

Formative Evaluation of CEPA 1999: Environment Canada



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Acronyms used in the report

CAPMoN	Canadian Air and Precipitation Monitoring Network
CCME	Canadian Council of Ministers of the Environment
CEPA	<i>Canadian Environmental Protection Act</i>
CEPA 1988	<i>Canadian Environmental Protection Act, 1998</i>
CEPA 1999	<i>Canadian Environmental Protection Act, 1999</i>
CFC	Chlorofluorocarbon
CG	<i>Canada Gazette</i>
CGI	<i>Canada Gazette, Part I</i>
CGII	<i>Canada Gazette, Part II</i>
DSL	Domestic Substances List
EEM	Environmental Effects Monitoring
EPS	Environmental Protection Service
HCFC	Hydrochlorofluorocarbon
MTBE	Methyl tertiary-butyl ether
NAC	National Advisory Committee
NAPS	National Air Pollution Surveillance Network
NPRI	National Pollutant Release Inventory
OECD	Organisation for Economic Co-operation and Development
PCBs	Polychlorinated biphenyls
PSL	Priority Substances List
SOR	Statutory Orders and Regulations
TSRI	Toxic Substances Research Initiative
VOC	Volatile organic compound

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EXECUTIVE SUMMARY

Scope and Objectives of the Evaluation

The purpose of this formative evaluation was to assess whether the obligations established by the *Canadian Environmental Protection Act, 1999* (CEPA 1999) are being fulfilled and whether Environment Canada has undertaken the required actions to meet the Act's intent. The evaluation covered the four-year period from the Act's entry into force on March 31, 2000, through December 31, 2004.ⁱ

Under Section 343 of CEPA 1999, a committee of one or both of the Houses of Parliament must review the Act every five years. Such a review is anticipated in 2005. The Minister of the Environment (the Minister) and the Minister of Health are expected to table a formal joint submission to the committee in support of the upcoming Parliamentary Review. This evaluation will inform the submission of the Ministers.

The objectives of the evaluation were to:

- examine the degree to which Environment Canada (the Department) is fulfilling its mandatory requirements under CEPA 1999;
- examine the degree to which the Department has initiated identified priority actions to improve the efficiency and effectiveness of the delivery of CEPA 1999;
- identify progress to date in meeting the Department's expected outcomes for CEPA 1999 and its various Parts;
- examine and make recommendations concerning the Department's governance structures, processes and procedures that have been put in place to implement the Act;
- make conclusions and recommendations concerning the above questions; and
- identify any changes that may be required to CEPA 1999 to improve the effectiveness and efficiency of departmental processes.

This independent evaluation is "evidence-based." Its conclusions and recommendations are based on objective, quantitative and documented evidence to the fullest extent possible. The consulting team undertook the evaluation in accordance with the work plan described in the Evaluation Plan provided by the Department's Audit and Evaluation Branchⁱⁱ.

The scope of the evaluation included all the programs and activities under CEPA 1999, as well as all the programs previously under the 1988 *Canadian Environmental Protection Act* (CEPA 1988) that were continued under CEPA 1999. The evaluation focused on the first 11 substantive Parts of the Act.ⁱⁱⁱ

Other issues affecting the scope of the evaluation were as follows:

- Obligations and activities undertaken by Health Canada were excluded from the evaluation, as that department is conducting its own evaluation.

ⁱ Major activities and outputs that were finalized from January 1 through March 31, 2005, such as newly published regulations in the *Canada Gazette*, Part II, were also included within the scope of the evaluation.

ⁱⁱ The Audit and Evaluation Branch became the Audit and Evaluation Directorate in March 2005.

ⁱⁱⁱ Section 12 (Consequential amendments, repeal, transitional provision and coming into force) is administrative in nature and was not considered relevant to this evaluation.

- The Act's obligations with respect to the role and activities of the Governor in Council (Cabinet) also were excluded.
- CEPA 1999 places a significant number of obligations on Persons (e.g., no unauthorized use or disposal of identified substances or wastes). The evaluation undertook an indirect examination of the extent to which these obligations are being met.
- The Act provides the Minister with authority to enter into equivalency and administrative agreements with the provinces and territories and agreements respecting administration with Aboriginal governments and peoples. The evaluation undertook an indirect approach in this area, focusing on the information-sharing and verification and assurance mechanisms instituted by the Department to ensure that the Act's obligations and objectives are satisfied.

Conclusions

The following broad conclusions arise from the detailed findings presented in this evaluation report.

1. Environment Canada is addressing its obligations under CEPA 1999.

CEPA 1999 is described as being an "enabling" Act that provides the Minister of Environment with broad, discretionary powers for protecting the environment. The Act imposes, however, a significant number of new obligations on the Minister, while maintaining many obligations that previously existed for CEPA 1988. Limitations with respect to the resources available for implementation of CEPA 1999 have required the Department to establish explicit priorities. The highest priority is placed on meeting all mandated obligations. The Department is well aware of all formal Ministerial obligations under the Act, and it has established the organizational base and relevant processes and procedures and secured the necessary resources to ensure that all of its obligations are met.

2. Environment Canada has realized significant accomplishments in most program areas.

Of particular note, the Department:

- is on track and well positioned to satisfy the requirement to categorize all of the more than 23 000 substances on the Domestic Substances List prior to the September 2006 deadline imposed by the Act; preliminary categorization decisions have already been published for about 17 000 substances, and a further 1000 substances have been identified for removal from the Domestic Substances List following investigations that concluded that they were inappropriate for inclusion;
- has met all legislated timeline requirements associated with the proposal and finalizing of risk management measures and tools in response to all substances proposed, by the Ministers of Health and Environment, for addition to the CEPA 1999 Schedule 1 List of Toxic Substances; and
- has strengthened industry and interjurisdictional cooperation on environmental protection matters through non-CEPA initiatives.

Despite the volume and significance of accomplishments documented in this report, the volume of the mandated activity the Department expects to undertake upon the completion of the Domestic Substances List categorization exercise in September 2006 could greatly

exceed activity levels experienced over the evaluation period. While resource requirements have been assessed and met, the anticipated volume of work may pose significant planning and coordination challenges within Environment Canada, among federal departments, between levels of government and with industry and other stakeholders.

In addition, there is a need for enhanced government-wide cooperation and clarity of mandate and responsibilities for managing certain types of new substances, specifically animate products of biotechnology, in areas involving aquatic organisms, pharmaceuticals, certain food products and transgenic animals.

3. The full potential of CEPA 1999 has yet to be realized.

Despite the real progress in the areas of Ministerial obligations, outputs and governance, Environment Canada, and more generally the Government of Canada, has yet to realize the full potential of CEPA 1999 to serve as the primary means of protecting environmental and human health in Canada. Several key aspects of the Department's implementation of CEPA 1999 need to be addressed before the Act's full potential can be realized.

Federal House Provisions

Key actions with respect to the federal house provisions of Part 9 of CEPA 1999 have not been initiated. The provisions give the government the authority to subject federal operations and operations on federal and Aboriginal lands to the same type of environmental performance standards as entities regulated by the provinces or territories. The government has made very limited use of the CEPA 1999 Part 9 provisions. Among the identified priority actions for strengthening implementation of CEPA 1999 and that remain outstanding are:

- establishment of a focal point for departmental and Government of Canada activities respecting environmental matters and the federal house;
- technical investigation and scientific assessment of the risk from federal house facilities and facilities on federal and Aboriginal lands; and
- subsequent development of a strategic plan for managing federal house issues under the Act.

CEPA National Advisory Committee

Fundamental differences of opinion on the appropriate role for the federal government in environmental protection remain between the federal government and its provincial and territorial counterparts. These differences, however, have not precluded fruitful collaboration on specific environmental issues. These differences of opinion will need to be addressed, however, before broader harmonization of environmental protection standards across Canada will be realized. The CEPA National Advisory Committee is intended to provide the forum and process for addressing such issues; however, all parties to the committee expressed concerns about its current effectiveness, including the following:

- Aboriginal representatives maintain that the committee is an ineffective forum for addressing the concerns of Aboriginal peoples and communities.
- Provincial and territorial representatives on the committee expressed concern with respect to the volume and pace of activity to be considered by the committee and their jurisdictional capacities to respond in a timely manner. They also expressed strong concerns with perceived federal duplication of their own efforts.
- Federal representatives are concerned that committee members do not see the real impacts that their efforts have had on shaping federal policies and risk management measures and tools. They are also concerned about declining attendance rates, due

to travel restrictions and other budgetary limitations imposed within some provincial jurisdictions.

Internal and External Barriers

Barriers exist that restrict the use of the Act's provisions relating to:

- the use of economic instruments and fees and charges;
- cost recovery with respect to both administrative costs and damages resulting from pollution incidents; and
- public actions to initiate investigations and recover damages to private property.

Environmental Outcomes

The Department has not yet determined or communicated the environmental outcomes that it intends to achieve with the broad enabling powers provided by the Act (with the exceptions of the Clean Air Agenda and the broad guidance provided by the National Pollution Prevention Strategy and the Toxic Substances Management Policy). Moreover, the links between risk management measures and environmental objectives are not always clear. The expected outcomes as developed for the purposes of this evaluation do not have formal departmental support. External stakeholders have also identified the lack of clear environmental outcomes as a significant shortcoming. The Department will continue to face difficulties in assessing its progress under the Act unless clear outcomes and objectives are understood and agreed upon by all parties.

Monitoring and Reporting

It remains too early to determine or report on demonstrable progress in environmental improvements under CEPA 1999 in many program areas. Measurement and accompanying reporting systems to determine and report on demonstrable progress even at some future date have yet to be fully introduced by Environment Canada. The ultimate success of CEPA 1999 in addressing the challenges of environmental and human health protection may be determined by the ability to monitor and report progress.

Recommendations

There are immediate opportunities to strengthen the implementation of CEPA 1999.

1. Environmental Outcomes

The Government of Canada, led by Environment Canada, should develop a set of clear and realistic environmental outcomes that it intends to achieve under the broad enabling powers provided by CEPA 1999. This should be undertaken in consultation with other jurisdictions and stakeholders. In this way, a common mission can be developed around how the Act's provisions are to be used in support of environmental and human health protection in Canada.

Management Response

Environment Canada agrees that environmental outcomes are important and recognizes that the programs developed to implement CEPA 1999 are part of a larger mosaic of federal and provincial programs designed to protect the environment. Furthermore, many of Environment Canada's programs, other than those directly associated with CEPA 1999, contribute to the same broad outcomes.

Within this broader context, the Assistant Deputy Minister, Environmental Protection Service with the support of the Director General of the Strategic Priorities Directorate will ensure that environmental performance information related to CEPA 1999 is fully integrated and identified as part of the results structure (Governance structure and new Program Activity Architecture (PAA)) for Environment Canada. We expect this structure to be approved in fiscal year 2005-06. The PAA would, therefore, form the basis for reporting on environmental outcomes related to CEPA 1999 in 2006-07.

With other federal and provincial partners, Environment Canada is developing the Competitiveness and Environmental Sustainability Framework which will include broad environmental outcomes. Over time, this framework will provide the direction and context for all of the departmental programs and as such, the environmental outcomes will frame Environment Canada's results management framework, including results under CEPA 1999.

2. Monitoring and Reporting

Environment Canada should develop and introduce, on a priority basis, a comprehensive framework for monitoring and reporting on progress against environmental outcomes. Through this framework, decision-makers at all levels will have appropriate information to facilitate decision-making, and Canadians will be able to determine whether the Act is succeeding in protecting environmental and human health. Specifically, measurement and reporting systems need to be in place to assess progress at the levels of:

- individual risk management measures and tools; and
- departmental programs and priorities relevant to CEPA 1999.

These monitoring and reporting programs should address both:

- changes in the activities and performance of the targeted audiences; and
- changes in environmental quality.

Management Response

The department agrees that a comprehensive framework for monitoring and reporting on progress against stated environmental outcomes is important. These activities must, however, as with the broader environmental outcomes, be part of broader monitoring and reporting structure.

As noted above, Environment Canada is also in the process of revising the structure of the Program Activity Architecture (PAA). This is the department's primary performance measurement system which supports results-based management. The Assistant Deputy Minister of the Environmental Protection Service with the support of the Director General of the Strategic Priorities Directorate will see that monitoring and reporting issues raised in this evaluation are addressed in the development of the Program Activity Architecture in order to measure progress against outcomes. It is expected that this work will take place over fiscal year 2006-07. It should be noted that the CEPA Annual Report already tracks progress publicly on activities related to CEPA 1999, including those related to administrative or equivalency with provinces and territories.

Furthermore, as previously noted, the Competitiveness and Environmental Sustainability Framework will provide a broader framework in time in which potentially other governments and organizations could potentially also monitor and track progress towards the same broad outcomes that CEPA 1999 is intended to contribute.

Additionally, in the fall of 2004, a new group under the Director General of the Risk Assessment Directorate was established to provide analysis and reporting, using existing information systems (notably the National Pollutants Release Inventory) with environmental quality monitoring information and other related information, to demonstrate trends and outcomes of CEPA and other related programs. This will assist us in better reporting on the effectiveness of risk management measures put in place under CEPA 1999. This information will be integrated into the CEPA Annual Report by the Director General of the Strategic Priorities Directorate.

3. Federal House

Environment Canada should address, on a priority basis, the lack of action on the federal house provisions under Part 9 of CEPA 1999. Action in this area can address a clear gap in the current implementation of CEPA 1999 and support the Government of Canada's national leadership role in environmental and human health protection.

Management Response

The Assistant Deputy Minister of the Environmental Protection Service with the support of the Director General of Pollution Prevention Directorate will establish a focal point to pursue greater implementation of the federal house provisions (Part 9) of CEPA 1999 this fiscal year. Once formed, the federal focal point will develop a plan and process to assess risks and set priorities for managing risks associated with activities on federal and aboriginal lands as well as from other federal activities. The unit will develop a strategic plan with priorities for managing federal house issues under the Act by the end of fiscal year 2005-06.

This unit will help to accelerate action on high risk areas on which the department is already making some progress such as hazardous wastes and storage tanks. Furthermore, it will complement other priority federal house activity on which the department already places a priority, notably contaminated sites where substantial progress has been made over the past few years.

Furthermore, Environment Canada has identified some concerns with the current provisions of CEPA 1999 with respect to the federal house in its public discussion documents in preparation for the parliamentary review of CEPA 1999. Others appear to share these concerns indicating that there is a need for wider discussion around this issue and that it is a potential issue for the CEPA Review.

4. National Advisory Committee

Environment Canada should undertake actions to strengthen the role of the National Advisory Committee as an effective means of promoting interjurisdictional cooperation. The Department should acknowledge that provincial/territorial and Aboriginal representatives do not fully share its view of the committee's mandate and successes. It should work with its partners to forge a forum that better responds to the emerging needs and priorities of all jurisdictions.

Management Response

Environment Canada agrees with the need to make NAC more effective and that its place in the governance of federal-provincial environmental protection matters must be clearer relative to the role of the Canadian Council of Ministers of the Environment (CCME) and bilateral activities. To this end, the Assistant Deputy Minister of the Environmental Protection Service, who co-chairs the CEPA NAC with Health Canada, will clarify the role of the NAC in the context of the broader work being led by the Policy Integration Branch on federal/provincial relations including the CCME. This work will be supported by the Director General of the Strategic Priorities Directorate.

Furthermore, the Director General of the Strategic Priorities Directorate will support the co-chairs in undertaking a study to assess the strengths and weaknesses of the Committee from the perspective of its members. This is the second such study and as such is part of a cyclical analysis to improve efficiency and effectiveness of NAC. This assessment will also explore ways that the committee can contribute to ongoing CCME activities and bilateral work with provinces and territories. Recommendations from this study will form the basis for a more detailed action plan that will be developed by the end of fiscal year 2005-06.

With respect to the views of aboriginal representatives, there is a need to recognize that NAC is an advisory body and its role relates to ensuring good cooperation among governments with responsibilities for environmental protection. In its preparations for the CEPA 1999 Parliamentary Review, the department raised concerns that NAC might not be appropriately structured to deal with the needs of aboriginal governments, nor with the broader interests of aboriginal peoples. Others share this concern which indicates that there is a need for wider discussion around this issue and it should be looked at during the CEPA 1999 Review.

5. Identification of Barriers

Environment Canada should undertake work to document, communicate and, where possible, address any internal and external barriers that relate to:

- the use of economic instruments, fees and charges;
- cost recovery with respect to both administrative costs and damages resulting from pollution incidents; and
- public actions to initiate investigations and recover damages to private property.

Management Response

The department agrees in part with this recommendation. The department will continue to ensure that in the selection of risk management instruments consideration is given to the full range of instruments available, including economic instruments. Additionally, the department is aware of some legislative constraints to the use of some economic instruments and cost recovery and did raise these in public consultations during its preparation for the CEPA review. Results from these consultations confirm that others share this concern and that it should be further discussed in the context of the Parliamentary Review of CEPA 1999.

However, since CEPA 1988 was created, the department has looked systematically three times at all of its programs to ensure that there is the right use of cost recovery where programs result in private benefits. There is cost recovery associated with the new substances risk assessments and ocean disposal permits. The evaluation has provided no evidence where there may be additional areas where cost recovery should be pursued.

CEPA 1999 does allow for recovery of costs the department incurs for remediation related to environmental emergencies. With the regulations that came into force at the end of 2003, the department has taken the necessary steps to enable the use of this authority.

Environment Canada also agrees in principle with the recommendation that it document, and communicate on any barriers relating to public actions to initiate investigations of alleged offences under the Act. This provision is not new to CEPA 1999 but has not been used widely. During the 2005-06 fiscal year, the Assistant Deputy Minister of the Environmental Protection Service with the support of the Director General, Strategic Priorities Directorate will, oversee analysis with respect to barriers to public participation, and once the study is complete will develop a plan to address barriers as may be appropriate.

6. Federal Coordination on New Substances

Environment Canada, in cooperation with Health Canada, should clearly document the full range of aspects for which CEPA 1999 is currently required to fulfil safety net provisions with respect to the management of new substances, specifically animate products of biotechnology and emerging technologies. The two departments should work with other federal departments to articulate clear timelines for developing regulations that will result in the management of these aspects of new substances and technologies by the most appropriate department and under the most appropriate federal legislation

Management Response

We fully agree with the merit of having clear documentation on where Environment Canada serves as the responsibility centre for notification of new substances under the authority of CEPA 1999. This information is available on the New Substances Program website for chemicals, polymers and products of biotechnology. The Assistant Deputy Minister with the support of the Director General, Risk Assessment Directorate will ensure that this documentation is reviewed to ascertain it is up to date, clear and user friendly by the end of 2005 and develop a plan for regular updating subsequently.

Nanotechnology is an emerging area. Discussions have begun with other departments to determine roles and responsibilities as per current federal Acts and regulations and clarify responsibilities under CEPA 1999. The Assistant Deputy Minister of the Environmental Protection Service with the support of the Director General, Risk Assessment Directorate will ensure that these findings are documented on the New Substances Program web site once interdepartmental discussions have been concluded.

Environment Canada has established Memoranda of Understanding with clear timelines with Fisheries and Oceans and Health Canada to develop regulations or amendments to their Acts. This will allow new chemicals, polymers and products of biotechnology regulated under the *Food and Drugs Act* and products of biotechnology that are fish to go through appropriate risk assessment prior to commercialization. Progress has been slower than expected. The Assistant Deputy Minister, Environmental Protection Service will continue to work with these Departments with the objective of ensuring completion of the regulatory and legislative changes by the end of 2007.

To date, Environment Canada has not been successful in entering into an agreement with the Canadian Food Inspection Agency (CFIA) with respect to novel animals. The Assistant

Deputy Minister, Environmental Protection Services will renew his efforts to reach an agreement with Canadian Food Inspection Agency by the end of 2005.

Should progress on developing and implementing agreements or Memoranda of Understanding with other departments not be sufficient, Environment Canada will make every effort to seek the necessary resources to carry out any future work and continue to fulfil its obligations under CEPA 1999 to carry out risk assessments. The areas that are subject to existing or planned Memoranda of Understanding are not where there is significant current notifications but rather where research is active and the government will likely be required to conduct risk assessments in the near future.

1.0 INTRODUCTION

1.1 Background

The purpose of this formative evaluation was to assess whether the obligations of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) are being fulfilled and whether Environment Canada has undertaken the required actions to meet the Act's intent.

A renewed CEPA 1999 received Royal Assent on September 14, 1999, and was proclaimed in force on March 31, 2000. This Act is the federal government's primary piece of environmental protection legislation. It promotes pollution prevention and the protection of the environment and human health in order to contribute to sustainable development. This Act is more than double the length of the previous *Canadian Environmental Protection Act* (CEPA 1988), increasing from 149 sections to 356 sections. It provided new authorities to allow the Minister of the Environment (the Minister) flexibility in achieving environmental results. It also established requirements, many with specified time frames, that the Minister must meet.

Section 343 of CEPA 1999 requires a review of the Act to be conducted every five years by a committee of one or both of the Houses of Parliament. Such a review is expected in 2005. In support of the upcoming Parliamentary Review, the Minister of the Environment and the Minister of Health are expected to table a formal joint submission to Parliament in advance of the committee's work. This formative evaluation complements the submission of the Ministers. It provides an evidence-based, independent evaluation of progress to date in meeting the Act's obligations and the Department's expected outcomes for CEPA 1999 and its various Parts.

This document contains the results of the "Formative Evaluation of CEPA 1999." It is organized into four main sections:

- **Section 1** outlines the purpose and objectives of the evaluation, provides an introduction to the Act and includes a summary of the evaluation methodology.
- **Section 2** provides a summary of the detailed findings for each Part and sub-Part of the Act.
- **Section 3** documents the evaluation findings from the perspective of the overall Act.
- **Section 4** provides conclusions and recommendations.

In addition, the report includes a number of appendices containing more detailed information on key departmental outputs during the evaluation period. Finally, a summary of the views of stakeholders interviewed in support of this evaluation has been included as **Annex 1** to the report.

1.2 Evaluation Objectives

The objectives of the evaluation were to:

- examine the degree to which Environment Canada (the Department) is fulfilling its mandatory requirements under CEPA 1999 (listed in **Appendix I**);
- examine the degree to which the Department has initiated identified priority actions to improve the efficiency and effectiveness of the delivery of CEPA 1999 (listed in **Appendix III**);
- identify progress to date in meeting the Department's expected outcomes for CEPA 1999 and its various Parts^{iv} (listed in **Appendix IV**);
- examine and make recommendations concerning the Department's governance structures, processes and procedures that have been put in place to implement the Act;
- make conclusions and recommendations concerning the above questions; and
- identify any changes that may be required to CEPA 1999 to improve the effectiveness and efficiency of departmental processes.^v

1.3 Overview of CEPA 1999

CEPA 1999 is a federal law jointly administered by Environment Canada and Health Canada with the primary purpose of protecting the environment and contributing to sustainable development through pollution prevention. The Act aims to integrate environmental factors into all decision-making by government and private entities.

The Act commits the Government of Canada to implementing pollution prevention as a national goal and as the priority approach to environmental protection. The Act provides the federal government with new tools to protect the environment and human health and provides a framework for protecting Canadians from pollution caused by "toxic" substances.^{vi} The Act ensures that the potential risks posed by chemical substances and

^{iv} The Department has not articulated CEPA-specific outcomes. Nevertheless, a set of expected outcomes has been developed, based on a review of the expected results under the Clean Environment Business Line, the Treasury Board Submission 2003 concerning CEPA implementation, the Act itself and the Government of Canada's response, entitled "Environmental Protection Legislation Designed for the Future – A Renewed CEPA," to the 1995 Report of the Standing Committee responsible for reviewing CEPA 1988. These expected outcomes are documented in Appendix IV.

