *Ibid.*, pp.10-11.
- ¹⁵² A.Robinson, "Mining industry lobbies for future of industry," *The Globe and Mail*, September 24, 1994.
- ¹⁵³ Government of Canada, *The State of Canada's Environment - 1991*, table 11.3.
- ¹⁵⁴ Barton, p. 18.
- ¹⁵⁵ Yukon Quartz Mining Act, Section 143 (1c).
- ¹⁵⁶ Bill 71, An Act to Amend the Mining Act, S.O. 1989, c.62.

¹⁵⁷ Mining Act, R.S.O. 1990, c.M.14 The changes to the Mining Act were implemented by Bill 26, the Savings and Restructuring Act, in January 1996. The relevant sections of Bill 26, in particular Section 26 dealing with Part VII Rehabilitation of Mining Lands of the Act have not yet been proclaimed in force.

¹⁵⁸ Winfield, Year 2 Report, p. 106.

¹⁵⁹ *Ibid.*

¹⁶⁰ *Ibid.* In the Ministry's description of the changes, it describes the new provisions as "providing the option of an 'exit ticket' so that mining companies may be able to return mining lands to the Crown and clarifying post-decommissioning environmental liabilities." See <http://www.gov.on.ca/MNDM/MINES/MG/REHAB/changes.htm>.

¹⁶¹ M. Winfield and G. Jenish, Ontario's Environment and the 'Common Sense Revolution: A Four Year Report (Toronto: CIELAP, October 1999), p.5.1 - 5.2.

¹⁶² Sierra Legal Defence Fund, *Digging Up Trouble: The Legacy of Mining in British Columbia*, Sierra Legal Defence Fund, May 1998, p.13.

¹⁶³ *Ibid.*

¹⁶⁴ *Ibid.*, p. 14.

¹⁶⁵ Northern Development and Mines, Ontario Mining Association, et. al. "Abandoned Mine Hazards in Ontario, A Report by the Interministry Abandoned Mining Lands Committee, December 1993.

¹⁶⁶ A. Robinson, "Ontario to shut mine closing arm," *The Globe and Mail*, October 25, 1995.

¹⁶⁷ See, for example, T. Spears, "Clean-up will need \$3 billion and 20 years," *The Ottawa Citizen*, October 25, 1990.

¹⁶⁸ See. R. Nadarajah and M. Winfield, Submissions by the Canadian Environmental Law Association and Canadian Institute for Environmental Law and Policy to the Ministry of Northern Development and Mines Regarding Part VII of the Mining Act and the Mine Rehabilitation Code (Toronto: CELA and CIELAP, October 1999).

¹⁶⁹ See, for example, G. Ford, D. Macdonald and M. Winfield, "Who Pays for Past Sins: Policy Issues in Contaminated Site Remediation in Canada" *Alternatives*, Fall 1994.

¹⁷⁰ Ministry of Northern Development and Mines Press Release, "Ontario Provides \$27 Million to rehabilitate Abandoned Mine Sites, September 15, 1999.

¹⁷¹ See, for example, *An Environmental Agenda for Ontario* (Toronto and Geulph: Ontario Environment Network and CIELAP, April 1999), p.18

¹⁷² See, for example Standing Committee on Environment and Sustainable Development, *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!*, Third Report, May 1998.

¹⁷³ 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.

¹⁷⁴ Estrin and Swaigen, p. 522

¹⁷⁵ *Ibid.*

¹⁷⁶ *Ibid.*

¹⁷⁷ *Fisheries Act*, R.S.C. 1985, c. F-14, s. 78(2).

¹⁷⁸ *Ibid.*, section 79.

¹⁷⁹ Estrin and Swaigen, p. 522.

¹⁸⁰ *Ibid.*

¹⁸¹ Environment Canada Business Plan 1995/6 - 1997/98, page 6.

¹⁸² Standing Committee on Environment and Sustainable Development, *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!* (Ottawa: House of Commons, May 1998), pg.31.

¹⁸³ See, for example, Office of the Auditor General, *Report to the House of Commons for the Fiscal Year Ended 31 March 1990* (Ottawa: Minister of Supply and Services, 1990), para 19.55-19-88; Standing Committee on Environment and Sustainable Development, *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!*; and Office of the Commissioner for the Environment and Sustainable Development, Annual Report 1999 (Ottawa: Minister of Supply and Services, 1999), ch.5.

¹⁸⁴ Castrilli, p. 37.

¹⁸⁵ *Environmental Protection Act*, R.S.O. 1990 c. E-19, s. 14.

¹⁸⁶ Effluent Monitoring and Effluent Limits-Metal Mining Sector, O. Reg. 560/94, ss 34, 35.

¹⁸⁷ Amendments to the *Environmental Protection Act* in 1998 increased penalties under the Act. Bill 82, Environmental Statute Law Amendment Act, 1998/ Royal Assent December 18. S.O. 1998, Chapter 35.