^v The Department is currently undertaking a parallel, supporting exercise to provide departmental advice for the five-year review (Ministerial Advice Paper). It is this study, and not the evaluation, that will primarily identify and analyze potential themes and questions with respect to provisions of the Act and areas where it could be adjusted to enhance its effectiveness.

^{vi} Under CEPA 1999, substances are defined as "toxic" if they enter or may enter the environment in amounts, concentrations, or conditions that:

- have an immediate or long-term effect on the environment or its biological diversity;
- endanger the environment upon which life depends (e.g., chlorofluorocarbons, or CFCs, damage the stratospheric ozone layer, increasing exposure to ultraviolet rays, thereby increasing the risk of skin cancer); or

biotechnology products are properly assessed, establishes strict deadlines for controlling

- **Sustainable Development** — a clean, healthy environment and a strong, healthy economy that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
- **Pollution Prevention** — "the use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and waste and reduce the overall risk to the environment or human health."
- **Virtual Elimination** — of releases of substances that are persistent, bioaccumulative, toxic and primarily the result of human activities.
- **Ecosystem Approach** — Based on natural geographic units rather than political boundaries, and that considers environmental, social and economic elements that affect the environment as a whole.
- **Precautionary Principle** — which states that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."
- **Intergovernmental Cooperation** — directs the federal government to endeavour to act in cooperation with governments in Canada to ensure that federal actions are complementary to and avoid duplication with other governments.
- **National Standards** — by providing for the creation of science-based, national environmental standards.
- **Polluter Pays Principle** — users and producers of pollutants and wastes should bear the responsibility for their actions. Companies or people that pollute should pay the costs they impose on society.
- **Science-based Decision-Making** — the integral role of science and traditional aboriginal knowledge (where available) in decision-making and that social, economic and technical issues are to be considered in the risk management process.

certain toxic substances and requires the virtual elimination of inherently toxic substances that are bioaccumulative, persistent and result primarily from human activity and that are not naturally occurring.

Through CEPA 1999, the Government of Canada expects to demonstrate national leadership, work to minimize overlap and duplication and increase harmonization across and within Canadian jurisdictions.

Box 1 – CEPA 1999 Guiding Principles

CEPA 1999 is described as being an "enabling" Act. However, it also imposes a significant number of obligations on Environment Canada, while maintaining many of the obligations that had been established for CEPA 1988 (see **Appendix I**). Many of these obligations are unique among Canadian jurisdictions. For example, the Act requires the Ministers of the Environment and Health to consider the risks posed by all substances included on the Domestic Substances List and, where appropriate, mandates the Department to propose and finalize risk management measures and tools within specified timelines.

CEPA 1999 is organized into 12 major Parts:

- Part 1 – Administration
-
- endanger human life or health (e.g., lead can hinder development of the human nervous system).

- Part 2 – Public Participation
- Part 3 – Information Gathering, Objectives, Guidelines and Codes of Practice
- Part 4 – Pollution Prevention
- Part 5 – Controlling Toxic Substances
- Part 6 – Animate Products of Biotechnology
- Part 7 – Controlling Pollution and Managing Wastes
 - Division 1: Nutrients
 - Division 2: Protection of the Marine Environment from Land-based Sources of Pollution
 - Division 3: Disposal at Sea
 - Division 4: Fuels
 - Division 5: Vehicle, Engine and Equipment Emissions
 - Division 6: International Air Pollution
 - Division 7: International Water Pollution
 - Division 8: Control of Movement of Hazardous Waste and Hazardous Recyclable Material and of Prescribed Non-Hazardous Waste for Final Disposal
- Part 8 – Environmental Matters Related to Emergencies
- Part 9 – Government Operations and Federal and Aboriginal Land
- Part 10 – Enforcement
- Part 11 – Miscellaneous Matters
- Part 12 – Consequential Amendments, Repeal, Transitional Provision and Coming into Force

1.4 Roles and Responsibilities

To achieve the objectives of CEPA 1999, Environment Canada works in partnership with Health Canada, other departments, the provinces and territories, Aboriginal governments, industry and the public.

The governance of CEPA 1999 is the responsibility of a number of parties:

- The Minister of the Environment must administer and implement the Act.
- The Minister of Health is expected to assist the Minister of the Environment and also has specific obligations under the Act.
- The Ministers are advised by a National Advisory Committee, whose representation and mandate are outlined in Part 1 of the Act.
- The Act allows the Minister of the Environment to enter into equivalency and administrative agreements with the provinces and territories and agreements respecting administration with Aboriginal governments and peoples, allowing these other orders of government to implement or administer some aspects of the Act.
- The Governor in Council (Cabinet) responds to the Ministers' recommendations and issue orders and make regulations, where appropriate.
- Parliament must review the Act every five years and has responsibilities for final approval of any changes or amendments to the Act.

The Department has established accountabilities for delivering on the Ministerial obligations and intended outcomes associated with each Part of the Act. These are documented in **Appendix II**.

1.5 Scope of Evaluation

The evaluation assessed departmental progress in achieving the Department's expected outcomes for CEPA 1999 and its various Parts over the period from its entry into force on March 31, 2000, through December 31, 2004.^{vii} The evaluation includes all the programs and activities established under CEPA 1999, including all the programs previously under CEPA 1988 that were continued under CEPA 1999. The evaluation focused on the first 11 substantive Parts of the Act.^{viii}

During the evaluation period, the administration of CEPA 1999 fell under the Department's Clean Environment Business Line umbrella (one of four business lines in the Department at the time). The evaluation includes all programs and activities conducted under the Clean Environment Business Line's Air Result and Toxics Result,^{ix} with the exception of environmental assessment.^x Relevant to CEPA 1999, this Clean Environment Business Line had the following expected outcomes:

- *Strategic Outcome*: Protection from domestic and global sources of pollution
- *Key Result (Air)*: Improved air quality and minimized human impact on the atmosphere
 - air quality improved
 - emissions and deposition of hazardous air pollutants reduced
 - acid rain deposition reduced
 - stratospheric ozone layer protected and recovered
 - Canadian environmental priorities advanced through partnerships
 - compliance
- *Key Result (Toxics)*: Reduced risk from toxic substances and other substances of concern
 - risks identified and understood for toxics or substances of concern
 - risks managed through strategies, tools and communication
 - pollutants directly managed
 - compliance
 - environmental conditions and impacts monitored, tracked and reported by the Department

Obligations and activities undertaken by Health Canada are excluded from the evaluation, as that department is conducting its own evaluation. The Act's obligations with respect to the role and activities of the Governor in Council (Cabinet) are also excluded. CEPA 1999 also places a significant number of obligations on Persons (e.g., no unauthorized use or disposal of identified substances or wastes). The evaluation undertook an indirect examination of the extent to which these obligations are being met by considering the effectiveness of departmental programs and procedures, including its compliance and enforcement activities.

^{vii} Major activities and outputs that were finalized from January 1 through March 31, 2005, such as newly published regulations in the *Canada Gazette*, Part II, were also included within the scope of the evaluation.

^{viii} Part 12 (Consequential amendments, repeal, transitional provision and coming into force) is administrative in nature and not considered relevant to this evaluation.

^{ix} The Clean Environment Business Line also includes a Climate Change Result. This result, and all climate change-related programs and activities, are excluded from this evaluation.

^x Authorities for environmental assessment activities are provided under the *Canadian Environmental Assessment Act*, not CEPA 1999.

No independent assessment of the actual compliance of Persons with the various obligations was undertaken, however.

Finally, the evaluation did not directly assess the actions and performance of other jurisdictions with equivalency agreements or agreements respecting administration with Aboriginal governments and peoples. Instead, the evaluation focused on the information-sharing and verification and assurance mechanisms instituted by the Department to ensure that the Act's obligations and objectives are satisfied.

1.6 Evaluation Approach

CEPA 1999 is an enabling tool to protect human and environmental health. However, the "use" of the Act alone is not an effective measure of its achievements. In some cases, various Parts of the Act have not yet been used because there is no rationale at this point to apply the particular provisions. In other cases, different Acts, tools and/or instruments can be more effectively used to meet the intent of the CEPA 1999 provisions (e.g., the use of the *Fisheries Act* or Canada-wide Standards). As a result, the evaluation does not assess whether all Parts of the Act are used and/or used equally, but rather whether the obligations in the Act are being fulfilled and whether the Department is organized in a manner that will enable progress on meeting the intended objectives of the Act.

The evaluation is formative in nature. It measures progress towards achieving results, such as whether systems and procedures are in place to implement the Act and whether the Department is on track to eventually achieve the intended outcomes. It does not evaluate actual environmental outcomes. The Act has not been in place long enough to fully evaluate its impact in terms of environmental results. Actual environmental improvements are noted where evident, however.

Responsibilities for delivering on the various obligations under CEPA 1999 are distributed across the Department, as noted above. Through the 2001-02 CEPA Operational Review exercise, the Department conducted an examination of implementation progress, using an approach that corresponded to the Department's program structure. For the purposes of the upcoming Parliamentary Review, however, the decision was taken to organize the evaluation framework in a manner that corresponds directly to the individual Parts of the Act, as Members of the Parliamentary Committee may be unfamiliar with the Department's organization and likely will want to know the impact of the Act itself. The evaluation focuses on the degree to which CEPA 1999 has enabled the achievement of the expected outcomes of CEPA 1999 (as documented in **Appendix IV**) rather than on the use of various Parts or instruments.

1.7 Evaluation Methodology

This evaluation is "evidence-based." That is, its conclusions and recommendations are based on objective, quantitative and documented evidence to the fullest extent possible. The evaluation was conducted in accordance with the work plan described in the Evaluation Plan prepared by the Department's Audit and Evaluation Branch. The major project Phases included:

- Phase I: Evaluation Planning;
- Phase II: Data Collection and Review;
- Phase III: Analysis and Development of Findings;

- Phase IV: Debriefing; and
- Phase V: Reporting.

Phase I: Evaluation Planning

During Phase I, a project initiation meeting was held with the Department's Evaluation Committee to review and confirm the project's scope and objectives; clarify roles and responsibilities; and finalize the evaluation work plan. A brief examination of the available documentation^{xi} was conducted to gain a better understanding of the range of documentation available to support the evaluation and to identify any shortcomings. A series of evaluation instruments were then developed, including:

- an *evidence collection template* to capture and record evidence during the documentation review and analysis phase (see **Appendix V**);
- a *summary evidence template* that included the evaluation criteria, and a related guidance document to assist the evaluation team in completing the template in a consistent manner; the a summary evidence template (see **Appendix VI**) was applied to the analysis of all Parts and related sub-Parts of the Act and provided the vehicle by which the evaluation team reached conclusions on evaluation issues; and
- an *interview guide* to support the conduct of stakeholder interviews (**Appendix VII**).

The completed evidence collection templates, summary evidence templates, interview notes and other working notes were submitted to the Audit and Evaluation Directorate upon completion of the evaluation.

Phase II: Data Collection and Review

In Phase II, the evaluation instruments were applied to a review of the documentation made available to the evaluation team. Gaps in the evidence base were documented, and interviews were scheduled with the Department's Accountable Leads (see **Appendix II**). The Leads were provided with a summary of the gaps in the documentation for their areas of accountability in advance of the interview. The initial analysis was then updated to incorporate any additional documentation or information made available through the interview process.

Forty-five stakeholders were contacted through a parallel process and invited to provide input to the evaluation. Of those contacted, 35 accepted the invitation and agreed to be interviewed. (**Appendix VIII** includes a list of the individuals and organizations interviewed.) As stakeholder views provided limited hard "evidence" in support of the evaluation, these views have been summarized and presented separately as **Annex 1** to this report.

Phase III: Analysis and Development of Findings

In Phase III, the evidence within each area of relevance was analyzed, and preliminary findings were developed. The preliminary findings provided an assessment for each of the evaluation criteria within each Part and sub-Part of the Act. The preliminary findings were presented to the Evaluation Committee.

Presentations on the preliminary findings that were relevant to their individual areas of accountability were then made to the Department's Accountable Leads. The Leads were asked to identify errors and omissions and were requested to provide additional sources of evidence in instances where the preliminary findings were considered to be in error.

^{xi} Documentation was provided to the evaluation team prior to the launch of the evaluation.

Additional evidence received was analyzed accordingly, and the preliminary findings were updated.

Draft evaluation findings were then prepared. These draft findings consisted of three presentation decks:

- stakeholder interview results;
- Parts-based findings (the updated preliminary findings); and
- evaluation-wide findings, which integrated the Parts-based and stakeholder interview findings and provided cross-cutting analysis and conclusions concerning implementation of CEPA 1999 over the evaluation period.

Phase IV: Debriefing

In Phase IV, the Evaluation Committee was briefed on the draft findings of the evaluation. Subsequent debriefs were conducted with:

- the Assistant Deputy Minister, Environmental Protection Service;
- the Environmental Protection Service Executive Committee;
- the Deputy Minister;
- Health Canada representatives; and
- the Office of the Minister of the Environment.

The individuals briefed were able to provide comment and feedback on the draft findings. Additional evidence received was analyzed, and the draft findings were updated.

Phase V: Reporting

In Phase V, the draft evaluation findings were documented as a Draft Report, which was submitted to the Evaluation Committee, Accountable Leads and Regional Directors General. Reviewers were asked to provide written comments. The Draft Report was adjusted, where appropriate, and a Final Evaluation Report was prepared and submitted.

1.8 Limitations of the Methodology

There are a number of limitations associated with the methodology used in the evaluation. These include the following:

- The evaluation's reliance on documentary evidence means that the summation of activities and outputs over the evaluation period as documented in this report represents a minimal accounting of what has been done. For example, documentation on additional activities and outputs may not have been made available to the evaluation team, or documentation may not exist for other activities and outputs.
- Documentation provided was not independently verified as being factual and accurate. Much of the documentation was provided in draft form, and the evaluation team needed to assess whether these documents provided clear evidence of actions being planned and/or executed or whether they simply documented a summary of available options.
- CEPA 1999 is jointly administered by Environment Canada and Health Canada. This evaluation, however, excluded actions, outputs and accomplishments of Health Canada. Therefore, the evaluation cannot reach conclusions on the degree to which the relationship between the two departments is functional and effective.
- Although tested with and agreed to by Accountable Leads, the expected outcomes developed and documented for the purposes of assisting this evaluation do not

necessarily reflect Government of Canada or department policy and may not have full support from all relevant program authorities.

- The evaluation was expected to consider issues of cost-effectiveness. However, with the exception of annual allocations to CEPA 1999, no information was made available to allow a determination of whether the Department's CEPA-related activities are being executed in a cost-effective manner relative to experiences under CEPA 1988 or to the period prior to the 2001-02 CEPA Operational Review.

2.0 PARTS-BASED FINDINGS

This section provides evaluation findings for each Part/Division of CEPA 1999. The material is organized in a consistent manner in each section, documenting:

- the expected outcomes associated with the relevant Part/Division;
- a brief introductory overview of the Part/Division and its related provisions;
- a discussion of the Part/Division's Ministerial obligations and the degree to which these have been satisfied during the evaluation period;
- a summary of the major accomplishments achieved and outputs produced during the evaluation period in relation to the Part/Division in question;
- where appropriate, a discussion of the priority actions identified for improving the effectiveness and efficiency of the department's delivery of CEPA 1999 and the extent to which progress has been initiated on these actions;
- discussion of the key issues and challenges identified that may limit the Department's ability to achieve the identified expected outcomes; and
- conclusions, representing the evaluation team's assessment of the likelihood that the identified expected outcomes will be achieved, over time.

2.1 Part 1: Administration

Expected Outcomes

The evaluation identified one expected outcome for Part 1:

1. *An increase in the harmonization of environmental standards and requirements across all Canadian jurisdictions.*

Overview of the Act and Its Provisions

Part 1 requirements cover administrative matters of the Act. One of the major administrative requirements is for the Minister to establish a National Advisory Committee. This committee is to be composed of one representative for each of the federal Ministers of the Environment and Health, representatives from each province and territory and six representatives of Aboriginal governments drawn from across Canada. The committee advises the Ministers on actions taken under the Act that enable national, cooperative action and that avoid duplication in regulatory activity among governments. The committee also serves as the single window into provincial and territorial governments and representatives of Aboriginal governments on departmental "offers to consult" on CEPA-related matters.

Part 1 also includes provisions that allow the federal government to enter into administrative agreements with provincial and territorial governments and with Aboriginal governments and people (e.g., Band Councils). The Act allows the federal government to sign equivalency agreements with provincial, territorial and Aboriginal governments.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 6(1) – A National Advisory Committee has been established in accordance with the stipulations of the Act.
- Sections 8, 9 and 10 – Procedural obligations under the parts of the Act dealing with agreements and the National Advisory Committee have been met.

Major Accomplishments

The Department has enacted both mandated and non-mandated governance structures to oversee implementation of the Act, including the following:

- The CEPA National Advisory Committee replaced the former Federal–Provincial Advisory Committee established under CEPA 1988. It has a broader mandate that extends beyond toxic substances. The committee has held 26 meetings since 2000. In 2001, members were surveyed on their expectations for committee role, function and operational processes.
- A joint Environment Canada – Health Canada Assistant Deputy Ministers' Committee on CEPA (formerly known as the CEPA Board of Directors) was established in 2004 to oversee the CEPA Management Committee and to address issues such as the precautionary principle, the categorization process and transparency.
- A joint Health Canada – Environment Canada CEPA Management Committee, composed of Directors General, is in place to ensure that timely and concerted actions are taken to implement the provisions of CEPA 1999. The committee provides policy direction, discusses work priorities and oversees program planning.

Environment Canada undertook a major learning and planning exercise in 2001-02 (CEPA 1999 Operational Review) to improve the implementation of CEPA 1999 and identify resource requirements. The Department has since secured the resources required to meet its mandatory obligations under the Act. Subsequent to the Operational Review, the Government of Canada provided the Department with an additional \$76.3 million a year for implementation of CEPA 1999. The additional funding was designed to offset funding due to expire and allow the Department to perform all mandatory activities under CEPA 1999. In addition to resources made available by the Government of Canada for implementation of CEPA 1999, the Department received \$120.2 million over 2001–2005 for implementation of the Clean Air Agenda, and \$59.5 million over 2003–2007 for implementation of the Border Air Quality Strategy.

As shown in **Table 1**, Environment Canada spent nearly \$900 million on implementation of CEPA 1999 over the first five years (2000–01 to 2004–05). The numbers in **Table 1** do not include corporate overhead, employee benefits and accommodation costs. When these numbers are included, the Department now spends more than \$200 million a year on implementation of CEPA 1999.

Table 1 – Operational Review Budgets Available for CEPA 1999 (\$000s)

Review Area	2000-01	2001-02	2002-03	2003-04	2004-05	Total
Environmental Quality Research	-	-	-	650.0	650.0	1,300.0
Tech. obligations in support of Risk Assessment and Risk Management	49,393.9	54,914.4	51,751.5	49,315.5	47,399.8	252,775.1
Risk Assessment of Existing Substances	3,676.9	3,676.9	3,594.8	4,900.6	4,986.6	20,835.8
New Substances Notification	4,755.6	4,755.6	4,966.2	6,900.1	7,590.1	28,967.6
Risk Management of Existing Substances	20,555.0	23,120.1	24,403.8	26,915.9	25,151.7	120,146.5
Marine Environment	3,260.5	3,260.5	3,217.8	3,657.8	3,657.8	17,054.4
Environmental Emergencies	5,911.9	7,659.9	7,068.3	7,790.2	7,806.5	36,236.8
Hazardous Waste	2,881.5	4,755.5	5,114.6	4,080.2	3,691.2	20,523.0
Federal House	1,458.9	1,540.9	1,563.8	2,785.7	3,484.4	10,833.7
Transboundary Air	9,566.0	15,715.9	18,374.5	17,826.0	17,953.6	79,436.0
Compliance Promotion	2,897.7	4,729.3	5,260.8	3,490.7	4,231.4	20,609.9
Inspection and Investigations (Enforcement)	14,629.2	14,833.4	18,375.8	25,025.1	25,300.6	98,164.1
Monitoring (includes NAPS, CAPMoN, EEM)	4,344.9	10,959.3	12,705.0	14,244.8	14,655.9	56,909.9
Reporting (includes NPRI)	4,080.8	6,935.7	8,757.4	11,007.0	11,102.0	41,882.9
Governance	12,279.4	13,607.4	13,281.0	11,824.3	11,992.7	62,984.8
Border Air Quality Strategy	-	-	-	10,900.0	17,300.0	28,200.0
Total available budget	139,692.2	170,464.8	178,435.3	201,313.9	206,954.3	896,860.5

Note:

1. The data in this table has been compiled for this report by Environment Canada.
2. The budgets above include A-Base, revenue, and sunseting resources (such as Program Integrity, TSRI, Ozone Annex etc).
3. Definition of CEPA included all resources from Clean Environment less Climate Change, Environmental Assessments and Contaminated Sites, as well as resources from other business lines as indicated by regions/services.
4. The 2000-01 budget is equal to 2001-02 less Program Integrity and Ozone Annex as funding for both started in 2001-02.
5. Includes additional resources received from Treasury Board for 2003-04 and 2004-05.

Environment Canada has negotiated two administrative agreements (one with Saskatchewan¹ to share work on certain provincial legislation and seven CEPA 1999 regulations; and one with Quebec² covering the pulp and paper sector). Environment Canada also has one equivalency agreement (with Alberta³ on regulations in three sectors). These agreements were all originally negotiated under the authority of CEPA 1988. The Quebec administrative agreement has been renewed twice. The Alberta and Quebec agreements expire in 2005. Environment Canada has initiated discussions to renegotiate them and to expand the scope of the Alberta and Saskatchewan agreements.

In addition to these administrative and equivalency agreements, Environment Canada has negotiated agreements under its CEPA 1999 authority with all or most provinces and territories on national air pollution surveillance and has invoked the provisions made available through Part 1 of the Act to enter into several agreements respecting Canada-wide

Standards under the auspices of the Canadian Council of Ministers of the Environment. These include the following Canada-wide Standards:

- Particulate Matter and Ozone;⁴
- Benzene;⁵
- Petroleum Hydrocarbons in Soil;⁶
- Mercury Emissions (base metal smelting);⁷
- Mercury in Lamps;⁸
- Mercury in Dental Amalgam Waste;⁹
- Dioxins and Furans;¹⁰
- Dioxins and Furans from Iron Sintering;¹¹ and
- Dioxins and Furans from Steel Manufacturing Electric Arc Furnaces.¹²

Issues and Challenges

Subsequent to the Operational Review exercise, the Department estimated that it needed a total of an additional \$120 million per year. The \$40 million per annum gap between the resource needs estimated and those provided by the Government of Canada would have halved the time needed to perform the estimated 3450 screening assessments and any mandated risk management actions that will be required subsequent to the completion of the categorization exercise for substances on the Domestic Substances List. The additional funds also would have permitted the Department to carry out additional discretionary activities, such as science and technology, environmental emergency preparedness and response and non-mandated risk management actions.

The evaluation found that the Department uses the Clean Environment Business Line Plan as the overarching plan for CEPA 1999 (no separate CEPA-specific strategic plan exists). Work on a Results-based Management and Accountability Framework for CEPA 1999 was initiated and later adjusted to cover the two key results areas for the Business Line (Air and Toxics). A Results-based Management and Accountability Framework for the Air Result has been completed and is being implemented; however, a Results-based Management and Accountability Framework for the Toxics Result is still under development.

All of the CEPA National Advisory Committee members interviewed expressed concerns with respect to the recent operations of the committee, including the following:

- Aboriginal organizations expressed concerns about the role of the National Advisory Committee in addressing environmental protection issues of greatest concern to them and about the committee being the most appropriate forum for Aboriginal input.
- Most provincial and territorial officials expressed the view that Environment Canada actions are increasingly duplicating provincial and territorial control measures. These provincial and territorial representatives were also dissatisfied with the National Advisory Committee and expressed concern over perceived jurisdictional intrusion.^{xii} Moreover, provincial and territorial representatives also expressed concerns with respect to the volume and pace of the committee's work and limitations in their capacity to respond in a timely manner.
- Federal officials expressed concerns with respect to declining rates of participation in the National Advisory Committee, due to travel restrictions and other budgetary constraints in some jurisdictions. They also expressed concerns with the unwillingness of provincial and territorial representatives to acknowledge the real impacts that their interventions have had on federal policies and risk management measures and tools.

^{xii} Evidence to support these views was not made available through the evaluation exercise.

Such concerns will pose challenges to the Department's ability to work cooperatively with the provinces and territories in the development of harmonized environmental protection standards across Canada.

Conclusions

It is likely that the expected outcomes of increasing harmonization of environmental standards and requirements across all jurisdictions will be achieved to some degree. Harmonization continues to take place largely through Canadian Council of Ministers of the Environment processes, with limited development of equivalency or administrative agreements under CEPA 1999.

Fundamental differences of opinion on the appropriate role for the federal government in environmental protection remain between the federal government and its provincial and territorial counterparts. These differences, however, have not precluded fruitful collaboration on specific environmental issues. These differences of opinion will need to be addressed, however, before broader harmonization of environmental protection standards across Canada will be realized.

2.2 Part 2: Public Participation

Expected Outcomes

The evaluation identified two expected outcomes for Part 2:

1. *Canadians have better access to information.*
2. *Canadians have the opportunity to initiate investigations of alleged offences, recover personal damage and economic loss, make personal claims and file citizens' suits.*

Overview of the Act and Its Provisions^{xiii}

Part 2 of CEPA 1999 includes provisions that strengthen the Government of Canada's commitment to encourage and support public participation in environmental decision-making. The Act specifically addresses enhanced opportunities for public participation, including:

- information-sharing through the CEPA Environmental Registry;
- the right to request that the Minister investigate an alleged violation of the Act;
- new citizen right-to-sue provisions; and
- enhanced whistle-blower protection for those who bring serious environmental protection issues to the attention of the Minister.

CEPA 1999 also gives members of the public the opportunity to participate in many decisions taken on toxic substances, including:

- the right to request the addition of a substance to the Priority Substances List;
- the right to file a notice of objection and to request a Board of Review; and
- the right to provide comments on various initiatives.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Sections 12 and 13(1) – A CEPA Environmental Registry¹³ has been established. It contains notices and other documents made publicly available by the Minister.
- The public participation provisions have not yet been triggered, as no relevant public applications for investigation or public environmental protection actions have been

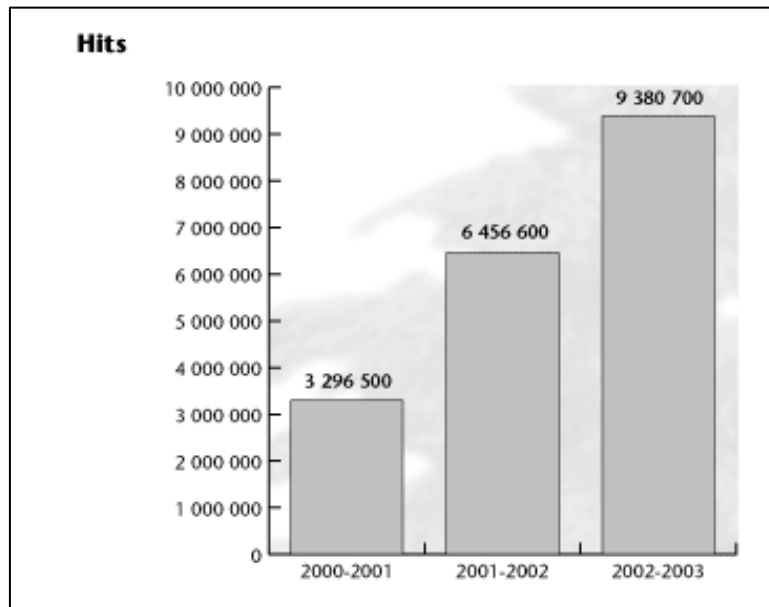
^{xiii} Source: Factsheet – Public Participation in the New CEPA (http://www.ec.gc.ca/CEPARegistry/gene_info/fs_0.cfm).

received (One environmental protection action was initiated under a Section 22 request, but this was dismissed by the Minister).

Major Accomplishments

The CEPA Environmental Registry, first launched in 2000–01, is the main instrument used to inform the public about CEPA 1999. The Registry includes publications related to CEPA 1999, as well as information on public participation, the Act, regulations, notices, orders, permits, substance lists, monitoring and research, guidelines, codes of practices, agreements, plans, policies, enforcement and compliance. This Internet-based tool now has more than 9 million “hits” a year (**Figure 1**).

Figure 1 – CEPA Environmental Registry Hits^{xiv}



Environment Canada has conducted several hundred public consultations on CEPA-related issues since the Act came into force.

A portion of money from the Environmental Damages Fund has been made available to civil society groups to finance projects that in a general way mitigate some of the damage done by offenders. These funds address the general intent of Section 40 of the Act. Most of the sums, however, are small.

Issues and Challenges

Environment Canada faces only minor challenges with respect to providing information to Canadians through the CEPA Environmental Registry. As the content and structure of the Registry continue to evolve, system reliability and user friendliness will require continued attention. In addition, the fact that public information is available primarily via the Internet may be an issue for those who do not have access to the required technology.

^{xiv} Source: CEPA Annual Report 2002–2003
http://www.ec.gc.ca/CEPARegistry/gene_info/annual_reports/ar02_03/cepa_toc.cfm.

Very few public applications for investigations or public environmental protection actions have been made. Barriers to increased public participation have not been formally examined.

Conclusions

The expected outcome of providing Canadians better access to information about CEPA 1999 is being achieved. Environment Canada produces a large number of CEPA-related documents, many of which are available on the CEPA Registry or on the Green Lane.¹⁴ These include information about changes in environmental stresses and conditions (Environmental Signals), risk assessments, risk management measures and tools and scientific research.

The expected outcome related to Canadians initiating investigations of alleged offences, recovery of personal damages and economic losses, making personal claims and filing citizens' suits is unlikely to be achieved without further actions by the Department. Work needs to be done to identify and address barriers before the opportunity provided through the public action provisions of the Act can be fully realized.

2.3 Part 3: Information Gathering, Objectives, Guidelines and Codes of Practice

CEPA 1999 Part 3 contains broad provisions relating to the collection of environmental data and information, the conduct of research and demonstration projects and the development and publication of environmental guidelines. To assist the reader, information relating to this part of the Act has been separated into two subsections:

- Information Gathering and Environmental Data and Research; and
- Environmental Objectives, Guidelines and Codes of Practice.

2.3.1 Information Gathering and Environmental Data and Research

Expected Outcomes

The evaluation identified three expected outcomes for this component of Part 3:

1. *Environmental conditions and impacts are monitored, tracked and reported.*
2. *Information extracted across disparate networks is extracted, analyzed and published in a way that influences internal decision-making and management by all levels of government.*
3. *Research and development and demonstration projects are supported.*

Overview of the Act and Its Provisions

Part 3 authorizes the Minister of the Environment to establish environmental monitoring systems and to collect and publish data on environmental quality in Canada. Part 3 also authorizes the Minister to conduct research and studies on pollution control and environmental contamination.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 44(1)(a) – Systems for monitoring environmental quality have been established, operated and maintained.
- Section 44(1)(d) – Inventories on environmental quality in Canada have been created and published regularly.

- Section 44(1)(e) – Demonstration projects have been conducted and publicized and pollution prevention and emergency preparedness plans have been prepared;
- Section 44 (1) (f) – A pollution prevention clearinghouse has been established.
- Section 47 – Guidelines respecting the use of information-gathering powers were developed and published.
- Section 48 – A national inventory of releases of pollutants continues to operate, as required under CEPA 1999.

Additional obligations Section 44 (1) (b) to complete research and studies have been addressed in areas such as pollution prevention, environmental contamination, ecosystems and hormone-disrupting substances. The requirement (under Section 44(1)(c)) to conduct research on the normal geochemical cycling of toxic substances has been partially met. Research in this area has been minimal.

Major Accomplishments

Environmental quality monitoring programs have been maintained and enhanced. Examples include the National Air Pollution Surveillance Network,¹⁵ the Canadian Air and Precipitation Monitoring Network,¹⁶ the National Pollutant Release Inventory¹⁷ and the Ecological Monitoring and Assessment Network.¹⁸

Funding has been provided for air quality monitoring via the National Air Pollution Surveillance Network and the Canadian Air and Precipitation Monitoring Network, and the networks have expanded and improved across the country. In 2001, Environment Canada committed more than \$29 million over five years to expand and refurbish federal and provincial networks for monitoring air quality and acid deposits at stations across Canada. As of 2002–03, there were 250 monitoring stations in 156 communities under the National Air Pollution Surveillance Network and 27 measurement locations for the Canadian Air and Precipitation Monitoring Network.

Research has been completed at Environment Canada's science institutes (e.g., the Environmental Technology Centre¹⁹ and National Water Research Institute²⁰) in the following areas: air quality, biotechnology, hormone-disrupting substances, metals, toxics, water quality and wildlife. Demonstration projects and pollution prevention success stories are listed on Environment Canada's Canadian Pollution Prevention Information Clearinghouse web site.²¹

Technology development has been conducted, particularly in the areas of emergencies science, contaminated sites and emissions control.

Implementation of Priority Actions

Work has been initiated on all three identified priority actions:

1. *Better science/policy linkages developed through effective priority setting and emerging issue identification* – Environment Canada's approach has been to secure stakeholder input in the selection of science priorities and projects and to improve the communications of scientific results to policy-makers. Additionally, efforts have been made at a departmental level to better integrate and manage science, by making horizontal links to policy issues.
2. *Improved coordination of activities across Science and Technology Centres* – Undertakings such as the Department's Laboratory Coordinating Committee and the interdepartmental Assistant Deputy Minister Science and Technology Integration Board are examples of the Department's efforts to improve coordination of science programs internally and across departments.

3. *An established monitoring and reporting focal point* – The Risk Assessment Directorate now has the responsibility to establish a monitoring and reporting focal point to ensure that CEPA-related information is drawn and reported on from monitoring systems. A strategic overview of the function has been developed for consultation and approval purposes, along with a business case for identifying and securing required resources. Key job descriptions have been developed, and staffing efforts are now under way.

Issues and Challenges

It is difficult to assess the sufficiency or quality of environmental data and research to support all parts of CEPA 1999. The Act is not explicit in articulating the level of effort to be applied in the mandated research areas. At the same time, the Department has not established or communicated specific targets or performance indicators to measure and report on progress in these areas.

External stakeholders were very critical of the Department's more limited efforts, in recent years, in the area of state of the environment. Two major strategies have been developed to communicate integrated environmental information (Knowledge in the Service of Canadians and the Canadian Information System for the Environment). Neither has been funded or implemented. The Department is working on implementing the National Round Table on the Environment and the Economy's recommendations to create several indicators of environmental quality (including indicators for air and water). The indicators are to be integrated on a media-specific basis. A large quantity of information will have to be integrated to create these indicators. A new structure has been established in the Department, in early 2005, to provide a single integrated monitoring team under the Ecosystem Sustainability Board.

Conclusions

The expected outcome that environmental conditions and impacts are monitored, tracked and reported (e.g., air quality) is likely to be achieved.

The expected outcome that information across disparate networks is extracted, analyzed and published in a way that influences internal decision-making and management at all levels of government is likely to be met in part only. While integrated information to influence decision-making exists for some issues, there has been no Department-wide, national integration of all CEPA-related information. However, the development of an integrated plan is now under way through the Ecosystem Sustainability Board.

Additionally, the expected outcome that research and development and demonstration projects are supported is being achieved, in part.

2.3.2 Environmental Objectives, Guidelines and Codes of Practice

Expected Outcomes

The evaluation identified one expected outcome for this component of Part 3:

1. *The behaviour of Canadians, and industry in particular, is influenced by guidelines and codes.*

Overview of the Act and Its Provisions

Part 3 of the Act requires the Minister of the Environment to issue objectives, guidelines and codes of practice for preserving environmental quality. The Act also requires the Minister of

Health to issue objectives, guidelines and codes of practice with respect to the elements of the environment that may affect the life and health of the people of Canada.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 54 – Environmental quality codes of practice and guidelines have been issued and published; offers to consult with provinces/territories and Aboriginal governments have been completed.

Major Accomplishments

Major accomplishments in this area include the following:

- Four Codes of Practice and five CEPA Guidelines have been published (see **Appendix IX**).
- Environment Canada also contributed to the development of several national guidelines under the auspices of the Canadian Council of Ministers of the Environment.
- A review of conformance against the steel sector Codes of Practice was conducted, and the codes are being reviewed and updated.
- The Department has measured and reported on the impact of the guideline concerning Recommendations for the Design and Operation of Wood Preservation Facilities.

Issues and Challenges

Environment Canada lacks mechanisms to ensure that the intended benefits of all issued Codes of Practice or Guidelines are achieved.

There is limited evidence of attempts to assess the use and relative effectiveness and efficiency of Guidelines or Codes of Practice.

Conclusions

The degree to which the expected outcome of the behaviour of Canadians and particularly industry being influenced by guidelines and codes has not been determined. Federal and Canadian Council of Ministers of the Environment guidelines likely are referenced in provincial approval processes, but the actual use of the guidelines by other jurisdictions and the associated impacts of the guidelines are currently not measured or reported.

More work needs to be done to measure and report on the impacts of CEPA 1999 Guidelines and Codes of Practices, as well as Canadian Council of Ministers of the Environment Guidelines.

2.4 Part 4: Pollution Prevention

Expected Outcomes

The evaluation identified one expected outcome for Part 4:

1. *Where risks can be managed appropriately, industry is provided opportunities to identify and address toxic releases in a manner most appropriate to its operations.*

Overview of the Act and Its Provisions^{xv}

The Act is designed to protect the environment and human health through pollution prevention. The Government of Canada has a duty to administer CEPA 1999 in a manner that promotes and reinforces enforceable pollution prevention approaches.

Part 4 of CEPA 1999 has new provisions that assist in meeting these goals. Under the Act, people releasing toxic substances to the environment can be required to prepare and implement pollution prevention plans to minimize or eliminate the environmental and human health risks posed by these substances.

If Canadian air or water pollution affects another country or breaches an international agreement binding on Canada, CEPA 1999 can be used to require pollution prevention plans or regulations to be developed and implemented. The Act also can be used to require preparation and implementation of such plans by federal facilities. More generally, the authorities for regulations under Section 93 and for Codes of Practice and Guidelines under Part 3 provide broad authorities to require and promote pollution prevention planning as the preferred approach for managing a wide range of environmental and health risks.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 56(4) – The Minister has published notices of pollution prevention planning extensions that have been granted.
- Section 62(1) – Guidelines relating to pollution prevention planning have been developed.
- Section 62(2) – The Minister has formally offered to consult with provinces and territories, via the CEPA National Advisory Committee, on the pollution prevention guidelines created under Section 62(1).

Major Accomplishments

The Department has issued five final and one proposed *Canada Gazette* Notices requiring the preparation and implementation of pollution prevention plans (see **Box 2**). Together, these final and proposed notices address 8 of the 22 substances declared toxic since the coming into force of CEPA 1999 (see **Box 3**) and 9 substances declared toxic under CEPA 1988.

Guidelines for the Implementation of the Pollution Prevention Planning Provisions of Part 4 of CEPA 1999²² have been prepared and published to assist both government officials using Part 4 provisions as well as those parties responsible for preparing and implementing pollution prevention plans.

Additional tools have also been created, including the following:

- The Pollution Prevention Planning Handbook²³ provides an overview of pollution prevention, information on the pollution prevention planning process, a model pollution prevention plan and detailed information on pollution prevention practices and on certain analytical techniques for preparing a pollution prevention plan.
- The Pollution Prevention Planning Tutorial²⁴ provides an online step-by-step guide to the basics of developing a pollution prevention plan.

^{xv} Source: Factsheet – The New CEPA and Pollution Prevention (http://www.ec.gc.ca/CEPARRegistry/gene_info/fs_2.cfm).

- The Canadian Pollution Prevention Information Clearinghouse²⁵ is a database providing Canadians with information about how to practise pollution prevention. More than 1200 references, ranging from fact sheets to case studies, can be searched.

Box 2 – Pollution Prevention Notices Published in the *Canada Gazette*

The Department has issued the following five final *Canada Gazette* Notices requiring the preparation and implementation of pollution prevention plans:

- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Dichloromethane²⁶
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans for Inorganic Chloramines and Chlorinated Wastewater Effluents²⁷
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Acrylonitrile²⁸
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Nonylphenol and its Ethoxylates Contained in Products²⁹
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Nonylphenol and its Ethoxylates Used in the Wet Processing Textile Industry and Effluents From Textile Mills that Use Wet Processing³⁰

The Department has issued the following proposed *Canada Gazette* Notice requiring the preparation and implementation of pollution prevention plans:

- Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Specified Toxic Substances Released from Base Metals Smelters and Refineries and Zinc Plants.³¹

Box 3 – Toxic Substances Managed through Pollution Prevention Planning Notices

Substances addressed by the final *Canada Gazette* Notices include:

- Acrylonitrile (C₃H₃N)
- Nonylphenol and its ethoxylates
- Effluents from textile mills that use wet processing
- Inorganic chloramines (NH_nCl_(3-n), where n = 0, 1 or 2)

Substances addressed by the currently proposed notice include:

- Respirable particulate matter less than or equal to 10 microns
- Sulphur dioxide (SO₂)
- Particulate matter containing metals that is released in emissions from copper smelters or refineries, or from both
- Particulate matter containing metals that is released in emissions from zinc plants

Issues and Challenges

Environment Canada faces no key challenges in promoting the use of pollution prevention plans under Part 4.

Conclusions

By definition, pollution prevention planning provides industry with the flexibility to identify and address toxic releases in a manner most appropriate to its organizations' operations. Thus, the expected outcome of "where risks can be managed appropriately, industry is provided opportunities to identify and address toxic releases in a manner most appropriate to its operations" is likely to be achieved, provided the recent trend towards increased use of Part 4 requirements continues. To date, 8 of the 22 substances added to Schedule 1 since March 2000 are subject to Part 4 requirements.

2.5 Part 5: Controlling Toxic Substances

Part 5 of the Act is comprehensive in nature and includes provisions relating to:

- assessing and managing risks of new substances – those not included on the Domestic Substances List;
- placing the onus on industry for notifying the government of new substances prior to their manufacture in or importation into Canada;
- assessing the risks of existing substances – those substances on the original Domestic Substances List; and
- managing the risks of substances added to the CEPA 1999 Schedule 1 List of Toxic Substances.

The Risk Assessment Directorate is responsible for the new substance provisions and risk assessment of existing substances. The Pollution Prevention Directorate and the Air Pollution Prevention Directorate share responsibilities for risk management provisions in Part 5. Following this functional separation, information relating to this Part of the Act has been separated into four subsections:

- New Substances – Chemicals and Polymers;
- Assessing Existing Substances;
- Risk Management (General); and
- Risk Management (Air).

2.5.1 New Substances – Chemicals and Polymers

Expected Outcomes

The evaluation identified three expected outcomes for this component of Part 5:

1. *Eliminate overlap and duplication with other acts.*
2. *CEPA 1999 functions as an effective safety net for areas not covered by other federal acts.*
3. *Unauthorized use of new substances will be prevented.*

Overview of the Act and Its Provisions^{xvi}

CEPA 1999 is the key authority for the government to ensure that all new substances to Canada are assessed for their potential to harm human health or the environment.

^{xvi} Source: Factsheet – Regulatory Roadmap for New Substances in Canada (http://www.ec.gc.ca/substances/nsb/html/RoadMap_e.htm).

Anyone (person or company) who wants to import, manufacture or sell any new substance is required to notify the appropriate Canadian regulatory authority so the new substance can be evaluated for potential effects on human health and the environment prior to its importation, manufacture or sale. Provisions under Part 5 of CEPA 1999 ensure that no new substances are introduced (imported or manufactured) into the Canadian marketplace before they have been assessed to determine whether or not they are toxic or capable of becoming toxic to the environment or human health. The risks of substances determined to be or suspected of being toxic or capable of becoming toxic may be managed, as necessary, through the imposition of conditions or the prohibition of their import or manufacture.

Recognizing that other acts provide for such an assessment process, CEPA 1999 includes a provision whereby substances regulated by other acts are exempt from the Act's obligations to provide the required information under CEPA 1999. This avoids regulatory duplication, while ensuring that standards for protection of the environment and human health are met and applied to all substances. Under CEPA 1999, the government determines, by order, which acts and regulations meet the above criteria for providing appropriate notification and assessment and lists them in published schedules (or "annexes") to CEPA 1999. Acts and regulations relating to new substances that are chemicals or polymers are listed in Schedule 2, and those relating to new substances that are animate products of biotechnology are listed in Schedule 4.

Ministerial Obligations

The evaluation found that all Ministerial obligations are being satisfied:

- Sections 83(1)–(4) – The New Substances Branch operates a database that tracks progress and changes in status at each key step of a new substance notification.
- Section 87(1) – The New Substances Branch publishes additions to the Domestic Substances List every six to eight weeks. The tracking system notifies the Branch when key steps have been completed, including when a substance should be added to the List.
- The other Ministerial obligations are administrative in nature and have been met through publications in the *Canada Gazette*.

Major Accomplishments

Since the coming into force of CEPA 1999, the joint Environment Canada – Health Canada New Substances Program has processed approximately 4000 new substance notifications (about 800 per year). Three prohibitions, 40 conditions and 29 significant new activity notices^{xvii} were issued during that period.

^{xvii} When the New Substances Program suspects that a "significant new activity" in relation to the substance may result in the substance becoming toxic, a notice is issued to ensure that adequate additional information is provided by the notifier or any other proponent who wishes to manufacture, import or use the substance for activities not specified by the notice. The additional information allows Environment Canada and Health Canada to assess the potential environmental and human health risks associated with such new activities.

Proposed *New Substances Notification Regulations*³² were published in 2004. These regulations incorporate revisions to the existing *New Substances Notification Regulations* recommended through the New Substances Notification multistakeholder consultative process held from 1999 to 2001. The regulations are projected to be in force by late 2005.

The *New Substances Fees Regulations*³³ came into effect on January 1, 2003. Importers and manufacturers of a new chemical or polymer who notify the government that they are introducing a new substance to Canada must pay a fee, in addition to providing the information prescribed in the *New Substances Notification Regulations*. These fees cover approximately 22% of the costs in administering the program, a level consistent with that imposed under similar initiatives in the United States.