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ontario Water Resources Act*, R.S.O. 1990, Chapter O-40, section 108(1), as amended by Bill 82; see note 139.

¹⁹⁰ *Ibid.*, section 108(2), as amended.

¹⁹¹ Mining Act, R.S.O. c. M.14, s. 167 (1).

¹⁹² *Ibid.*, ss. 167(5), (6).

- ¹⁹³ Winfield and Jenish, Ontario's Environment and the 'Common Sense Revolution': A Four Year Report," figure 1.1(a).
- ¹⁹⁴ *Ibid.*, pg. 1-7.
- ¹⁹⁵ *Ibid.*, table 1-1.
- ¹⁹⁶ *Mines Act*, RSBC 1996, c. 293, ss. 39(3).
- ¹⁹⁷ *Ibid.*, ss. 39(4).
- ¹⁹⁸ *Waste Management Act*, RSBC 1996, c. 482, s.54.
- ¹⁹⁹ British Columbia Government Employees Union, *Press Release*, "B.C. Moving Backwards on Environmental Protection, July 30, 1999.
- ²⁰⁰ *Canadian Environmental Protection Act*, 1999, ss.17-21.
- ²⁰¹ 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, p. 39.
- ²⁰² *Ibid.*
- ²⁰³ *Ibid.*, 38.
- ²⁰⁴ *Ibid.*, 39.
- ²⁰⁵ *Ibid.*, 39.
- ²⁰⁶ *Ibid.*, 40.
- ²⁰⁷ Castrilli, 10.
- ²⁰⁸ 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, p. 42.
- ²⁰⁹ Jerry DeMarco, *Summary of Presentation by Sierra Legal Defence Fund*, Standing Committee on Environment and Sustainable Development Harmonization Hearings, Standing Committee Submission, 3.
- ²¹⁰ Winfield, Ford and Crann, p. 43.
- ²¹¹ *Ibid.*, 42.
- ²¹² *Ibid.*, 44-5.
- ²¹³ *The Canadian Environmental Protection Act*, 1999, ss.22-38.
- ²¹⁴ Winfield, Ford and Crann, p. 45
- ²¹⁵ R.S.C. 1985, Chap. 16, as amended.
- ²¹⁶ NPRI data can be viewed on the Internet at <http://www.npri-inrp.com/>.
- ²¹⁷ See the registry at http://www.ceaa.gc.ca/registry/registry_e.htm.
- ²¹⁸ *Access to Information Act*, Revised Statutes of Canada 1985, Chapter 111, Subsection 2(1)
- ²¹⁹ See, for example, *The Ontario Freedom of Information and Protection of Privacy Act*, RSO, 1990 c.F31.
- ²²⁰ See, for example, A. Roberts, *Limited Access: Assessing the Health of Canada Freedom of Information Laws* (Kingston: Queens University School of Policy Studies 1998).
- ²²¹ *Environmental Bill of Rights*, 1993, S.O. 1993, c.28, Part III.
- ²²² See, for example, *Open Doors: Ontario's Environmental Bill of Rights: Report 1998* (Toronto: Environmental Commissioner for Ontario, April 1999).
- ²²³ See, for example, *Report of the Commissioner of the Environment and Sustainable Development to the House of Commons: 1999* (Ottawa: Minister of Public Works and Government Services Canada, 1999).
- ²²⁴ For excellent summaries of these issues see: J.E. Young *Mining the Earth* (World Watch Paper 109) (Washington, D.C.: Worldwatch Institute, 1994); and J.E. Young, *The Next Efficiency Revolution: Creating a Sustainable Materials Economy* (World Watch Paper 121) (Washington, D.C.: Worldwatch Institute, 1995).
- ²²⁵ Young, *Mining the Earth*, pg.41
- ²²⁶ *Ibid.*
- ²²⁷ Minister of Public Works and Services Canada, *The Mineral and Metals Policy of the Government of Canada*, 1996. p. 12.
- ²²⁸ On materials use and sustainability, see for example, J.E. Young, *Mining the Earth* (Washington, D.C.: Worldwatch Institute, 1994); and J.E. Young, *The Next Efficiency Revolution: Creating a Sustainable Materials Economy* (Washington, D.C.: Worldwatch Institute, 1995).
- ²²⁹ See, M. Winfield, *Waste Prevention and the Front-End of the Materials Cycle: Perspectives from Canada* paper presented to the OECD Workshop on Extended Producer Responsibility and Waste Minimisation Policy in Support of Environmental Sustainability, Paris, May 4-7, 1999.
- ²³⁰ J.Mintz and K.Scarf, *A Comparison of Tax Incentives for Extraction and Recycling of Basic Materials in Canada* (Winnipeg: CCME, 1995).
- ²³¹ See, for example, M.LeBlanc and F.Vaillancourt, "Regional Distribution of Federal Corporate Tax Expenditures," *Choices Public Finance* Vol.1, No.13., November 1995.



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