Environment Canada is very active internationally in the area of new substances. For example, Canada is working towards the mutual recognition of new substance assessments, both on a bilateral basis with Australia and the United States and through an Organisation for Economic Co-operation and Development pilot project. As well, Environment Canada is participating in the United Nations Environment Programme Strategic Approach to Chemicals Management. Having completed its assessments, Canada shares its information with the international community, such as the Stockholm Convention on Persistent Organic Pollutants.

Implementation of Priority Actions

Where applicable, work has been initiated on all identified priority actions:

1. *Implement changes in response to New Substances Notification Regulation consultations* – Environment Canada published a formal “Response” to the consultation Final Report. The Response committed the Department to pursue the implementation of all of the recommendations of the consultation Final Report. In 2003, Environment Canada issued a Progress Report describing its progress towards implementing its commitments. It plans to issue another progress report in 2005.
2. *Assess growing number of New Substances Notifications* – The program has continued to assess all new substances notified under the Act and to impose risk management instruments where appropriate. Contrary to the projections in the Operational Review, however, the number of notifications has not increased. According to departmental officials, new substances programs in other Organisation for Economic Co-operation and Development jurisdictions have experienced a similar levelling-off of notifications.
3. *Continue to exercise leadership in Organisation for Economic Co-operation and Development initiatives with goal of international harmonization* – See international activities under *Major Accomplishments*, above.
4. *Provide environmental risk assessment advice and support to Health Canada and other government departments* – The New Substances Branch continues to lead and collaborate in various initiatives with the Existing Substances Branch and other parts of Environment Canada and Health Canada to develop or refine risk assessment tools and techniques (e.g., organometallic toxics testing, compiling and developing exposure assessment methods). The New Substances Branch has also advised Environment Canada and Health Canada personnel on a small number of specific risk assessments of existing substances.
5. *Maintain support for compliance promotion and enforcement* – The New Substances Branch helped prepare compliance promotion materials and helps fund compliance promotion activities, largely through financial transfers to the regions. The New Substances Branch publishes decisions on the CEPA Environmental Registry,

- including regular updates to the Domestic Substances List³⁴ and Non-Domestic Substances List³⁵ amendments. Despite these efforts, however, data on overall compliance rates and the effectiveness of the new substances notification requirements under CEPA 1999 is not available. The New Substances Branch sees its role as providing compliance promotion support and responding to notifications and assumes that the Enforcement Branch staff, in collaboration with regional staff, are responsible for monitoring and reporting on compliance. The New Substances Branch has ongoing relationships with most of the “regular” notifiers (e.g., large manufacturers and importers of chemicals and polymers) and is confident that these organizations comply routinely. The Branch has less contact with and information about less frequent notifiers.
6. *Continue to develop and modernize the operation of the New Substances Program* – For the past two years, the New Substances Branch has been developing a Service Delivery Improvement Strategy. In 2004, the New Substances Branch issued a revised Operational Policy Manual, which incorporates numerous operational changes in response to the new substances notification consultations and lessons learned. The New Substances Branch is also working towards a long-term initiative to develop an e-filing system.
 7. *Implement the New Substances Fees Regulations for chemicals/polymers* – See discussion under *Major Accomplishments*, above.

Issues and Challenges

Some of the most significant challenges facing the new substances notification process pertain to scheduling other acts. While progress has been made towards scheduling the *Food and Drug Act* and the *Fisheries Act*, as well as certain products under the *Health of Animals Act*, final scheduling is still outstanding. As a result, Environment Canada and Health Canada remain responsible for these assessments under CEPA 1999, despite not having expertise or funding. Second, even when an act has been scheduled, the Ministers of Health and Environment need to be assured that activities undertaken by other government departments remain consistent with CEPA 1999.

Another challenge for Environment Canada is to be aware of and stay ahead of novel technologies, such as nanotechnologies.

Finally, Environment Canada needs to obtain better information on overall compliance rates in order to fully comprehend the impact that the regulations are having.

Conclusions

The expected outcomes of eliminating overlap and duplication with other acts and of CEPA 1999 functioning as an effective safety net for areas not covered by other federal acts are being achieved. Since CEPA 1999 came into force, three other acts have been listed under Schedule 2, and work is under way to list others.

The evaluation was unable to determine the degree to which the expected outcome of preventing the unauthorized use of new substances will be achieved. All notifications submitted are processed, and all prohibitions, conditions and significant new activities issued are enforced. Based on ongoing relationships, Environment Canada is confident that large notifiers (i.e., those responsible for the vast majority of the manufacture and import of new substances) comply with notification requirements. However, the Department does not have solid intelligence on overall levels of compliance with notification requirements.

2.5.2 Assessing Existing Substances

Expected Outcomes

The evaluation identified one expected outcome for this component of Part 5:

1. *All substances on the Domestic Substances List are categorized by September 2006.*

Overview of the Act and Its Provisions^{xviii}

CEPA 1999 requires that all substances on the Domestic Substances List that have not been subject to notification and assessment as new substances^{xix} be categorized within seven years of Royal Assent, which occurred on September 14, 1999.

Categorization involves the systematic identification of substances on the Domestic Substances List that should be subject to screening-level risk assessment. For this purpose, categorization identifies substances that:

- are inherently toxic and display either of the characteristics of persistence (take a long time to break down) or bioaccumulation (collect in living organisms and end up in the food chain); or
- may present to individuals in Canada the greatest potential for exposure.

Environment Canada plays the lead role in conducting categorization activities concerning “persistent, bioaccumulative and inherent toxicity to environmental organisms” aspects. Health Canada plays the lead role in conducting activities concerning “greatest potential for exposure and inherent toxicity to humans” aspects. The departments share the categorization deadline of September 2006.

For substances “categorized in,” screening assessment activities will be undertaken to determine whether the substances are “toxic” or capable of becoming “toxic” in accordance with the criteria stipulated in CEPA 1999. The outcomes of the screening assessments may result in one of the following decisions:

- No further action is taken.
- If the substance is not already listed, it could be added to the Priority Substances List.
- The Ministers of Environment and Health recommend that the Governor in Council add the substance to the List of Toxic Substances (Schedule 1 of CEPA 1999).

Ministerial Obligations

The evaluation found that all but one of the Ministerial obligations that have been triggered have been satisfied:

- Section 66 – The Domestic Substances List and the Non-Domestic Substances List are maintained and are published on the CEPA Environmental Registry.
- Section 73(1) – Categorization of substances on the Domestic Substances List is under way. Current planning documents predict that the categorization will be concluded by the CEPA 1999 deadline of September 2006.
- Section 74 – Both Health Canada and Environment Canada have processes in place to identify and conduct screening assessments on substances that either meet the Domestic Substances List categorization criteria in Section 73 or are added to the Domestic Substances List under Section 105. The departments are in the process of

^{xviii} Source: Factsheet – The New CEPA and the Assessment of Existing Substances (http://www.ec.gc.ca/CEPARegistry/gene_info/fs_5.cfm).

^{xix} This affects approximately 23 000 substances.

completing a pilot screening assessment exercise to prepare for and refine screening assessment procedures and techniques.

- Section 75 – Procedures to implement the obligation to review decisions of other jurisdictions are under development, but not yet implemented.
- Section 76(4) – The Ministerial obligation to respond to requests for additions to the Priority Substances List³⁶ within 90 days has been met. There have been two requests for additions to the Priority Substances List since CEPA 1999 came into force: perfluorooctane sulfonate and forest-fire retardants containing ferrocyanides. The Minister responded to both requests within 90 days.
- Section 76.1 – A weight of evidence approach and the precautionary principle are applied when conducting and interpreting the results of risk assessments.^{xx}
- Section 77(3) – The Department is now completing the first screening assessments and has not yet completed the process of adding any of the substances assessed under this process to Schedule 1, although it plans to do so. For both polybrominated diphenyl ethers and perfluorooctane sulfonate, the *Canada Gazette* Notices indicate that the Ministers of the Environment and Health propose addition to Schedule 1.
- Section 77(4) – The *Persistence and Bioaccumulation Regulations*³⁷ set the criteria used to determine whether a substance is persistent or bioaccumulative under CEPA 1999. In 2003, the Ministers of the Environment and Health published a proposal to establish the Virtual Elimination List and to add hexachlorobutadiene³⁸ to it. For both polybrominated diphenyl ethers and perfluorooctane sulfonate, the draft *Canada Gazette* Notices indicate that some of these substances meet the criteria for virtual elimination and that the Ministers propose addition to the Virtual Elimination List.
- Section 77(6) – Environment Canada and Health Canada have published summaries of the screening assessments and proposed measures for polybrominated diphenyl ethers and perfluorooctane sulfonate under Section 77(3) and Section 77(4), as well as the summaries and proposed measures under the sections of all Priority Substances List assessments completed since the Act came into force. **Appendix XII** provides an overview of the assessment decisions made on all Priority Substances List 1 and 2 and Domestic Substances List substances since the coming into force of CEPA 1999.
- Section 77(6)(c) – For substances recommended for addition to Schedule 1, the Minister of the Environment has published statements indicating the manner in which the Department intends to develop a proposed regulation or instrument (such as proposed risk management strategies).
 - Section 77(9) – All Section 77(6) statements are published in the CEPA Environmental Registry, and there is a record of all Governor in Council decisions about additions to Schedule 1.

Additional Ministerial obligations, under Sections 76(2), and 79 have not been triggered.

^{xx} The Department has consistently asserted that it has always used a “weight of evidence” approach in its assessment activities, and its current assessment guidance manual explicitly refers to weight of evidence. Departmental officials explained that, in practice, recent assessments account for weight of evidence more clearly than in the past. In particular, CEPA 1999’s focus on “persistent, bioaccumulative and toxic” has required assessors to account for more lines of evidence than was typically the case for most Priority Substances List assessments conducted under CEPA 1988. The Department similarly emphasizes that the precautionary principle informs all aspects of the risk assessment process, from the type of risks examined to the safety factors utilized to the overall interpretation of the results. A guidance document regarding the operationalization of the precautionary principle under CEPA 1999 has been prepared, and a number of presentations on the subject have been made.

Major Accomplishments

Environment Canada and Health Canada have identified nearly 1000 substances on the Domestic Substances List that did not meet the criteria for addition to the list. The departments are in the process of arranging for these substances to be removed from the Domestic Substances List.

Environment Canada has developed, tested, consulted on and revised categorization approaches for determining persistence, bioaccumulation and inherent toxicity to environmental organisms of various categories of the remaining 22 000 Domestic Substances List substances.

Environment Canada has released preliminary categorization decisions³⁹ on 17 000 of the remaining 22 000 Domestic Substances List substances (as of January 31, 2005).

A screening assessment pilot project is under way, involving 123 substances, to test and improve approaches for screening assessments.

All but two of the remaining assessments on Priority Substances Lists 1 and 2 substances have been completed, and Notices providing a summary of assessments have been published (see **Appendix XII**). The remaining two Priority Substances List assessments (aluminum salts and ethylene glycol) are under legal suspensions due to the need for further research studies.

Implementation of Priority Actions

Work is under way on each of the four identified priority actions:

1. *Establish priorities for risk assessments* – Results of the categorization have been grouped by chemical or sector uses and also by (tentative) priority for assessment. The pilot project is being used, in part, to learn how to set priorities for screening assessments. Further, Environment Canada is developing policies and procedures for setting priorities for reviewing decisions in other jurisdictions (as required in Section 75). Setting priorities for risk assessment will remain an extremely important and difficult task for the Department for the foreseeable future.
2. *Leverage and harmonize with other jurisdictions* – International collaboration is a very important strategy for the Existing Substances Branch. Slow progress in addressing the legacy of existing substances in other jurisdictions has meant that the availability of foreign information has been less than anticipated.
3. *Work closely with Health Canada* – Environment Canada is committed to working with Health Canada. However, technical barriers have inhibited sharing confidential information databases between the two departments. Other aspects of the Environment Canada – Health Canada relationship were excluded from the scope of this evaluation.
4. *Place onus on industry to provide information* – The Industry Coordinating Group has been effective. Ongoing improvements are being made to processes for obtaining information from industry in ways that minimize burden and respect confidential business information.

Issues and Challenges

Some of the issues and challenges facing Environment Canada regarding the assessment of existing substances include:

- identifying and assessing the risks from toxic substances contained in or created and released by the use or disposal of manufactured articles;

- ensuring that sufficient information is available such that industry does not choose alternatives to toxic substances that might themselves pose significant risks;
- conducting assessments to support sectoral, multipollutant risk management approaches; and
- making ongoing refinements to the use of surveys and developing other information-gathering tools under Section 71.

In addition:

- A significant proportion of the substances on the Domestic Substances List may no longer be of commercial interest. Nonetheless, CEPA 1999 does not provide the Minister the authority to remove any of the originating substances from the Domestic Substances List. As a result, Environment Canada and Health Canada are required to categorize all of these substances and to then perform a screening assessment on any that meet the categorization criteria – even if the substance is not currently used in Canada.
- The obligation on industry to inform the Minister of suspected toxic substances (Section 70) is providing less information than anticipated. For example, Environment Canada is receiving only 1% of the reports received under a similar requirement in the United States. Environment Canada has not identified a reason for the low reporting levels.

Conclusions

The expected outcome of meeting the obligation to categorize all existing substances on the Domestic Substances List by September 2006 is likely to be met. Environment Canada continues to expect to categorize about 3450 substances from the Domestic Substances List for screening assessments. Some of these substances will be high priorities for assessment (persistent, bioaccumulative and inherently toxic, or high volume persistent). Some substances that meet categorization criteria will be assigned lower priorities for assessment.

2.5.3 Risk Management (General)

Expected Outcomes

The evaluation identified three expected outcomes for this component of Part 5:

1. *Releases of toxic substances are prevented or reduced.*
2. *Releases of known persistent, bioaccumulative and inherently toxic substances from human-caused sources are virtually eliminated.*
3. *The use of existing substances in products and industrial and commercial processes is better managed.*

Overview of the Act and Its Provisions^{xxi}

Where the Ministers of Health and Environment have determined a substance to be toxic, following a Priority Substances List assessment, a screening assessment or the review of a decision by another jurisdiction, and where they have proposed that the Governor in Council add the substance to the List of Toxic Substances, Section 91 requires the Minister of the Environment to publish a proposed regulation or instrument using the authorities under CEPA 1999 to establish preventive or control actions for managing the substance. The proposed regulation or instrument must be published in the *Canada Gazette* within two

^{xxi} Source: Factsheet – Identifying Risk Management Tools for Toxic Substances Under CEPA 1999 (http://www.ec.gc.ca/CEPARRegistry/gene_info/fs_rm1.cfm).

years of the Ministerial recommendation that the substance be added to the List of Toxic Substances. Section 92 requires the regulation or instrument to be finalized and published in the *Canada Gazette* within 18 months of the publication of the proposed regulation or instrument.

Based on the scientific information available, risk management strategies are developed to determine how best to manage each toxic substance. Social, economic and technology factors are integral to risk management decision-making, including considering which risk management instruments are the most cost-effective. While CEPA 1999 provides for certain instruments that can be developed under the Act, such as regulations, pollution prevention plans, guidelines and codes of practice, other tools outside the Act, such as voluntary agreements, other Acts of Parliament or provincial and territorial actions, also may be suitable for managing particular risks posed by a toxic substance.

Ministerial Obligations

The evaluation found that all Ministerial obligations with regard to legislative timelines and priority actions are being satisfied:

- Sections 91(1) and 92(1) – Environment Canada has developed proposed regulations or instruments within 24 months of recommendation for addition to Schedule 1 in all cases (see **Appendix X**).
- Section 90(1.1) – The Department has continued to focus on pollution prevention through a variety of initiatives, such as leading the development of the Canadian Council of Ministers of the Environment's National Commitment to Pollution Prevention 1996. For eight years (until 2004), Environment Canada reported annually on progress made towards the objectives in the Cabinet-approved Federal Pollution Prevention Strategy 1994. One indicator of the impact of this commitment is that, whereas the first progress report was signed only by Environment Canada, all 25 federal departments signed the eighth report.
- The Virtual Elimination List (Section 65(3)) has not yet been formally established, although the Act does not specify a time frame for such action. A proposal to establish the Virtual Elimination List (Section 65(2)) was published in the *Canada Gazette*, Part I, in 2004. Final establishment of the Virtual Elimination List has been delayed by industry challenges, which are now resolved. Environment Canada anticipates establishing the List in June 2005.

Major Accomplishments

The Department has developed and made ongoing revisions to the Toxics Management Process⁴⁰ to guide the development of risk management strategies for toxic substances. It has also developed a guidance document to assist risk managers and external stakeholders in understanding and implementing the revised process. The document sets out expectations and guidance regarding issues such as roles and responsibilities; procedures for developing risk management strategies; selecting appropriate public engagement practices; and selecting and designing individual risk management measures and tools.

Environment Canada has developed numerous risk management measures and tools within the legislated timelines, including:

- 13 regulations;
- five final and one proposed Pollution Prevention Planning Notices;
- four Codes of Practice;
- five CEPA 1999 Guidelines; and
- four Environmental Performance Agreements.

In addition to initiating actions as prescribed under the Act, the Department has developed or supported the development of several other relevant risk management measures and tools that contribute to the achievement of the intended results associated with the Act. For example:

- Environment Canada played a key role in the development of several Canada-wide Standards and Guidelines under the Canadian Council of Ministers of the Environment process, including Canada-wide Standards for:
 - particulate matter and ozone;
 - mercury;
 - dioxins and furans; and
 - benzene.
- The Department also played the lead role in engaging the provinces to initiate work that is expected to lead to more standardized management of municipal wastewater effluents across Canada.
- Environment Canada has worked closely with the Forest Products Association of Canada on a “smart regulations” initiative for the forest products sector. A key component of this initiative is a joint agreement to develop a 10-year agenda for addressing air emissions from the forest products sector.

A listing of all risk management measures and tools developed and implemented by the Department during the evaluation period is included as **Appendix IX** to this report.

Appendix X provides an overview of the risk management measures and related timelines for those substances added to CEPA 1999 Schedule 1 during the evaluation period.

Appendix XI provides a similar overview of risk management measures and tools introduced for substances already existing on CEPA 1999 Schedule 1 at the time the Act entered force in March 2000.

Implementation of Priority Actions

Work has been initiated on all identified priority actions:

1. *Develop an effective priority-setting mechanism that facilitates resource allocation by highest priority* – The Pollution Prevention Directorate continues to refine the processes used to set priorities and to facilitate resource allocation by highest priority.
2. *Establish priorities in conjunction with the risk assessment program* – Risk managers work with risk assessors through the CEPA Management Committee Toxics Management Subcommittee to identify strategies for risk assessment that will lead to a predictable set of priorities for both risk assessment and risk management. They are exploring options such as focusing on certain types of chemicals (e.g., persistent organic pollutants) and focusing assessments on groups of substances relevant to a particular sector (as is being explored through the forest products smart regulations initiative). The recent split of the Risk Assessment Directorate from the Pollution Prevention Directorate has made collaboration more difficult, at least in the short term.
3. *Leverage the work of, and seek harmonization with, other jurisdictions* – There are some good examples of leveraging work of other jurisdictions, most notably with respect to Extended Producer Responsibility and the fuel, vehicle and small equipment regulations.
4. *Seek efficiencies by leveraging generic instruments to reduce development and implementation costs* – Various steps have been taken to leverage generic measures and tools, including pollution prevention planning notices, environmental performance agreements and standardized fuel regulations.

5. *Increase the application of voluntary initiatives to reduce the use of suspected toxics by industry, through environmental performance agreements* – There has been mixed success in increasing the application of voluntary initiatives. However, the Policy Framework for Environmental Performance Agreements⁴¹ has made the approach more systematic.

Issues and Challenges

Environment Canada faces several external and internal challenges as it strives to manage the risks posed by toxic substances and other substances of concern while also satisfying the time-bound obligations of CEPA 1999. Tension exists within the Department as to how much risk management is enough for any given substance. Tension also exists externally, as the shared jurisdiction for environmental protection under the Constitution creates an ongoing need to consult closely with the provinces and territories and to adopt pragmatic approaches to risk management that respect both existing authorities and local perspectives.

The Act itself also poses several additional challenges:

- The requirement that a regulation or instrument must be proposed within 24 months and finalized within a further 18 months, has created challenges in the development of optimal risk management approaches.
- It may not always be appropriate or even possible to establish either a Ministerial release limit or a level of quantification for every persistent, bioaccumulative and toxic substance. The requirement to develop these limits may result in delays before the Minister can add a substance to the Virtual Elimination List.
- The limited range of economic instruments authorized under the Act, the limitations associated with tradable units and fees and broader Government of Canada policies on economic instruments and fees and charges restrict the Department's ability to manage risks as efficiently as possible. This undermines the Department's ability to ensure that the market fully accounts for environmental costs and to satisfy the Act's explicit principle of "polluter pays."
- Resource and information limitations can limit the Department's ability to develop effective multipollutant risk management approaches.

Despite reviews of most major risk management measures and ongoing efforts to review and share lessons learned, not all risk management measures and tools developed to date included mechanisms to support assessment and reporting of effectiveness. This limits the Department's ability to assess progress or make subsequent instrument choices.

Other emerging issues for Environment Canada include the need to have better information and clearer legal authority to manage all relevant aspects of toxic substances that are in or are created and released by the use or disposal of manufactured articles. The Department will need to have the ability to keep current with and respond to emerging technologies, including nanotechnologies. In addition, the Department will need to keep pace with the expected outputs of the screening assessment process following completion of Domestic Substances List categorization.

Conclusions

The expected outcome that releases of toxic substances will be prevented or reduced is likely to be achieved, in part. At least one risk management measure has been implemented for each toxic substance. These measures, however, may not address all sources of the substance. Also, some measures may not result in aggregate reductions. For instance, total

emissions may increase in cases where the specified measure limits emissions per unit of activity, but where overall activity increases at rates greater than the prescribed reductions.

The expected outcome of “virtual elimination” of releases of known persistent, bioaccumulative and inherently toxic substances from human-caused sources is likely to be achieved.

The expected outcome that the use of existing substances in products and in industrial and commercial processes is better managed is likely to be achieved, in part. Through CEPA 1999, more substances, processes and products are being managed. The use of a wider range of measures and tools may imply more efficient management. Nevertheless, little documentation exists on the relative efficiency or effectiveness of ongoing management efforts. Moreover, while there is evidence that use, emission levels and exposures are declining for some toxics (e.g., benzene, dioxins and furans), trends for others are increasing, and data are insufficient for still others to make such determinations.

2.5.4 Risk Management (Air)

Expected Outcomes

The evaluation identified five expected outcomes for this component of Part 5:

1. *Reductions of releases of smog-forming emissions from major industrial sources.*
2. *Reduction of nitrogen oxide emissions.*
3. *Reductions of volatile organic compound emissions from various products.*
4. *Protect the ozone layer from ozone-depleting substances.*
5. *Reductions of acid deposition below critical levels.*

Overview of the Act and Its Provisions

CEPA 1999 does not contain air-specific provisions, with the exception of those included under Part 7, Divisions 4, 5 and 6. During the evaluation period, however, Environment Canada placed a high priority on addressing air quality issues. Given the assigned priority, the extent of resources assigned to the issue and the volume of outputs produced with respect to air quality, it was determined that a separate analysis of progress made in this area would be instructive.

Ministerial Obligations

There are no specific Ministerial obligations in this area. Related obligations are addressed under Section 2.5.2 – Risk Management (General).

Major Accomplishments

One of the most significant accomplishments with respect to risk management of air pollutants is the Government of Canada’s Ten-year Action Plan on Clean Air,⁴² published in 2001. This agenda articulates the government’s commitment to work with the provinces, territories and the private sector to develop strategies that will ensure cleaner air for all Canadians. The agenda includes an articulation of planned activities, expected outcomes and resource requirements under six specific elements:

1. Targets are continuously improved.
2. Transboundary flows of air pollution are reduced.
3. Emissions for vehicles, engines and fuels are reduced (see discussion under Part 7 – Divisions 4 and 5).
4. Emissions from industrial and other sectors are reduced.
5. Canadians take action to reduce air pollution.
6. Canadians understand how to interpret air quality information.

The Department received funding of \$120 million through fiscal year 2005–06 for implementation of the Clean Air Agenda. Resources granted by the Government of Canada for implementation of CEPA 1999 resulted in funding levels provided for under the Clean Air Agenda being regularized into the Department's annual allocations beginning in fiscal year 2006–07. In addition, the Department realized a further \$59.9 million over the period 2003–2007 for implementation of the Border Air Quality Strategy. The Department prepares annual progress reports documenting activities and outputs related to the implementation of the Clean Air Agenda.

Ground-level ozone and soot, also known as particulate matter, are key components of smog. As part of the efforts to promote cleaner air for Canadians, Environment Canada added Precursors to Respirable Particulate Matter Less than or Equal to 10 Microns (sulphur dioxide, nitrogen oxides, ammonia and volatile organic compounds) to the CEPA 1999 Schedule 1 List of Toxic Substances. Additionally, ozone and its precursors (nitrogen oxides [composed of nitric oxide and nitrogen dioxide] and volatile organic compounds) has been added to Schedule 1.

The decision to list these substances as toxic under Schedule 1 acted as the primary driver for the multitude of activities and outputs that have materialized under the Clean Air Agenda. The following provides an overview of what has been done to meet the six Intermediate Outcomes of the Clean Air Agenda, as well as what has been done with respect to other air-related aspects (i.e., ozone-depleting substances, hazardous air pollutants, and acid rain) not covered by the agenda.

1. Targets Are Continuously Improved

Environment Canada led the development of the new Canada-wide Standards for Particulate Matter and Ozone⁴³ and co-chaired the subsequent federal–provincial committee tasked with implementing provisions of the standards. The long-term air quality management goal for particulate matter and ozone is to minimize the risks of these pollutants to human health and the environment. However, recent scientific evidence indicates that there is “no apparent lower threshold” (i.e., safe exposure limit) for the effects of these two pollutants on human health. As such, the parties to the standards have agreed to revisit the standards as additional information is made available, beginning with a planned review of the fine particulate matter and ozone standard beginning in 2005 as well as a recommendation on whether or not to have a coarse fraction standard. Environment Canada also plays the lead role in information gathering and the provision of scientific and technical activities in support of the standards and any future reviews.

2. Transboundary Flows of Air Pollution Are Reduced

Environment Canada played a key role in both the negotiation of and the strategy to implement the Canada – United States Air Quality Agreement (including the Ozone Annex⁴⁴ and Acid Rain Annex and the Border Air Quality Strategy). The Canada – United States Air Quality Agreement now includes targets for sulphur dioxide regionally and nationally and for nitrogen oxides and volatile organic compounds within pollutant emission management areas. These targets have been adjusted to reflect new scientific understanding. Canada and the United States continue to measure and report publicly on progress in achieving the objectives of the agreement.

3. Emissions from Vehicles, Engines and Fuels Are Reduced

A Ten-year Federal Agenda on Cleaner Vehicles, Engines and Fuels⁴⁵ has been developed and implemented. See the discussion under Part 7 – Divisions 4 and 5 for additional details.

4. Emissions from Industrial and Other Sectors Are Reduced

Environment Canada has developed a range of instruments and tools to reduce harmful air emissions from industrial and other sectors (see **Box 4**).

Box 4 – Instruments and Tools to Reduce Harmful Air Emissions

Guidelines

New Source Emission Guidelines for Thermal Electricity Generation⁴⁶
 Guidelines for Combined Heat and Power Facilities – 2004 (draft in development)

Code of Practice

Code of Practice for the Reduction of Dichloromethane Emissions from the Use of Paint Strippers in Commercial Furniture Refinishing and Other Stripping Applications⁴⁷

Environmental Performance Agreements

Environmental Performance Agreement Respecting the Production and Distribution of 1,2-Dichloroethane, 2001⁴⁸

Environmental Performance Agreements: A Cooperative “Environmental Emissions Monitoring, Inspection and Product Stewardship Program,” 2001–2002⁴⁹

Regulations

Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations – expected to reduce emissions of tetrachloroethylene at dry cleaning facilities by 70% by 2005

Solvent Degreasing Regulations went into effect in 2003 – expected to result in a 65% reduction in consumption of trichloroethylene and tetrachloroethylene by 2007

Pollution Prevention Plans

Proposed notice requiring the preparation and implementation of pollution prevention plans in respect of specified toxic substances released from base metals smelters and refineries and zinc plants⁵⁰

Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Acrylonitrile⁵¹

Memorandum of Understanding

In 2001, the federal government, in conjunction with the provinces of Ontario and Alberta, entered into a Memorandum of Understanding with the Canadian Chemical Producers' Association for the reduction of releases of chemical substances from Canadian Chemical Producers' Association member companies.

Canada-wide Standards

Environment Canada has worked with the Canadian Council of Ministers of the Environment to develop a range of **Canada-wide Standards**, including:

- Canada-wide Standard for Incineration⁵²;
- Canada-wide Standard for Dioxins and Furans from Conical Waste Combustion of Municipal Waste; and
- Canada-wide Standards for Particulate Matter and Ozone.

In addition:

- In 2000, the Canadian Council of Ministers of the Environment endorsed the first of a number of Canada-wide Standards for mercury for the base metal smelting industry and the waste incineration sector.
- In 2001, the Canadian Council of Ministers of the Environment endorsed Canada-wide Standards for dioxins and furans from waste incineration and pulp and paper boilers.
- In 2003, Canada-wide Standards for dioxins and furans from steel manufacturing electric arc furnaces and iron sintering plants were endorsed.
- A regulatory action plan for the reduction of emissions of volatile organic compounds from consumer products and from the use of paints, solvents and other products in industrial and commercial processes is also being developed under the Canada-wide Standards.

Analysis

Multipollutant Emissions Reduction Analysis Foundation reports have been completed for electricity, iron and steel, base metals smelting, pulp and paper, lumber and allied wood products and hot mix asphalt plants and concrete batch plants. These reports will form the basis for development of implementation plans to achieve Canada-wide Standards for particulate matter and ozone.

*5. Canadians Take Action to Reduce Air Pollution and**6. Canadians Understand How to Interpret Air Quality Information and Are Aware of Actions They Can Take*

Environment Canada has worked to help Canadians reduce air pollution and protect their health by supporting community-level programs geared at reducing emissions and giving them better access to information related to air quality in their community. These community-level programs include Clean Air Day activities and the Commuter Challenge.

Agreements with provinces, territories, municipalities and health organizations led to the decision to expand the air quality forecasting program, both geographically and scientifically. The Air Quality Forecasting and Advisory Program is now in place nationally, and the National Air Pollution Surveillance Network⁵³ and the Canadian Air and Precipitation Monitoring Network⁵⁴ have been expanded through further investment in monitoring equipment and technology.

The National Pollutant Release Inventory Communities Portal⁵⁵ provides information about community-level air pollutants and is searchable by location or postal code. Other air quality programs provide daily forecasts and advisories in various Canadian regions.

7. Ozone-depleting Substances

Since 2000, Canada has:

- established a Canadian Council of Ministers of the Environment National Action Plan for the Environmental Control of Ozone-depleting Substances and Halocarbon Alternatives;
- regulated the phase-out of chlorofluorocarbons (CFCs) in metered dose inhalers;
- phased out methyl bromide consumption by 50% in 2001, by 70% in 2003 and by 100% in 2005;
- reduced its consumption of hydrochlorofluorocarbons (HCFCs) by 35%; and
- published proposed *Regulations Amending the Ozone-depleting Substances Regulations, 1998* in the *Canada Gazette*, Part I, on April 3, 2004. A revised draft, for information purposes, was published in November 2004.

8. Hazardous Air Pollutants

Hazardous air pollutant initiatives over the evaluation period involved extensive consultations and achieved the following:

- Canada signed and ratified the Stockholm Convention on Persistent Organic Pollutants.
- Canada ratified the United Nations Economic Commission for Europe Protocols on Persistent Organic Pollutants and Heavy Metals.
- Canada established the five-year, \$20 million Canada Persistent Organic Pollutants Fund to assist capacity building in developing countries.

9. Acid Rain

The federal government continues to implement its commitments under the 1998 Canada-wide Acid Rain Strategy for Post-2000. Under the strategy, the federal government continues to seek further emission reductions from the United States, maintain an adequate science and monitoring program and work with Ontario, Quebec, New Brunswick and Nova Scotia as they develop measures to further reduce sulphur dioxide emissions. Canada's total sulphur dioxide emissions have decreased by about 50% since 1980 and remain 25% below the national total agreed to under the Canada – United States Air Quality Agreement.

Issues and Challenges

A variety of challenges confront the clean air efforts of Environment Canada. For example, much of the anticipated improvement in air quality is dependent on the provinces meeting the commitments outlined in the Canada-wide Standards for Particulate Matter and Ozone. At this point, however, it is still unclear whether all provinces will meet performance expectations related to the standards.

Similarly, Environment Canada is currently assessing Ontario's proposed implementation plan under the Ozone Annex emission cap for nitrogen oxides from large fossil fuel-fired power plants in southern and central Ontario. The Ministers of the Environment and Health have determined that Ontario's strategy is insufficient for achieving the nitrogen oxides cap under the Canada – United States Air Quality Agreement.

Awareness and outreach activities included in the Clean Air Agenda have not been sufficiently funded and have relied on reallocation of existing funds to produce results.

With respect to sectoral programs, environmental outcomes have not been fully developed or articulated, although efforts are under way to do so with respect to the forest products sector. As well, many of the risk management measures and tools lack measurement and reporting structures to determine and communicate their impacts and effectiveness.

Finally, the Act does not include provisions for the Minister to regulate finished products that generate air toxics during their operation, such as wood stoves.

Conclusions

The Intermediate Outcomes under the Clean Air Results-based Management and Accountability Framework are all likely to be achieved. The realization of these outcomes will make an important contribution towards the realization of the ultimate expected outcomes described above and as articulated under the Clean Environment Business Line Plan's Air Result:

- *Targets are continuously improved* – This expected outcome is likely to be realized. For instance, targets under the Canada – United States Air Quality Agreement (including the Ozone Annex and Acid Rain Annex) have been adjusted over time. Targets under the Canada-wide Acid Rain Strategy for Post-2000 have also been adjusted to reflect new science. There is less certainty regarding performance targets included in sector-based initiatives (e.g., those included under environmental performance agreements, codes of practice); while some initiatives include targets, it is uncertain how progress towards these targets is monitored or if there is a formal process for ensuring that targets remain relevant and up to date.
- *Transboundary flows of air pollution are reduced* – This expected outcome is likely to be realized. Performance targets have been established under the Canada – United States Air Quality Agreement (including the Ozone Annex and Acid Rain Annex).

- Canada has surpassed initial sulphur dioxide and nitrogen oxides emission targets and will continue to work towards elements of the Canada-wide Acid Rain Strategy for Post-2000, the Canada-wide Standards for Particulate Matter and Ozone and caps on stationary sources of nitrogen oxides outlined in the Ozone Annex.
- *Emissions for vehicles, engines and fuels are reduced* – See Part 7, Divisions 4 and 5.
 - *Emissions from industrial and other sectors are reduced* – This expected outcome is likely to be realized. Sector-specific instruments that have been designed and implemented include regulations, memoranda of understanding, codes of practice and guidelines. Multipollutant emission reduction strategies have been developed for six sectors: electricity; pulp and paper; lumber and allied wood products; iron and steel; base metals smelting; and hot mix asphalt plants and concrete batch plants.
 - *Canadians take action to reduce air pollution and understand how to interpret air quality information* – These expected outcomes are likely to be realized. Information is available to the public through several monitoring networks. Additional information on Canada – United States air quality can be found on the United States Environmental Protection Agency's AIRNow⁵⁶ web site (with contributions from Environment Canada).

2.6 Part 6: Animate Products of Biotechnology

Expected Outcomes

The evaluation identified two expected outcomes for Part 6:

1. *Releases of toxic or harmful animate products of biotechnology are prevented or reduced.*
2. *Unauthorized use of new animate products of biotechnology is prevented.*

Overview of the Act and Its Provisions

The Act establishes an assessment process for living organisms that are new animate products of biotechnology. This process mirrors the provisions in Part 5 respecting new substances that are chemicals or polymers.

For the purposes of this evaluation, this section of the report also considers departmental efforts with respect to the 35 biotechnology substances listed on the Domestic Substances List.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied.

Major Accomplishments

Over the period 1997–2004, 140 notifications concerning new animate products of biotechnology were received by Environment Canada. The Department authorized manufacturing or importing with respect to 43 (30%) of these notifications. It did not provide authorization for the remaining 97 notifications, because the information provided was insufficient to make a determination.

For one biotechnology substance considered a “suspected toxic,” Environment Canada worked with industry, resulting in the voluntary withdrawal of the notification. This prevented the manufacture and use of the substance.

Since 2000, the Governor in Council has listed five acts and regulations under CEPA 1999 Schedule 4, indicating that those acts provide an equivalent notification and assessment process. These five acts and regulations are:

- *Pest Control Products Act – Pest Control Products Regulations;*
- *Seeds Act – Seeds Regulations;*
- *Fertilizers Act – Fertilizers Regulations;*
- *Feeds Act – Feeds Regulations, 1983; and*
- *Health of Animals Act – Health of Animals Regulations.*

The departments administering those acts are responsible for assessing new products of biotechnology relevant to those acts.

The Department also has concluded a memorandum of understanding with the Department of Fisheries and Oceans on the “assessment of aquatic organisms with novel traits” and another with Health Canada for animate products of biotechnology regulated under the *Food and Drugs Act*. Under the memoranda of understanding, these other departments have agreed to lead the assessment of certain animate products of biotechnology, even though the *Fisheries Act* and the *Food and Drugs Act* have not yet been added to Schedule 4.

Issues and Challenges

Other departments have been slow to develop environmental regulations with respect to aquatic organisms, certain pharmaceuticals, food products and transgenic animals. As a result, Environment Canada has had to assume responsibility for assessing substances of biotechnology in those areas, even though it lacks both appropriate expertise and funding. The Department is responsible for assessing any novel substances of biotechnology that do not fit neatly into areas of responsibility of any other department.

In spite of efforts to promote compliance across Canada, a lack of awareness among the regulated community of notification requirements has created difficulties for the Department in implementing its New Substances Program for animate products of biotechnology. For example, a significant percentage (70%) of submissions that the Department receives are rejected as incomplete. A consultation plan for the forthcoming *New Substances Notification Regulations (Organisms)* has been proposed, including an outreach and awareness component relating to animate products of biotechnology.

The Domestic Substances List includes 35 existing biotechnology substances. Protocols to facilitate the screening assessments of these substances are under development.

Research on ecosystem effects of “novel living organisms” remains unfunded. This was a need identified by the Royal Society of Canada and the Canadian Biotechnology Advisory Committee.

The need to increase transparency with respect to assessment protocols and other aspects of the biotechnology notification process, as identified in the 2001-02 Operational Review, remains outstanding.

Conclusions

The expected outcome of preventing and reducing releases of toxic or harmful products of biotechnology is being met in part, where notifications have been submitted.

It is not possible to determine whether the expected outcome of preventing unauthorized use of new animate products of biotechnology is being or will be achieved. Measurement

and reporting systems capable of documenting progress towards this expected outcome are not currently in place.

2.7 Part 7: Controlling Pollution and Managing Wastes

CEPA 1999 Part 7 contains eight separate divisions. Each of these divisions is analysed in a distinct subsection below.

2.7.1 Division 1 – Nutrients

Expected Outcomes

The evaluation identified one expected outcome for this division of Part 7:

1. *Growth of vegetation caused by the release of nutrients is prevented/reduced.*

Overview of the Act and Its Provisions

Nutrients are defined as substances that, if released to waters, provide nourishment that promotes the growth of aquatic vegetation. CEPA 1999 provides the authority to regulate nutrients in cleaning products and water conditioners that degrade or have a negative impact on an aquatic ecosystem.

Ministerial Obligations

Division 1 of Part 7 of CEPA 1999 does not impose any mandatory obligations on the Minister of the Environment.

Major Accomplishments

The expected outcome of prevention or reduction of growth of vegetation caused by nutrients is being addressed by the *Phosphorus Concentration Regulations*⁵⁷ originating under CEPA 1988 and later amended for CEPA 1999. These regulations limit the concentration of phosphorus in laundry detergents to 5% by weight expressed as phosphorus pentoxide or 2.2% by weight expressed as elemental phosphorus. No new measures or activities have been initiated under CEPA 1999.

Issues and Challenges

The need for additional responses to address sources of vegetation growth has been identified within two Government of Canada reports, to which Environment Canada contributed:

- *Nutrients and their Impact on the Canadian Environment*⁵⁸ together with its companion report, *Nutrients in the Canadian Environment – Reporting on the State of Canada's Environment*,⁵⁹ were published in July 2001. The reports indicate that environmental problems caused by excessive nutrients are less severe in Canada than in many countries. This is in part due to protective measures implemented by governments in the last 30 years. Nonetheless, while successes have been realized, environmental and human health problems related to nutrients are evident across Canada.
- *Draft Recommendations for a Federal Nutrient Agenda – Towards a National Nutrient Agenda* were prepared in 2002. The draft agenda is built on a strategic framework that addresses the breadth of the nutrient issue in Canada and outlines strategic priorities for action. It also outlines future key steps that could be taken by the federal government to move the nutrient agenda forward.

Conclusions

The expected outcome of preventing/reducing the growth of vegetation caused by the release of nutrients associated with detergents is being achieved. CEPA 1999 is not currently considered an effective means for addressing new and additional nutrient sources or responding to the draft *Recommendations for a Federal Nutrient Agenda*.

2.7.2 Division 2 – Protection of the Marine Environment

Expected Outcomes

The evaluation identified one expected outcome for this Division of Part 7:

1. *Protection of marine environment from land-based sources of pollution.*

Overview of the Act and Its Provisions

The Act provides authorities to issue non-regulatory objectives, guidelines and codes of practice to help implement Canada's National Programme of Action for the Protection of the Marine Environment from Land-based Activities. These provisions are intended to supplement the authorities that exist in other federal, provincial, territorial and Aboriginal government laws. This Division's purpose is also to assist Canada to meet its obligations under the United Nations' Convention on the Law of the Sea.

Ministerial Obligations

The single Ministerial obligation, under Section 121(2), is conditional and has not been triggered.

Major Accomplishments

Canada released its National Programme of Action for the Protection of the Marine Environment from Land-based Activities⁶⁰ in 2000. The National Programme of Action is a collective federal, provincial and territorial effort, for which Environment Canada is the secretariat. The program identifies both regional and national problems relating to the protection of the marine environment and outlines corresponding priorities, objectives, actions and strategies. Progress reports on activities under the program were prepared in 2001⁶¹ and 2004.

Through the Shellfish Water Quality Protection Program, Environment Canada is responsible for monitoring bacterial water quality in shellfish growing areas. Environment Canada conducts water surveys to determine the classification of coastal waters as to their suitability for the harvesting of molluscan shellfish. The surveys are based on the sanitary and bacteriological water quality conditions in the area. The Shellfish Water Quality Protection Program also promotes pollution prevention, remediation and restoration of shellfish growing areas. Eliminating or controlling pollution sources advances the health of both the shellfish industry and the marine environment and enables health officials to open more sections of the shoreline to shellfish harvesting.

As a partner in the Canadian Shellfish Sanitation Program, Environment Canada has recommended the classification of new shellfish areas (16 areas were classified in 2002 and 21 new areas in 2003). Now, more than 14 000 square kilometres of shellfish growing areas are classified as approved for the direct harvesting of shellfish. Additionally, several administrative improvements were made to the Canadian Shellfish Sanitation Program, including a memorandum of understanding signed in 2000 between the Canadian Food Inspection Agency, the Department of Fisheries and Oceans and Environment Canada. In 2003, the Canadian Shellfish Sanitation Program SP was audited by the European Union. The United States Food and Drug Administration audited the program again, in 2004. While

these audits identified some issues, none was significant to limit export as related to shellfish sanitation.

Implementation of Priority Actions

Work has been initiated on three of the four identified priority actions:

1. *Enhance coordination and consistency of marine environmental protection activities for land-based sources of marine pollution with other government departments and provinces* – Both the National Programme of Action and the Shellfish Water Quality Protection Program are examples of effective coordination with other government departments and provinces.
2. *Improve linkages and coordination with other ocean bodies, university groups and regional groups* – On several fronts, the National Programme of Action has improved linkages and coordination through activities such as creating an information clearinghouse, launching the National Programme for Action Youth web site and participating in regional activities (e.g., the St. Lawrence Action Plan – a collaborative undertaking of the Government of Canada, the Province of Quebec and other partners, such as non-governmental organizations, universities, the private sector and local and community organizations). Canada also participates in the Arctic Council's Working Group on Protection of the Arctic Marine Environment to promote the implementation of the Regional Programme of Action for the Protection of the Arctic Marine Environment.
3. *Leverage existing monitoring and shellfish water quality data to support program goals and objectives* – Data from shellfish water quality monitoring are used in a variety of ways. For example, the National Programme of Action uses the data to demonstrate problem areas. Data are used as part of the Canadian Shellfish Sanitation Program by its partners, the Canadian Food Inspection Agency and the Department of Fisheries and Oceans. Data also are linked back to municipal wastewater effluent to help determine water treatment needs by municipality and therefore pollution prevention planning requirements.
4. *Building of capacities and ensuring that objectives and targets for pollution prevention and management of marine-based sources of pollution are considered by other departments* – no evidence was found on this action.

Issues and Challenges

There are growing pressures on Environment Canada to provide advice and other services in new and expanding areas of protection of the marine environment, such as aquaculture, elements of Canada's Ocean Strategy and integrated management of freshwater and coastal marine environments.

Many of the marine environment protection programs have been operating for several years. However, strategic planning, including the development of implementation plans, timelines, priorities and resources, is not widely evident in the Marine Environment Branch.

Conclusions

The expected outcome of "protection of the marine environment from land-based sources of pollution" is likely to be partially met through continued implementation of the National Programme of Action and the Shellfish Water Quality Protection Program.

Protection of the marine environment is likely to be more successful with the development and approval of a comprehensive strategic plan. Emerging issues, such as aquaculture, elements of Canada's Ocean Strategy and integrated management of freshwater and coastal marine environments place increasing resource pressures on the Department.

2.7.3 Division 3 – Disposal at Sea

Expected Outcomes

The evaluation identified one expected outcome for this Division of Part 7:

1. *Enhanced management of materials disposed of at sea.*

Overview of the Act and Its Provisions^{xxii}

CEPA 1999 Part 7 Division 3 prohibits the disposal of waste at sea within Canadian jurisdiction, and by Canadian ships in international waters, unless the disposal is done under a permit issued by the Minister. A permit for disposal at sea will be approved only if it is the environmentally preferable and practical option. Incineration, beyond that of normal ship operations at sea, is banned except under emergency situations. The requirement for a CEPA 1999 permit also triggers an assessment under the *Canadian Environmental Assessment Act*.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 128 – Environment Canada has consulted with the International Maritime Organization in the few instances involving disposal in international water. In each case, the departmental obligations to communicate and collaborate with the International Maritime Organization were met.
- Section 132 – Selected sites used for disposal/incineration at sea are monitored annually and recorded in the Annual Compendium of Monitoring Activities.⁶² This report is prepared each year as part of Canada's obligations under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Convention) and to the regulated community paying the monitoring fee.
- The other obligations pertain to administrative permitting requirements and are incorporated into the *Disposal at Sea Regulations*.⁶³ CEPA 1999 takes a precautionary approach to ocean disposal. It now includes a short list of substances that may be disposed of at sea. By contrast, CEPA 1988 and its regulations stipulated what could not be disposed of at sea. A second change is that CEPA 1999 now requires the creation of a National Action List that determines when wastes cannot be disposed of at sea in order to limit harm to the environment and human health.

Major Accomplishments

CEPA 1999 introduced changes that reflect new international approaches to controlling disposal at sea. To ensure consistencies with CEPA 1999, Environment Canada replaced the *Ocean Dumping Regulations (1988)* with the following two regulations, which were published in August 2001: (i) *Disposal at Sea Regulations* and (ii) *Regulations Respecting Applications for Permits for Disposal at Sea*.⁶⁴

Canada continues to be an active participant at the international level in the area of disposal at sea. Canada ratified the 1996 protocol to the London Convention⁶⁵ in May 2000. When it comes into force, the Convention will further strengthen international requirements regarding ocean disposal practices.

^{xxii} Source: Factsheet – The New CEPA and Disposal at Sea (http://www.ec.gc.ca/CEPARegistry/gene_info/fs_7.cfm).

Amendments to the *Migratory Birds Convention Act, 1994* and CEPA 1999 were proposed in 2004. When finalized, these amendments will protect seabirds from oily bilge released by passing ships and provide for increased fines and powers to detain ships suspected of polluting Canadian waters.

Implementation of Priority Actions

Work has been initiated on both of the identified priority actions:

1. *Increase capacity to respond to anticipated requests for ocean disposal permits from offshore oil and gas sector* – Capacity needs for responding to future requests for ocean disposal permits from the offshore oil and gas sector, particularly in the North, have been incorporated into the program's future planning.
2. *Increase transparency of ocean disposal permitting system – Regulations Respecting Applications for Permits for Disposal at Sea* contribute to ensuring transparency by clearly specifying information requirements for the application form for disposal at sea. The information is used to decide on the appropriateness of issuing a permit for sea disposal of a particular waste or other matter. The permitting requirements are detailed in the regulations, and the permits are communicated through *Canada Gazette* notices and the CEPA Environmental Registry.

Issues and Challenges

The most significant challenge identified for the disposal at sea program pertains to its dependency on cost recovery revenue. Wide fluctuations in annual resources in the past have created problems with carry forward. This same problem is anticipated to occur again when there is a large volume of dredging in the North that will require extensive permitting and monitoring.

Conclusions

The creation and implementation of the new regulations contribute to the expected outcome of “enhanced management of materials disposed of at sea.” More clearly articulated expected outcomes for this program area are needed. As is, it is not possible to determine if the expected outcome will be achieved.

2.7.4 Division 4 (Fuels) and Division 5 (Vehicle, Engine and Equipment Emissions)

Expected Outcomes

The evaluation identified one expected outcome for these two Divisions of Part 7:

1. *Reduction of smog-forming emissions from fuels, vehicles, engines and equipment.*

Overview of the Act and Its Provisions^{xxiii}

CEPA 1999 provides for a performance-based approach to fuel standards and allows for a range of fuel characteristics to be regulated to address emissions. Regulations may distinguish between different sources of fuels or the place or time of use of the fuel. There are also provisions for regulations to establish a “national fuels mark” that may be used only if a fuel conforms to specific requirements provided for by regulations.

Provisions in CEPA 1999 include the authority to set emission standards for on-road vehicles and engines. CEPA 1999 also includes authorities to set emission standards for vehicles and engines used in a variety of off-road applications, such as lawnmowers, construction and agricultural equipment, hand-held equipment and recreational vehicles.

^{xxiii} Source: Factsheet – The New CEPA and Fuels and Engine Emissions (http://www.ec.gc.ca/CEPARegistry/gene_info/fs_3.cfm).

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 140(4) – The Minister has formally offered to consult with provinces and territories, through the CEPA National Advisory Committee, on all regulations respecting fuels.
- Section 157(6) – The Transportation Systems Branch maintains a roster of current provincial and territorial contacts and forwards to them particulars of any notice of defect submitted by vehicle, engine and equipment manufacturers, importers and sellers.

Major Accomplishments

In February 2001, the Minister published the Notice of Intent on Cleaner Vehicles, Engines and Fuels,⁶⁶ which laid out a 10-year federal agenda. This agenda recognized that substantial and certain reductions in the sulphur levels of gasoline and diesel fuels were necessary to achieve the potential emissions reductions from new vehicle emission control technologies. The agenda identified key areas of activity for Environment Canada over the 10-year period. Since then, the Department has delivered the following key outputs:

- Six new regulations have been made, and one additional regulation has been proposed (see **Box 5**). Enforcement of the new fuels regulations has been among the Department's highest priorities within its annual enforcement strategy over the past five years.
- In 2001, Environment Canada issued an information-gathering notice, under Section 71(1)(b) of CEPA 1999, on the use and releases of methyl *tertiary*-butyl ether (MTBE) in Canada. A report on the use and releases of MTBE in Canada⁶⁷ was produced, indicating that, as of 2001, only one company was producing MTBE, and that company expected to cease production of MTBE in 2002. The report also indicated that by 2000, only 2% of gasoline in the Canadian pool contained MTBE, and that by 2002, MTBE use in gasoline was projected to be 95% lower than in 1998. On the basis of this report, Environment Canada announced that it intended to monitor progress by means of reporting under the *Benzene in Gasoline Regulations* and Statistics Canada's database of imports.
- The Department has initiated work to develop new regulations for reducing sulphur in heavy and light fuel oils. It has completed background studies⁶⁸ and produced a discussion paper entitled "Setting Canadian Standards for Sulphur in Heavy and Light Fuel Oils."⁶⁹
- Demonstrable and documented progress has been made in the reduction in use of benzene in gasoline (see **Figure 2**). Primary fuel producers and suppliers have submitted reports to the Minister, in accordance with regulatory requirements. These reports indicate that all gasoline supplied in Canada in 2003 met the regulated requirements with respect to benzene concentration, with one exception. This regulation has contributed to the documented reductions of benzene concentrations in urban and rural areas by 47% and 32%, respectively, since 1998 (see **Figure 3**).
- The average sulphur content in gasoline nationally in 2003⁷⁰ was determined to be 136 mg/kg, representing a decline of 54.6% with respect to 2002 levels (see **Figure 4**).

Box 5 – Regulatory Activity under Divisions 4 and 5

The *Benzene in Gasoline Regulations*,⁷¹ which took effect in July 1999, prohibit the supply and sale of gasoline containing more than 1% and 1.5% benzene by volume, respectively, and have been fully implemented.

The *Sulphur in Gasoline Regulations*,⁷² which took effect in July 2002, require that gasoline have an average sulphur concentration of 150 mg/kg as of July 2002, and 30 mg/kg as of January 2005.

Sulphur in Diesel Fuel Regulations,⁷³ which took effect in July 2002, set a maximum limit of 15 mg/kg of sulphur in on-road diesel fuel (starting June 1, 2006) that is produced or imported for use or sale in Canada and for on-road diesel fuel that is sold or offered for sale. The limit is 500 mg/kg until 2006.

In January 2003, new *On-Road Vehicle and Engine Emission Regulations*⁷⁴ were introduced to align Canadian emission standards with those of the United States Environmental Protection Agency. The new standards are being phased in, as of January 1, 2004, and will reduce the allowable emissions levels from new on-road vehicles by up to 95%.

In November 2003, new *Off-Road Small Spark-Ignition Engine Emission Regulations*⁷⁵ were made. The regulations apply to year 2005 and later model-year gasoline-fuelled engines found in lawn and garden machines (e.g., hedge trimmers, brush cutters, lawnmowers, garden tractors, snowblowers), in light-duty industrial machines (e.g., generator sets, welders, pressure washers) and in light-duty logging machines (e.g., chainsaws, log splitters, shredders).

In February 2005, *Off-Road Compression-Ignition Engine Emission Regulations*⁷⁶ were made. These regulations establish exhaust emission standards for compression ignition engines (i.e., diesel engines) used for off-road mobile applications. The regulations apply to diesel engines that are found in construction, mining, farming and forestry machines, such as tractors, excavators and log skidders, and would take effect for new equipment manufactured beginning with the 2006 model year.

The Department proposed amending regulations to reduce sulphur in off-road, rail and marine diesel fuel⁷⁷ in the *Canada Gazette*, Part I, on October 2, 2004. The proposed regulations will introduce the same 500 mg/kg requirement for off-road, rail and marine diesel fuels starting in 2007, reducing to 15 mg/kg in 2010 for off-road diesel fuel and in 2012 for rail and marine diesel fuel.

Figure 2 – Average Benzene Content of Canadian Gasoline, 1994–2003^{xxiv}

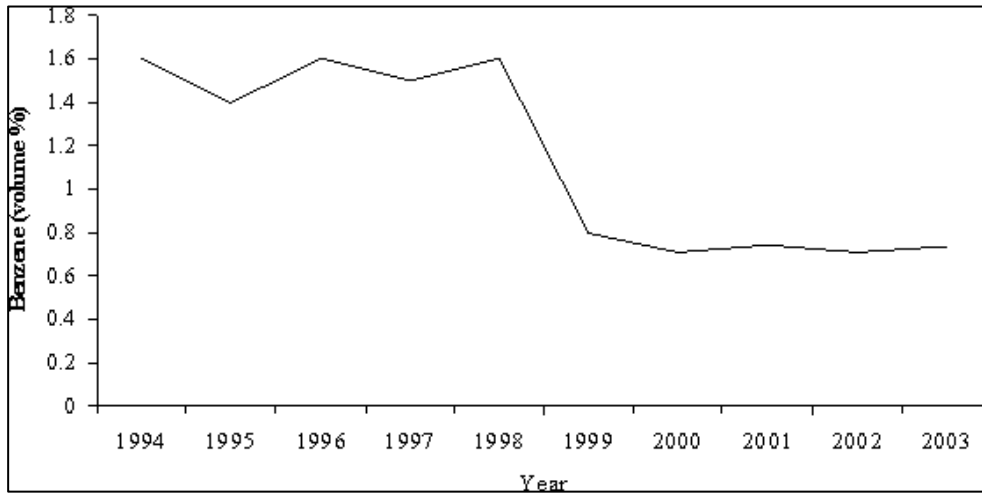
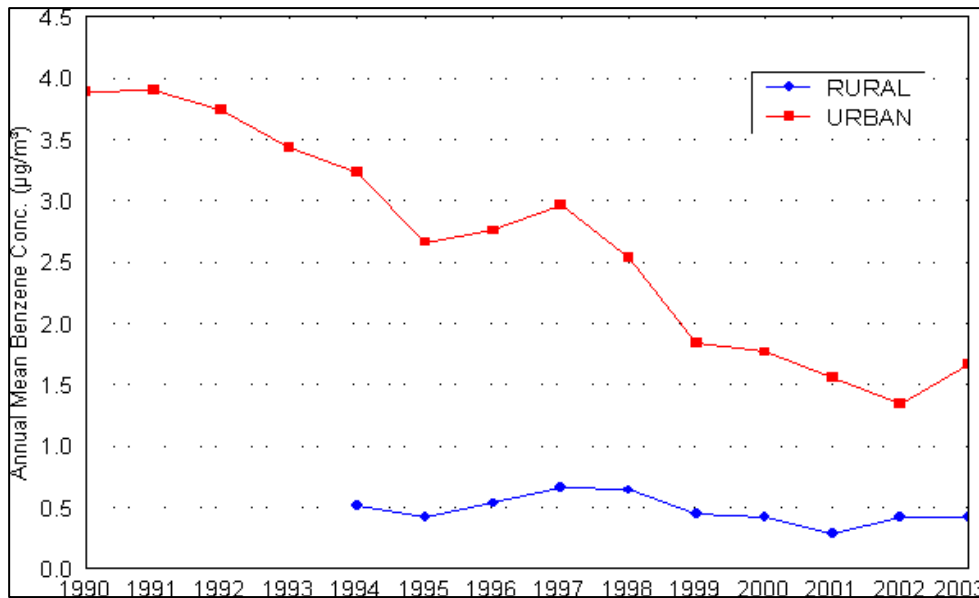


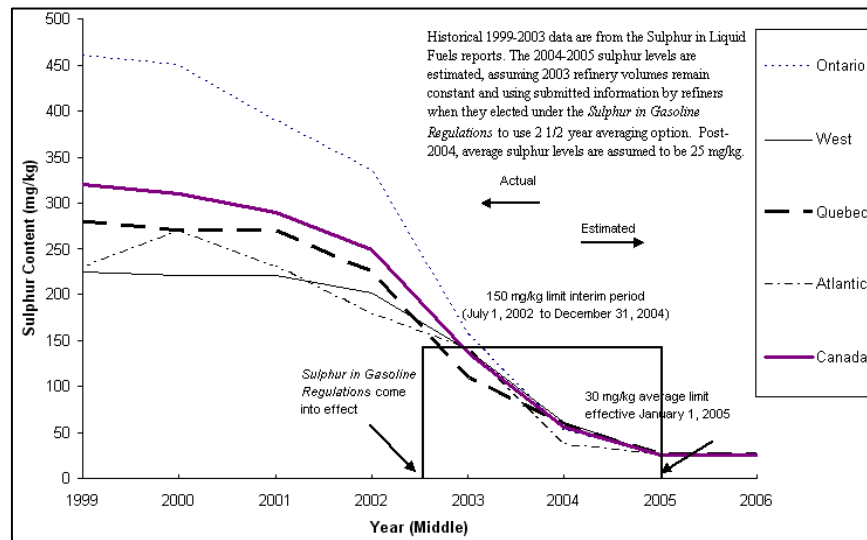
Figure 3 – Average Benzene Concentration in Ambient Air in Canada, 1990–2003^{xxv}



^{xxiv} Source: Sulphur in Liquid Fuels 2003

(http://www.ec.gc.ca/energ/fuels/reports/SulphurLiquid2003/toc_e.cfm).

^{xxv} Source: Benzene in Canadian Gasoline: Report on the Effect of the Benzene in Gasoline Regulations 2003 (http://www.ec.gc.ca/energ/fuels/reports/Benz_2003/BenzeneReport2003_e.cfm).

Figure 4 – National Trends in Sulphur Concentrations in Gasoline, 1999–2006^{xxvi}

Issues and Challenges

Environment Canada faces key challenges in ensuring that sulphur levels in fuel oils are reduced as intended.

In contrast to the decline in the level of sulphur in gasoline, the reported mass of sulphur content in all liquid fuels nationally increased by 7.7% in 2003 from 2002 values. The increases are mainly due to a 12.4% increase in the volume of heavy fuel oil produced and imported into Canada. Full implementation of the 10-year agenda on fuels and vehicles requires significant reductions in sulphur contained in fuel oils, as these oils currently contain 69% of the total mass of sulphur found in Canadian fuels.

A further challenge involves the lack of comparable national fuel oil standards in the United States (although the intended control levels would be equivalent to state-level provisions in the northeastern states). A major issue, however, is the apparent lack of full provincial support for federal action in this area. A number of provinces have indicated that they have programs in place under the Acid Rain Program to address emissions from facilities that use fuel oils. Industry stakeholders consider that provincial regulation would be more cost-effective and that a federal regulation would be redundant.

Conclusions

The expected outcome of achieving planned reduction of smog-forming emissions from fuels and on- and off-road vehicles is being achieved as a result of new fuel and vehicle regulations and related activities. Moreover, it is highly likely that the objectives of the 10-year agenda on fuels and vehicles will be achieved within the specified time frame.

^{xxvi} Source: Sulphur in Liquid Fuels 2003 (http://www.ec.gc.ca/energ/fuels/reports/SulphurLiquid2003/toc_e.cfm).

2.7.6 Division 6 – International Air Pollution; and Division 7 – International Water Pollution

Overview of the Act and Its Provisions

CEPA 1999 provides the Minister of the Environment with authorities to regulate or require pollution prevention plans for Canadian sources of international air and water pollution where another Canadian government is unwilling or unable to deal with the pollution source.

Major Accomplishments

The Minister has not initiated action under the enabling powers provided in Division 6 or Division 7.

Canada made the commitment, however, under the Ozone Annex to the 1991 Canada – United States Air Quality Agreement to cap emissions of nitrogen oxides from large fossil fuel-fired power plants in southern and central Ontario to 39 kilotonnes per annum. In May 2002, the Ministers of Environment and Health made a determination (with respect to the authorities provided to them under CEPA 1999 Section 166(1)(b)) that Ontario's proposed regulatory strategy could lead to Canada exceeding the 39 kilotonne per annum cap and therefore violating the international agreement. The Minister of the Environment consulted with the Province of Ontario on this matter in December 2003, in accordance with CEPA 1999 Section 166(2)(a) and (b). Environment Canada is currently assessing Ontario's revised implementation plan.

2.7.8 Division 8 – Control of Movement of Hazardous Waste

Expected Outcomes

The evaluation identified two expected outcomes for this Division of Part 7:

1. *Increased harmonization of approach across Canadian jurisdictions.*
2. *A commitment to raise Canadian standards to those in the United States.*

Overview of the Act and Its Provisions^{xxvii}

This Division provides the authority for regulations governing the export and import of hazardous waste, including hazardous recyclable materials. It also includes authorities to:

- introduce regulations on the export and import of prescribed non-hazardous waste for final disposal;
- require exporters of hazardous wastes destined for final disposal to submit export reduction plans; and
- develop and implement criteria to assess the environmentally sound management of transboundary movements prior to issuing permits for export and import.

Division 8 requires the Minister of the Environment to publish notification information for exports, imports and transits of hazardous waste and hazardous recyclable material.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations are being satisfied:

- Section 185(3) – This obligation has not been invoked, as the Minister has not refused to issue a permit under Section 185(2).

^{xxvii} Source: The New CEPA and Hazardous Waste
(http://www.ec.gc.ca/CEPARRegistry/gene_info/fs_13_e.pdf).

- The other obligations pertain largely to notifications and permits. The obligations are being met through the publication of Resilog,⁷⁸ the newsletter of Environment Canada's Transboundary Movement Branch.

Major Accomplishments

The Transboundary Movement Branch has undergone a significant transformation. It has been reorganized and has developed and implemented various new planning and operational procedures and tracking tools.

Amendments were made to the *PCB Waste Export Regulations, 1996*⁷⁹ and the *Interprovincial Movement of Hazardous Waste Regulations*⁸⁰ to ensure compatibility with CEPA 1999.

The Department continues to implement the *PCB Waste Export Regulations, 1996*, the *Interprovincial Movement of Hazardous Waste Regulations* and the *Export and Import of Hazardous Waste Regulations*.⁸¹

Proposed new *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*⁸² were published in the *Canada Gazette, Part I*, on March 20, 2004. The proposed regulations will significantly revise the existing *Export and Import of Hazardous Waste Regulations* obligations. These revisions are intended to adapt to evolving international obligations, to incorporate the new authorities under CEPA 1999 and to modernize the control regime established over a decade ago. In accordance with the "smart regulations" approach, the proposed regulations will also replace the existing *PCB Waste Export Regulations, 1996*.

Implementation of Priority Actions

Work has been initiated on four of the six identified priority actions:

1. *Develop a performance measurement framework for the hazardous waste program* – The 2004 Strategic and Operational Plan for the Transboundary Movement Branch identifies overall performance indicators for most, but not all, of the branch's objectives.
2. *Develop and harmonize standards for the management of hazardous waste nationally, regionally and globally, and promote national harmonization of criteria for environmentally sound management of hazardous waste* – Environment Canada has undertaken initiatives to help define and promote environmentally sound management of hazardous waste, including with the provinces, through the Canadian Council of Ministers of the Environment, regionally, through the Commission for Environmental Cooperation, and internationally, through the Organisation for Economic Co-operation and Development.
3. *Harmonize selected standards with those in the United States* – The proposed *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* will, when finalized, result in some aspects being better aligned with the approach used in the United States. Full alignment is not proposed, however, as Environment Canada considers the American approach less satisfactory in certain areas, including hazardous recyclables, in particular.
4. *Create an e-tracking system for hazardous waste in partnership with the United States Environmental Protection Agency* – Work on an e-tracking system has been initiated.

5. *Explore opportunities to implement cost recovery within the hazardous waste program* – The Transboundary Movement Branch explored cost-recovery options in the late 1990s, but has not done further work on the issue.
6. *Increase the number of memoranda of understanding with the provinces regarding the control of interprovincial movements of hazardous waste* – The Transboundary Movement Branch has not signed any new memoranda of understanding with the provinces.

Issues and Challenges

The main challenge with respect to controlling hazardous waste is that responsibility for hazardous waste in Canada is divided between the federal and provincial governments. Provinces directly regulate internal movement, treatment and management of hazardous waste at disposal, treatment and recycling facilities. Environment Canada's direct control extends to only the 10% of hazardous waste in Canada for which transboundary movement is involved.

Additionally, there is growing pressure from industry and other government departments to fully harmonize with the United States' standards, both in areas under provincial jurisdiction (e.g., in the pretreatment requirements) and in certain areas where the United States' standards are not as stringent as international or Canadian standards (as in the case of recyclables).

Conclusions

The expected outcome to increase harmonization of approach across Canadian jurisdictions is likely to be met in part. Environment Canada has determined that the expected outcomes of increased harmonization across Canadian jurisdictions and enhanced support for environmentally sound management of hazardous waste can be promoted most effectively through collaboration with the Canadian Council of Ministers of the Environment, the Commission for Environmental Cooperation and the Organisation for Economic Co-operation and Development. In June 2004, following a major effort by the Department, the Canadian Council of Ministers of the Environment approved a strategic work plan to develop and promote a harmonized waste management framework for Canada. Achievement of the expected outcome will thus be contingent on progress made by the Canadian Council of Ministers of the Environment.

The expected outcome of raising Canadian standards to those of the United States is likely to be met in part through the proposed *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*. These regulations, when finalized, will increase alignment between Canadian and American rules on many issues. An exception is the case of recyclables, which the United States does not regulate, but where the proposed regulations in Canada align with broader Organisation for Economic Co-operation and Development decisions.

2.8 Part 8: Environmental Matters Related to Emergencies

Expected Outcomes

The evaluation identified three expected outcomes for Part 8:

1. *Emergency preparedness, prevention response and recovery more effective.*
2. *Plans in place for toxic substances whose accidental release poses a significant risk.*
3. *Regulations in place that enable efficient recovery of costs.*

Overview of the Act and Its Provisions^{xxviii}

Part 8 of the Act provides authorities to require environmental emergency plans for substances once the Ministers of Environment and Health have declared them toxic. It further provides the authority to establish regulations respecting emergency prevention, preparedness, response and recovery for the uncontrolled, unplanned or accidental releases of a substance that has been identified as posing potential harm to the environment or to human health.

Part 8 also provides authority to issue guidelines and codes of practice. It establishes a regime that makes the person who owns or controls the substance liable for restoring the damaged environment and for the costs and expenses incurred in responding to an environmental emergency.

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations have been satisfied:

- Section 197(1) – Consultations have occurred with the CEPA National Advisory Committee for Implementation Guidelines for Part 8 of CEPA 1999 – Environmental Emergency Plans.⁸³
- Section 198 – Notice was published in the *Canada Gazette* that the Minister of the Environment developed the Implementation Guidelines for Part 8 of CEPA 1999 – Environmental Emergency Plans.

Major Accomplishments

The *Environmental Emergency Regulations*⁸⁴ came into force in November 2003. These regulations require any person who owns or manages any of the identified substances above a specified threshold to notify the Minister of their location and quantity and to prepare and implement the appropriate environmental emergency plans. All 68 substances currently on CEPA 1999 Schedule 1 have been reviewed, and 16 of these, along with 158 others, are included on the list of substances requiring environmental emergency plans.

Environment Canada has worked with the provinces to avoid overlap and duplication and provide notifiers with a single point of contact in the event of a spill or another environmental emergency. These single contact points are clearly documented within the *Environmental Emergency Regulations*.

Environment Canada also developed the Implementation Guidelines for Part 8 of CEPA 1999 – Environmental Emergency Plans as a companion document to the regulations. These new guidelines provide clarification and guidance to those who have to comply with the *Environmental Emergency Regulations*. The guidelines underwent multistakeholder consultations, and the CEPA National Advisory Committee was also engaged through a series of regular briefings.

To date, 4427 Notifications of Substance and Place have been received, covering 2892 different facilities and 97 of the 174 identified substances requiring environmental emergency plans. Environmental emergency plans are required for 1898 facilities.

Currently, amendments to the regulation are underway to add 39 substances or compounds to the environmental emergency regulations. These substances include 37

^{xxviii} Source: Factsheet – The New CEPA and Environmental Matters Related to Emergencies (http://www.ec.gc.ca/CEPARegistry/gene_info/fs_8.cfm).

substances or compounds that relate to 15 CEPA Schedule 1 substances, as well as two non-Schedule 1 substances of concern.

Implementation of Priority Actions:

Two of the four identified priority actions have been addressed:

1. *Remove backlog of assessing risk of emergencies from substances declared toxic* – Assessment of risk of emergencies from toxic substances has been completed. All CEPA 1999 Schedule 1 toxics have been assessed using the environmental emergency planning risk evaluation framework.
2. *Develop and implement a national strategic framework for implementation of the environmental emergencies program* – A draft Results-based Management and Accountability Framework has been prepared as a national strategic framework for implementation of the environmental emergency program.

The remaining two actions identified in the submission have not been satisfied:

3. *Review and maintain up-to-date agreements with partners* – Agreements with partners have not been reviewed and revised, except for the agreement with Alberta, which is currently being renegotiated. The Environmental Emergencies Branch has administrative agreements with all provinces and territories except Quebec. CEPA 1999 has a five-year mandatory termination period. Other agreements, either under the *Fisheries Act* or where no specific legislative base is referenced, have no termination clause and are periodically discussed and maintained with partners.
4. *Enhance capacity to seek compensation from polluters and restoration costs* – Capacity to seek compensation from polluters and to recover restoration costs has not been enhanced. However, a draft Results-based Management and Accountability Framework for strengthening the Environmental Damages Fund has been developed and the Fund has been evaluated.⁸⁵

Issues and Challenges

The Department faces several issues and challenges with regard to environmental emergencies:

- Compliance awareness of the *Environmental Emergency Regulations* is nationally inconsistent. For example, 40% of received notices are from Prairie and Northern Region, which may suggest a low level of awareness in other regions. Awareness and compliance across small and medium-sized enterprise facilities are considered especially low.
- The environmental emergency program relies heavily on its partners, particularly the provincial governments. A long-standing challenge for the program, identified in the Department's 2001-02 Operational Review, is that its priorities and funding are "event-driven" and difficult to plan for in a comprehensive manner. Further, the bulk of the responsibility of the program falls on the partners. Therefore, it has been difficult to develop a comprehensive and stable program that involves a number of partners, each with changing roles, responsibilities and capacities.
- Although the authority to undertake cost recovery exists, the requisite systems and procedures to ensure the efficient recovery of costs from polluters are lacking. Several problems are associated with seeking recovery of costs from polluters. Concerns include demonstrating burden of proof; legal costs; the definition of what costs polluters should be liable for; the definition of "restored" and the boundary on "restoration of environment" costs; and accessibility to recovered funds to use either as reimbursement for costs or to fund restoration activities. The environmental emergencies program faces difficulties in keeping pace with the decisions reached

with respect to the risk assessment of existing substances. Each time a substance is added to the CEPA 1999 Schedule 1 List of Toxic Substances, it must be assessed with respect to the environmental emergency risk it poses. Where risks are significant, the *Environmental Emergency Regulations* must be updated, and additional awareness and enforcement activities need to be undertaken. The first amendment to the regulations, adding 39 new substances, has come only two years after the regulations first entered into force.

- While the number of prepared plans is being tracked, the Department lacks a measurement and reporting system to determine the environmental protection results that the regulations are having.

Conclusions

The expected outcome of making emergency preparedness, prevention, recovery and response more effective is likely being achieved through the *Environmental Emergency Regulations*.

The expected outcome of having plans in place for toxic substances whose accidental release poses significant risk is being achieved. Under the *Environmental Emergency Regulations*, a total of 174 substances, including 16 CEPA 1999 Schedule 1 substances, are included on the list of substances requiring environmental emergency plans. All 68 substances currently on CEPA 1999 Schedule 1 have been reviewed.

The expected outcome of having regulations in place that enable the efficient recovery of costs is unlikely to be achieved. The Department's progress to date has not led to regulations for the recovery of costs from polluters. However, the Environmental Damages Fund is in place to seek restoration damages from polluters. The Department has created a number of documents designed to assist in conducting damage assessments and estimating restoration costs.

2.9 Part 9: Government Operations and Federal and Aboriginal Land

Expected Outcomes

The evaluation identified two expected outcomes for Part 9:

1. *Federal operations and those of federal works and undertakings will be held to the same environmental protection and prevention standards as the communities in which they operate.*
2. *Operations on Aboriginal lands will be held to the same environmental protection and prevention standards as comparable operations on adjacent non-Aboriginal lands.*

Overview of the Act and Its Provisions^{xxix}

Members of the federal house are subject to federal laws, including CEPA 1999. Under Canada's Constitution, however, provincial environmental laws do not generally apply to the federal house. This means that federal operations and land, including Aboriginal land, are, for the most part, not subject to provincial regulations or permit systems covering emissions, effluents, environmental emergencies, waste handling and other environmental matters.

^{xxix} Source: The New CEPA and Government Operations and Federal and Aboriginal Land (http://www.ec.gc.ca/CEPARRegistry/gene_info/fs_9_e.pdf).

Part 9 of CEPA 1999 is intended to enable the Government of Canada to address this gap. It provides that federal facilities and land, and Aboriginal land, can be covered by the same type of environmental regulations as entities regulated by the provinces and territories.

Part 9 also provides the authority for making environmental regulations or guidelines that can be applied exclusively to the federal house, to move the federal house towards the goal of “ensuring that its operations and activities on federal and Aboriginal land are carried out in a manner that is consistent with the principles of pollution prevention and the protection of the environment and human health” (as set out in the preamble to CEPA 1999).

Ministerial Obligations

The evaluation found that all relevant Ministerial obligations have been satisfied:

- Section 209(3)(a) – Offers to consult were extended to provinces and Aboriginal governments on the *Federal Halocarbon Regulations, 2003*, and on new draft federal storage tank regulations.
- Section 208 – The obligation to establish and consult on objectives, guidelines and codes of practice concerning government operations and federal and Aboriginal lands has not yet been triggered as such measures have not yet been proposed for the federal house.

Major Accomplishments

The *Federal Halocarbon Regulations, 2003*⁸⁶ were published in 2003 to address releases, recovery and recycling of ozone-depleting substances and their halocarbon alternatives on federal lands. These regulations replace the *Federal Halocarbon Regulations*. The purpose of the regulations is to achieve an orderly transition from chlorofluorocarbons (CFCs) and halons to alternative substances and technologies and to address administrative issues that have been identified concerning the former regulations.

A federal fuel storage tank regulation is at the legal draft stage. These regulations, if finalized, will establish technical requirements for storage tank management by the federal house that are comparable to provincial counterparts.

Environment Canada is cooperating with Indian and Northern Affairs Canada and Health Canada on a First Nations Water Management Strategy. The February 2003 Federal Budget allocated \$600 million over five years in new funding to improve infrastructure, operations and maintenance and monitoring programs for high- and medium-risk water and wastewater services on reserves.^{xxx} As a result, the Government of Canada announced that the First Nations Water Management Strategy will be implemented over a five-year period beginning in 2003 for First Nations communities located south of 60°N and in the Yukon. Environment Canada has been asked by Indian and Northern Affairs Canada to participate in the delivery of the strategy. Environment Canada's involvement will focus on wastewater management and certain source water protection activities.

Implementation of Priority Actions

Work has been initiated on three of the seven identified priority actions:

^{xxx} Refer to the National Assessment of Water and Wastewater Systems in First Nations Communities May 2003 (Indian and Northern Affairs Canada) for more detailed information on medium- to high-risk systems (http://www.ainc-inac.gc.ca/ps/hsg/cih/ci/ic/wq/wawa/index_e.html).

1. *Compliance promotion and enforcement of relevant regulations and standards* – Enforcement actions have been taken on the *Federal Halocarbon Regulations, 2003*. In fiscal year 2003–04, for example, there were 97 inspections and 73 warnings issued. Various regional compliance promotion efforts have been undertaken with respect to these regulations.
2. *Risk management strategies and legislative and non-legislative instruments to address risks* – A small number of instruments exist to address federal house risks, including the *Federal Halocarbon Regulations, 2003* and the Manual for Federal Facilities to Address Mercury-containing Products. Other instruments are in development, including the federal storage tank regulations and the First Nations Water Management Strategy. Together, these measures cover a small portion of the overall set of issues.
3. *Technical investigation of the status of federal house facilities and Aboriginal land* – Environmental audits have been conducted across many federal facilities to assess the management of environmental issues. However, a comprehensive “roll-up” and analysis of this information have not been prepared. Regarding Aboriginal land, an overview of the environmental protection gap has been conducted, although a technical investigation has not been completed.

No evidence has been provided for the remaining four identified priority actions:

4. establishment of a focal point;
5. scientific assessment of risk from the federal house facilities and Aboriginal lands;
6. consultation in the federal house and with Aboriginal groups on the setting of objectives, guidelines and codes of practice (although these requirements are planned for the First Nations Water Management Strategy); and
7. standard and guideline development (again, guidelines are anticipated with respect to implementation of the First Nations Water Management Strategy).

Issues and Challenges

The Department faces several issues and challenges with regard to environmental management in the federal house:

- The Government of Canada lacks comprehensive risk assessment and risk management strategies for the federal house and for Aboriginal lands. Data regarding many of the known risks and environmental impacts arising from federal operations and those on federal and Aboriginal lands are limited. This undermines efforts to establish a risk management strategy focused on priorities.
- There is no single focal point, either for the government as a whole or within Environment Canada in particular, for Part 9 issues.
- A coherent, government-wide set of objectives for managing environmental performance for the federal house is still not in place. Although various initiatives have been undertaken, there is an overall lack of a consistent approach. Different policies and objectives exist across the federal house with respect to environmental protection standards for federal operations and operations on federal and Aboriginal lands.
- There is no evidence of attempts to incorporate federal works and undertakings and Crown corporations into the scope of current activities. Program staff indicated that part of this challenge is the lack of a complete inventory of such works and undertakings.

Conclusions

While progress is being made on a small number of individual issues (e.g., fuel storage tanks, halocarbons, First Nations municipal water), given the current processes and progress, it is highly unlikely that either of the expected outcomes – i.e., holding federal operations and those of federal works and undertakings to the same environmental protection and prevention standards as the communities in which they operate; and holding operations on Aboriginal lands to the same environmental protection and prevention standards as comparable operations on adjacent non-Aboriginal lands – will be met.

Considerably more work needs to be done to create a strategic risk-based, focused and cooperative approach to the establishment of environmental protection standards for the federal house.

2.10 Part 10: Enforcement

Expected Outcomes

The evaluation identified four expected outcomes for Part 10:

1. *Increased awareness of enforceable CEPA 1999 instruments and related obligations.*
2. *The rate of compliance with enforceable CEPA 1999 instruments improves.*
3. *Enforcement is carried out in a fair, consistent and predictable manner.*
4. *Facilities return to compliance more quickly through the use of more flexible enforcement tools.*

Overview of the Act and Its Provisions

CEPA 1999 provides enforcement officers with the authority to address cases of alleged non-compliance with the Act. CEPA enforcement officers have the following enforcement tools at their disposal:

- warnings to indicate the existence of a violation, so that the alleged offender can take notice and return to compliance;
- directions that enforcement officers may issue to deal with or to prevent illegal releases of regulated substances;
- tickets for offences such as failure to submit written reports;
- environmental protection compliance orders to put an immediate stop to illegal activity, to prevent a violation from occurring or to require action to be taken;
- environmental protection alternative measures; and
- prosecution under the authority of a Crown prosecutor.

Ministerial Obligations

The evaluation identified eight Ministerial obligations. All of these obligations are of a technical nature, prescribing the duties of enforcement officers and chief review officers. Evidence indicates that all but one of these obligations have been met. No evidence was available to show that the obligation requiring enforcement officers to return items seized under Section 222(2) within 30 days is being met.

Major Accomplishments

Both the Compliance and Enforcement Policy for CEPA 1999⁸⁷ and the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*⁸⁸ were released in 2001. These policies establish the principles for enforcing relevant sections of CEPA 1999 and the *Fisheries Act*. The policies identify expectations of

those responsible for protection of the environment (e.g., government, industry, organized labour and individuals).

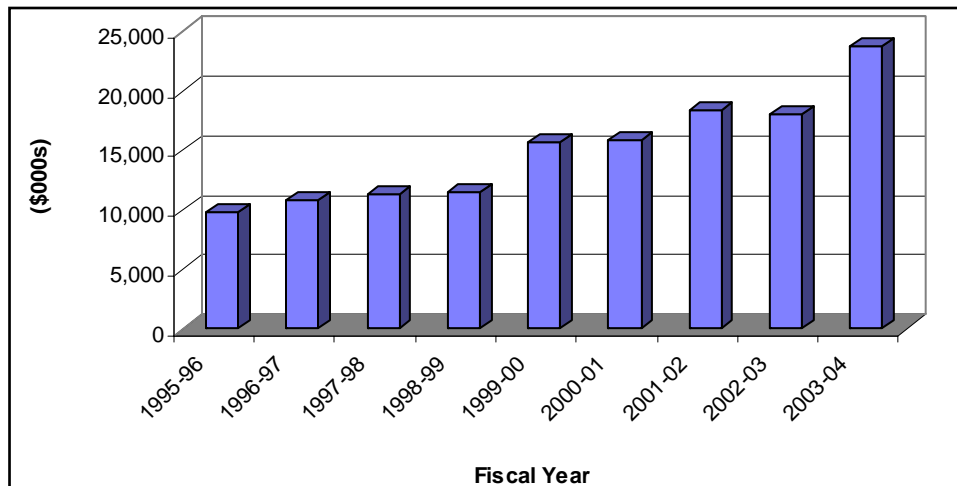
*Contraventions Regulations*⁸⁹ were published in 2001 and identify violations under CEPA 1999 punishable by ticket.

Two Environmental Protection Alternative Measures Agreements⁹⁰ have been negotiated and are posted on the CEPA Environmental Registry. Environmental protection alternative measures are an alternative to court prosecution for a violation under CEPA 1999. The Attorney General of Canada, in consultation with the Minister of the Environment, negotiates these agreements with the accused. The Environmental Protection Alternative Measure Agreements contain measures that the accused must take in order to restore compliance.

A memorandum of understanding was signed by Environment Canada and the Canadian Customs and Revenue Agency in 2000, designed to improve enforcement of environmental law at borders. Additionally, a memorandum of understanding with the Royal Canadian Mounted Police was signed in 2002 to clarify the responsibilities of both parties in enforcing pollution and wildlife laws for the protection of the environment.

Budgets were significantly increased in 2000 to strengthen the enforcement of environmental protection laws, and again in 2003 to improve the capacity within Environment Canada and Health Canada for meeting CEPA 1999 obligations (see **Figure 5**).

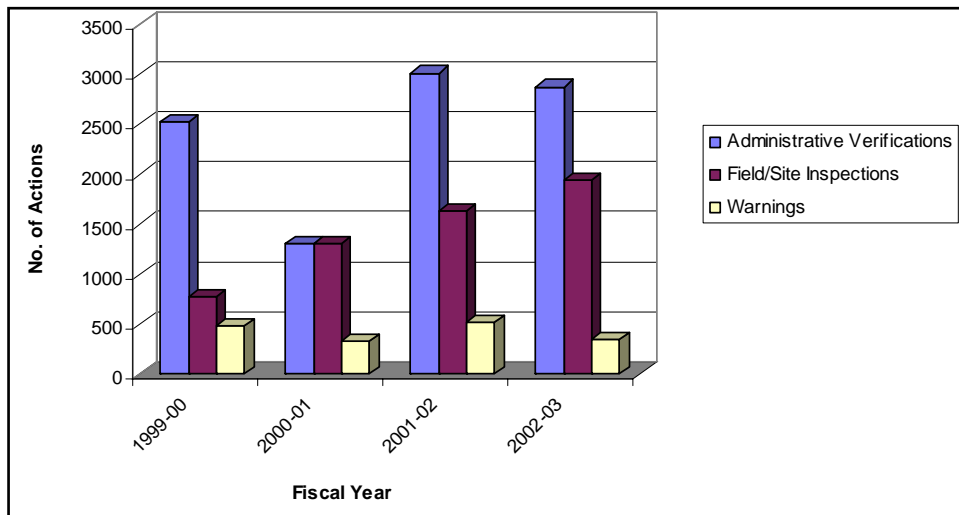
Figure 5 – Environment Canada Environmental Protection Service Enforcement Expenditures



Annual inspection plans are prepared, and implementation is tracked and reported annually. The Department significantly increased its CEPA-related enforcement activities over the evaluation period (see **Table 2** and **Figure 6**).

Table 2 – Annual Enforcement Actions under CEPA 1999

	1999–2000 ⁹¹	2000–01 ⁹²	2001–02 ⁹³	2002–03 ⁹⁴
Administrative verifications	2525	1309	3009	2870
Field/site inspections	779	1299	1628	1934
Investigations	64	14	57	36
Warnings	478	327	517	345
Prosecutions	26	3	27	4

Figure 6 – Annual Enforcement Actions under CEPA 1999
(Excluding Investigations and Prosecutions)

Implementation of Priority Actions

Work has been initiated and/or completed on each of the following 10 identified priority actions:

1. *Department will take a more streamlined, innovative approach to making industry aware of incoming control instruments* – Through the Compliance Assurance Branch and regional offices, Environment Canada's compliance promotion programming is being coordinated and delivered. The Branch leads the development of compliance strategies for each new instrument and works to integrate compliance promotion and enforcement efforts within existing programming.
2. *Compliance promotion materials will be coordinated to avoid duplication and to effect efficient distribution across regions* – The National Compliance Promotion Coordinating Team establishes priorities for compliance promotion and coordinates efforts for compliance promotion activities.
3. *A national focal point for compliance promotion will be established* – The Compliance Assurance Branch was established in 2003 as the departmental focal point for compliance promotion.
4. *A targeted approach to compliance promotion will be adopted by leveraging synergies between tools aimed at the same sector (as opposed to individual substances)* – The use of the Compliance Analysis and Planning database is to be customized for compliance promotion. This is scheduled to begin in 2005–06 as part of stated outcomes in the work plan. The database is currently under development

- for use in targeting organizations for enforcement attention; after this is tested within enforcement, this technology will be used for targeting compliance promotion.
5. *More effective integration training of compliance promotion and enforcement officers* – Appropriate program staff are members of enforcement training's design and delivery teams. Program staff provided information on regulatory requirements and compliance promotion activities. Service Agreements are signed between the Training and Learning Division and the regional enforcement managers to formalize this commitment to partnership.
 6. *Electronic enforcement tools (integrated database information system) developed* – Several electronic tools have been developed to improve enforcement capabilities. For instance:
 - The National Enforcement Management Information System and Intelligence System is used to track and manage enforcement activities and actions. This application is also used as the Department's official reporting mechanism.
 - The Regulatory Information Submission System is an electronic reporting tool that allows industry to submit required information through the Internet. The pulp and paper industry and the metal mining industry are currently using the system. Other industries that will be involved in the reporting system within the next few years include petroleum refineries and gasoline operators.
 - CAPMap is an online mapping tool that spatially represents information on Environment Canada's regulated community. Information from risk managers, compliance promotion officers and enforcement will be available through this tool. Development of the tool began in 2003 and will be completed in March 2005.
 7. *Adopt a risk-based approach to enforcement* – Every fiscal year, Environment Canada develops a national inspection plan for the regulations that it administers under CEPA 1999 and the *Fisheries Act*. The process for setting plans and priorities continues to evolve and improve; however, some of the specific considerations in setting priorities and in developing planned inspection activities include, but are not limited to, environmental significance, geographic scale, compliance history and profile, nature of the regulatory provisions, operational complexity and the capacity, number and type of targeted populations or activities.
 8. *Develop a strong intelligence program that targets potential violators before infractions occur* – The Department's intelligence function has grown and has been integrated into the enforcement program. Most regions are working on tactical and operational intelligence activities. However, gaps still remain.
 9. *Develop a performance measurement framework for the enforcement program* – One of the major functions of the Compliance Assurance Branch is to provide senior management and regional Environmental Protection Service management with the data, analyses, interpretation and reporting of compliance-related programming. Annual performance reporting of enforcement actions is provided in the CEPA 1999 Annual Reports.
 10. *Integrate enforcement with pollution prevention and other environmental stewardship initiatives* – Compliance strategies are being written to integrate enforcement with other related initiatives. For instance, the objectives of the Compliance Strategy for the Wet Processing Textile Industry are to ensure that the regulatees are informed of the requirements of the Pollution Prevention Planning Notice and are motivated to achieve the risk management objectives for substances specified in the Notice, preferably by using pollution prevention methods.

Issues and Challenges

While resources were received in Budget 2003 to develop the enforcement program, additional work needs to be done to fully develop and strengthen the program, particularly as both the number and complexity of regulations is increasing. The evaluation identified the following issues and challenges for Part 10 implementation:

- Weaknesses exist in the current inspection program. Identified gaps include: lack of a re-inspection cycle, limited sample size, incomplete knowledge of the regulated community, and inconsistency of implementation across the country.
- The intelligence function (strategic, tactical and operational levels) that supports the inspection program requires additional strengthening. The Department's intelligence function has grown and has been integrated into the enforcement program. Most regions are working on tactical and operational intelligence activities. However, gaps still remain with respect to staffing and staff capacities, secure central database, integrating the intelligence findings into the annual inspection plans and senior management's level of understanding of the role and benefits of the intelligence function.
- The enforcement and compliance promotion functions need to be more consistently integrated. The current process includes development of an integrated strategy that guides the development of a separate compliance promotion plan and an enforcement implementation plan (formerly, the process involved the development of a single compliance strategy). However, this process has not been in place long enough to know whether it is meeting all of the needs of both groups and providing the national consistency and coordination needed.
- Responsibilities for compliance promotion need better delineation, consistency of delivery and measurement and reporting of results.
- More data and information is needed to measure the ultimate effectiveness of the department's compliance promotion and enforcement programs. Presently, data and information are lacking concerning the degree to which those regulated are aware of and act upon their legal requirements, and the degree to which the department's activities contribute to returning the regulated community to compliance in a timely and efficient manner.

Conclusions

The Department significantly increased the resources available for CEPA 1999 compliance and enforcement activities during the evaluation period and undertook significantly more enforcement-related actions. It is not possible to determine whether expected outcomes with respect to Part 10 of the Act will be achieved as measurement and reporting systems capable of documenting progress towards expected outcomes in this area remain under development at the time of this evaluation. Such systems will need to be developed and implemented in order to ascertain the likelihood of progress relating to the expected outcomes:

- increased awareness of enforceable CEPA 1999 instruments within the regulated community;
- improved rate of compliance using enforceable CEPA 1999 instruments;
- enforcement carried out in a fair, consistent and predictable manner; and
- facilities return to compliance more quickly through the use of more flexible enforcement tools.

2.11 Part 11: Miscellaneous Matters

Expected Outcomes

The evaluation identified two expected outcomes for Part 11:

1. *Cost recovery of departmental efforts related to the control or cleanup of pollution is pursued consistent with government policy.*
2. *Economic instruments (such as trading systems) are used to achieve environmental objectives where appropriate.*

Overview of the Act and Its Provisions

Part 11 of the Act sets out general authorities or conditions for items such as disclosure of information; general regulation-making provisions; regulations regarding cost recovery; use of economic instruments, namely deposit/refund systems and tradable unit systems; requirements governing publication of various CEPA 1999 instruments in the *Canada Gazette*; boards of review; and review of the Act by Parliament every five years.

Ministerial Obligations

All applicable Ministerial obligations are being satisfied:

- Section 332 – All proposed orders and regulations have been published in the *Canada Gazette* and the CEPA Environmental Registry.⁹⁵
- Section 342 – Reports to Parliament are prepared annually, including a report on research, through the CEPA Annual Reports⁹⁶ available through the CEPA Environmental Registry.

Many additional Ministerial obligations have not been triggered.

Major Accomplishments

Environment Canada has been using two approaches for cost recovery:

- Cost recovery through charges and fees for permits and other regulatory services – In 2002–03, the Department recovered \$1.37 million for ocean disposal applications, permits and fees and \$84 000 under new chemical notification (out of a total CEPA 1999 budget in 2003–04 of close to \$190 million).
- Cost recovery through fines for violations of the Act – Environment Canada has set up the Environmental Damages Fund as a special holding or trust account to manage funds received as compensation for environmental damage (not just under CEPA 1999).

There has been limited use of economic instruments to support CEPA 1999. However, the Department acknowledges that the use of economic instruments is a core element of Environment Canada's environmental innovation agenda. Since 2000, Environment Canada has sponsored an international conference and various analyses on economic instruments related primarily to climate change and air pollution, as well as participating in the National Round Table on the Environment and the Economy's project on ecological fiscal reform. To date, much of this analytical work has involved the use of economic instruments to address climate change rather than CEPA 1999 toxics.

Issues and Challenges

Cost recovery was a central theme of public management in the mid to late 1990s, at the time that revisions to CEPA 1988 were under consideration. During that period, and as part of the Program Review exercise, Environment Canada undertook analyses to identify cost-recovery opportunities. While CEPA 1999 provides authorities for enacting cost-recovery

provisions, less than 1% of CEPA 1999 implementation costs are currently recovered.^{xxxii} Barriers to increasing the recovery of CEPA 1999 implementation costs exist, including those posed by the new *User Fees Act*⁹⁷ and related Treasury Board policies,⁹⁸ as well as the decrease in emphasis on cost recovery as a Government of Canada priority.

There has been limited use of economic instruments to support CEPA 1999. In fact, the two trading regimes used were initiated under CEPA 1988. Several challenges have been identified, but the Treasury Board policies in particular impose significant barriers to the use of economic instruments such as user fees and charges. The 2004 environmental performance review of Canada by the Organisation for Economic Co-operation and Development noted the “urgency” of making progress on economic instruments.

Conclusions

The expected outcome of pursuing cost recovery of departmental efforts related to the control or cleanup of pollution is likely to be achieved only to some limited degree. Cost recovery defrays some program costs, and some funds will be available to restore degraded environmental conditions. The significant external barriers in existence are likely to prevent any significant recovery of program implementation costs or costs occurring as a result of environmental damages.

The expected outcome of using additional economic instruments to achieve environmental objectives is unlikely to be achieved until the barriers are addressed.

^{xxxii} Ocean disposal permits are issued on a cost-recovery basis, and the New Substances Program recovers approximately 20% of its implementation costs.

3.0 ACT-WIDE FINDINGS

This section of the report builds on the Parts-based analysis presented in Section 2 and summarizes Act-wide findings according to the established evaluation criteria (see Appendix VI).

3.1 Progress Findings

This subsection presents evaluation findings according to the following progress-related evaluation criteria:

- Are Ministerial obligations being satisfied?
- What governance and administration structures have been put in place to implement the Act?
- What has been done (2000–2004)?
- Have the identified priority actions for strengthening the effectiveness and efficiency of the department's implementation of CEPA 1999 been initiated?
- What improvements in implementation have been made since 1999, and with what results?
- What progress has been made in harmonizing activities/processes with provinces and territories?
- What progress has been made in coordinating activities/processes with those of other Organisation for Economic Co-operation and Development jurisdictions?
- What major issues / challenges / contextual factors have been identified or addressed?

Ministerial Obligations

The evaluation found that all Ministerial obligations that have been triggered to date have been satisfied.

CEPA 1999 is described as being an “enabling” Act, in the sense that it establishes authorizations for a wide range of actions in support of pollution prevention. However, it does impose a significant number of new obligations on Environment Canada, while maintaining many obligations that previously existed under CEPA 1988. The findings of this evaluation indicate that the Department is well aware of all formal Ministerial obligations under the Act and has established new mechanisms and modified existing ones to ensure that all obligations will continue to be met.

Although the Act does not specify a time frame, the Minister has not yet published a Virtual Elimination List, as required under Section 65(2). A Virtual Elimination List has been formally proposed, via a *Canada Gazette*, Part I, Notice⁹⁹ on August 16, 2003. Final establishment of a Virtual Elimination List had been delayed by industry challenges, which have now been resolved. Environment Canada expects to establish the Virtual Elimination List in June 2005.

Governance and Administration

The Department has established both mandated and non-mandated governance processes to assist in implementing CEPA 1999. These processes and activities involve elements of coordination among federal departments, with other governments and with other jurisdictions.

To ensure the most effective management and delivery of CEPA 1999, Environment Canada undertook an Operational Review of related programs in 2001-02. The objectives of the review were to:

- improve understanding of the Act's obligations and how program elements were being delivered;
- identify major risks that might have an impact on the delivery of results and strategies for managing the risks;
- make recommendations for priority actions in the months and years following the exercise; and
- identify management assumptions and expected workload over a 10-year period and the required resources for delivering results.

The completion of the Operational Review resulted in the Government of Canada granting the Department with phased-in, increased funding which leads to approximately \$76.3 million in 2007/08 of additional permanent funding on an annual basis for CEPA 1999 implementation

Out of the \$90 million allocated to implement the Border Air Quality Strategy under the Canada - United States Air Quality Agreement, the department received \$59.9 over a four year period. This initiative was designed to engage the administration of the United States in transboundary air quality cooperation while at the same time supporting Canada's domestic Clean Air Agenda.

Major Accomplishments (2000–2004)

The Department's major accomplishments over the period 2000–2004 are discussed in detail in Section 2. An overview of the major accomplishments achieved is given below.

A significant volume of CEPA 1999-related outputs was produced during the evaluation period. Of particular note, the evaluation found that:

- The Department is on track and well positioned to satisfy the requirement to categorize all of the more than 23 000 substances on the Domestic Substances List prior to the September 2006 deadline imposed by the Act; preliminary categorization decisions have already been published for about 17 000 substances, and a further 1000 substances have been identified for removal from the Domestic Substances List, following investigations that concluded that they should not have been placed on the list in the first place.
- The Department has met all legislated timeline requirements associated with the proposal and finalizing of risk management measures and tools in response to all substances proposed for addition to the CEPA 1999 Schedule 1 List of Toxic Substances over the evaluation period.

Other notable CEPA-related outputs produced over the evaluation period include the following:

- added 22 substances to the CEPA 1999 Schedule 1 List of Toxic Substances;
- published 13 new and amended regulations;
- implemented environmental emergency planning regulations covering 174 substances, including 16 CEPA 1999 Schedule 1 substances;
- published five final and one proposed pollution prevention planning notices, covering 8 of 22 substances added to CEPA 1999 Schedule 1 since 2000 and 9 additional substances;

- published four codes of practice;
- published five CEPA 1999 guidelines, plus several guidelines through the Canadian Council of Ministers of the Environment;
- developed and implemented a 10-year Clean Air Agenda and an accompanying 10-year Federal Agenda on Cleaner Vehicles, Engines and Fuels;
- processed more than 3000 new substance notifications;
- completed all but two of the outstanding assessments of substances on the Priority Substances Lists;
- reduced overlap and duplication by listing other acts under Schedule 2 and Schedule 4 and developing memoranda of understanding with respect to CEPA 1999's provisions for new substance notifications, including some aspects of animate products of biotechnology;
- made significant improvements to implementation of the New Substances Program in response to consensus-based recommendations of multistakeholder consultations;
- addressed each of the 24 recommendations made by the Parliamentary Standing Committee's 1998 review of enforcement;
- expanded and made significant upgrades to the National Air Pollution Surveillance Network and the Canadian Air and Precipitation Monitoring Network; and
- increased the scope of the National Pollution Release Inventory, which now includes reporting on criteria air contaminant releases from Canadian industrial facilities.

The Department also strengthened industry and interjurisdictional cooperation on environmental protection matters by means of initiatives outside of CEPA 1999. These initiatives included:

- developing four environmental performance agreements;
- working with the provinces and territories to develop Canada-wide Standards, under the Canadian Council of Ministers of the Environment process, for particulate matter and ozone, mercury, dioxins and furans, benzene and petroleum in soil;
- initiating work with the provinces and territories to standardize the management of municipal wastewater effluents across Canada;
- working with the forest products industry on a "smart regulations" initiative for that sector, including the announcement of an agreement to develop a 10-year agenda on air quality issues; and
- working with industry and the provinces/territories under the auspices of the Canadian Council of Ministers of the Environment to develop a framework for managing refinery air emissions across Canada.

Implementation of Priority Actions

The Department's initiation of identified priority actions to improve the efficiency and effectiveness of delivery of CEPA 1999 is discussed in detail throughout Section 2. The majority of the identified priority actions have been initiated. However, most programs under CEPA 1999 have not adopted the identified outcomes and performance indicators as the formal basis for their strategic planning and reporting processes. Noteworthy priority actions that have not been initiated include the following:

- Actions with respect to Part 9 (the federal house provisions) have not been initiated.
- A monitoring and reporting focal point has only recently been established and has yet to execute its intended functions.

Harmonization across Canadian Jurisdictions

The Department continues to promote harmonization of environmental protection standards across Canadian jurisdictions through both the Canadian Council of Ministers of the Environment process and program-level initiatives.

The Minister of the Environment invoked the authorities under Part 9 of the Act to enter into several agreements respecting Canada-wide Standards through the Canadian Council of Ministers of the Environment process, including standards relating to:

- particulate matter and ozone;
- dioxins and furans;
- mercury;
- benzene; and
- petroleum hydrocarbons in soil.

Further, in June 2004, the Minister of the Environment, along with the other members of the Canadian Council of Ministers of the Environment, formally adopted a work plan to promote environmentally sound management of hazardous waste.

Environment Canada also enhanced harmonization through program-level initiatives, such as:

- harmonization of fuel, vehicle and equipment standards across Canadian jurisdictions;
- harmonization of spill reporting requirements through the environmental emergency planning regulations; and
- development of a “single window” approach and harmonization of most reporting requirements between the National Pollutant Release Inventory and the Ontario “OnAir” (Ontario Regulation 127/01) initiative.

Despite the progress described above, representatives of provincial governments interviewed as part of this evaluation expressed the view that Environment Canada is increasingly duplicating provincial control measures.

International Coordination and Collaboration

International cooperation continues to be an important strategic direction within Environment Canada. The Department’s international activities can be grouped under the broad areas of science, international agreements and standards and international capacity building. Many of the Department’s international activities also focus on ensuring better alignment between trade and economic issues and environmental standards.

During the evaluation period, Environment Canada’s major CEPA 1999-related international activities included:

- significant ongoing involvement in Organisation for Economic Co-operation and Development and United Nations Environment Programme scientific processes;
- significant and ongoing involvement in Organisation for Economic Co-operation and Development information-sharing initiatives to promote pollution prevention and sustainable production and consumption;
- bilateral arrangements with several countries;
- promotion of international vehicle, engine and equipment standards;
- promotion of mutual recognition for assessment decisions on existing and new substances;

- international work on the environmentally sound management of hazardous waste and hazardous recyclables; and
- international agreements and protocols concerning hazardous air pollutants, including the Stockholm Convention on Persistent Organic Pollutants.

Environment Canada also continued its traditional high level of cooperation with the United States Environmental Protection Agency. Major areas of collaboration during the evaluation period included:

- alignment of Canadian fuel, vehicle, engine and equipment standards with existing and anticipated American standards;
- increased alignment of regulations and administrative processes governing transboundary movement of hazardous waste;
- ongoing and strengthened cooperation on the Canada – United States Air Quality Agreement; and
- cooperation on scientific, technical and research activities in all areas.

Issues and Challenges

Issues and challenges have been identified with respect to the Department's delivery of nearly all aspects of CEPA 1999 implementation. These are discussed in detail throughout Section 2. Noteworthy mentions include the following:

- Progress has been very limited in efforts to ensure that environmental protection standards for federal activities and lands, and Aboriginal lands (Part 9) are equivalent to the environmental protection standards that apply in the communities in which the federal government operates.
- Environment Canada's ability to act as an effective safety net for new substances could be compromised by gaps in the regulatory regimes of other federal departments and agencies for some aspects of new substances, including new animate products of biotechnology, such as:
 - aquatic organisms;
 - pharmaceuticals;
 - certain food products; and
 - transgenic animals.

Environment Canada lacks the technical and scientific resources in these areas, but is accountable for those areas until other departments develop appropriate regulations.

- Government of Canada policies have contributed to limited development and use of economic instruments, fees and charges in support of environmental protection. These policies have limited the Department's ability to recover costs of environmental damages and the costs of implementing the Act and its provisions. Currently, less than 1% of the Department's implementation costs are being recovered.
- Systems for the provision of nationally integrated environmental information have not yet been established.

Other important cross-cutting issues and challenges include the following:

- Mechanisms are needed to assess the effectiveness of the full suite of risk management measures and tools and to allow for informed decision-making among options.
- Intelligence gathering, compliance promotion and enforcement resources are insufficient to ensure that the intended benefits of all CEPA 1999 measures will be achieved.

- The provinces and territories view interjurisdictional cooperation as being in need of attention. Both the provinces/territories and Aboriginal peoples' organizations express the view that the operations of the National Advisory Committee established under CEPA 1999 have not met their expectations.

Finally, the need to set priorities for and implement screening assessments and mandated risk management measures and tools in response to the outcomes of the categorization exercise for substances on the Domestic Substances List will create significant planning and implementation challenges for the Department. The volume and pace of work anticipated as a result of that exercise are expected to be significantly higher than that experienced under the first five years of CEPA 1999 implementation.

3.2 Process Issues for Evaluation

This subsection presents findings concerning the following evaluation criteria, which are intended to determine whether the Department has developed and implemented the processes and systems that will be required to realize the Act's expected outcomes:

- Have expected outcomes/goals/objectives been established? Are these agreed to?
- Has an implementation strategy with timelines, priorities and resources been established?
- Have roles and accountabilities been established? Are these being acted upon?
- Have resource needs been assessed and met? Are the identified "Strategic Assumptions" being used in the planning process?
- Has a measurement and reporting system been put in place to track progress towards strategic goals / expected outcomes?
- What organizational learning activities have taken place?

Expected Outcomes

Environment Canada has not developed a CEPA 1999-specific set of expected outcomes for its implementation of CEPA 1999. The high-level expected outcomes guiding the Department's efforts over the evaluation period were articulated in the Clean Environment Business Line Plan. This plan contains two results areas that are relevant to CEPA 1999:

- the Air Result, which includes measurable environmental outcomes that are to be achieved within specified time frames; and
- the Toxics Result, which focuses primarily on processes and outputs, rather than environmental outcomes.

With the collaboration of departmental officials, the evaluation team developed a set of expected outcomes to assist in the conduct of the evaluation (see **Appendix IV**). These expected outcomes have been reviewed and agreed to by the Department's Accountable Leads (see Appendix II), for the purposes of assisting this evaluation. These expected outcomes, however, are not fully agreed to or aligned with relevant program-level strategies and goals and may not represent departmental policy.

Implementation Strategies

The evaluation found that the Department uses the Clean Environment Business Line Plan^{xxxii} as the overarching plan for CEPA 1999 (no separate CEPA 1999-specific strategic plan exists). Work on a Results-based Management and Accountability Framework for

^{xxxii} Environment Canada's governance structure was undergoing change at the time this evaluation was completed, in March 2005.

CEPA 1999 was initiated and later adjusted to cover the two key results areas for the Business Line (Air and Toxics). A Results-based Management and Accountability Framework for the Air Result has been completed and is being implemented; however, a Results-based Management and Accountability Framework for the Toxics Result is still under development.

The Results-based Management and Accountability Framework for the Air Result, the related Clean Air Agenda and the accompanying Federal Agenda on Cleaner Vehicles, Engines and Fuels represent “best practice” examples of departmental implementation strategies. These documents include:

- measurable, time-bound and environment-focused objectives;
- accountabilities and systems covering the complete management cycle of policy development, planning, implementation, measurement and reporting and senior management review; and
- sufficient resources to implement the most essential elements of the Clean Air Agenda, although the agenda was not fully funded.

While several examples of departmental “strategies” were identified for key program areas (e.g., the Toxic Substances Management Policy, Toxic Substances Management Process and the National Pollution Prevention Strategy), no other examples of similarly detailed implementation strategies were identified during the course of the evaluation. Less comprehensive program-level plans and strategies, however, were provided in support of the evaluation. In most cases, though, these remained in draft form, and it was unclear to the evaluation team whether these strategies reflected formal departmental policy and intentions or merely outlined possible options for future consideration

Roles and Responsibilities

Roles and responsibilities for implementation of most aspects of CEPA 1999 are addressed through the accountability mechanisms of the Clean Environment Business Line and the Department’s Accountability Charter. Aspects of CEPA 1999 where accountabilities could not be identified in this evaluation included the following:

- Accountabilities could not be identified for management and oversight of the federal house provisions of Part 9.
- An Accountable Lead could not be clearly identified for Nutrients (Part 7 Division 1), although the accountabilities are discussed in the CEPA 1999 Annual Reports.
- Given policy constraints, accountabilities for economic instruments, fees and charges and the recovery of costs and damages have not been established.

Resource Needs

The CEPA 1999 Operational Review in 2001–02 assessed resource needs for the full implementation of CEPA 1999. The Government of Canada subsequently provided the Department with an additional \$76.3 million a year for the implementation of CEPA 1999. These funds were to address mandatory obligations and replace resources from previous allocations that were scheduled to expire.

The main assumptions identified during the review of CEPA 1999 implementation remained valid at the time of the evaluation and continued to be used in departmental and program-level planning exercises. These assumptions are that:

- A total of 3450 substances from the Domestic Substances List will be “categorized in” as a result of the categorization exercise, scheduled for a September 2006

- completion. These substances will be subjected to further screening risk assessments.
- Of those substances subjected to screening assessments, 500 will require some form of risk management action.

The Department has estimated that it requires an additional \$40 million a year, on an ongoing basis, to:

- reduce by one-half the time to conduct screening-level risk assessments and any mandated risk management actions; and
- carry out a number of additional discretionary activities identified in CEPA 1999, such as:
 - environmental research;
 - environmental data collection, analysis and reporting;
 - risk management activities;
 - preparation for environmental emergencies; and
 - certain hazardous waste management activities.

Additional resource requirements have also been identified to support further progress in a small number of additional program areas, including:

- the federal house;
- biotechnology (ecosystem effects);
- marine environment; and
- compliance and enforcement.

Measurement and Reporting

At the departmental level, reporting is occurring through the annual Departmental Performance Report and the mandated CEPA 1999 Annual Report. These reports typically do not employ the performance indicators committed to by the Department within the Treasury Board Submission 2003 for implementation of CEPA 1999.

Few examples of reporting on program-level results were identified in the evaluation. Most program-level reporting focused on cataloguing activities and outputs. These activities and outputs are then reported through the Departmental Performance Report and the CEPA 1999 Annual Report. Reporting under the Clean Air Agenda and the Federal Agenda on Cleaner Vehicles, Engines and Fuels are examples of best practices. Measurement and reporting systems under these agendas include activities and outputs as well as progress against stated environmental performance and environmental outcome aspects.

Measurement and reporting practices at the level of individual risk management measures and tools vary. Most regulatory measures include some monitoring and reporting requirements. Some risk management measures and tools, such as guidelines and some codes of practice, however, do not include reporting. While many risk managers assess the effectiveness of the measures for which they are responsible, there is no formal requirement to do so systematically. Relatively few formal assessment reports were identified during the course of the evaluation.

The gaps in assessing the effectiveness of risk management measures and tools have been recognized by the Department. A Compliance and Enforcement Performance Assessment Tracking Initiative has been launched to help address these gaps. Nevertheless, some examples of risk managers changing risk management measures and tools to reflect assessment findings have been identified (e.g., changes to the regulation of polychlorinated

biphenyls, or PCBs). Best practice examples of measurement and reporting at the level of the individual risk management initiatives include:

- annual reporting on the impacts of new fuel regulations for benzene and sulphur, which are publicly available through departmental web sites;
- assessment and reporting on implementation of the *Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations*;
- assessment and reporting on implementation of guidelines for the wood preservation sector; and
- mechanisms put in place to ensure that Section 58 declarations provide consistent information relevant to assessing the environmental impacts of pollution prevention plans.

Organizational Learning

Organizational learning was widely undertaken by Environment Canada during the formative period of CEPA 1999 implementation. The CEPA 1999 Operational Review in 2001-02 was the major organizational learning and planning initiative undertaken. Formal organizational learning activities also have been undertaken in most program areas, including:

- preparation activities in support of the five-year Parliamentary Review of CEPA 1999 (in 2003–04);
- review and learning activities conducted in support of the emerging sectoral tables process;
- CEPA 1999 National Advisory Committee Survey (2001);
- surveys of users of the Green Lane and the CEPA Environmental Registry (ongoing);
- preparation of the Science and Technology Management Review Panel Report;
- multistakeholder consultations regarding numerous regulatory and implementation reforms, including pollution prevention planning, new substance notification, management of hazardous waste and disposal at sea;
- review of the regulatory development process subsequent to publishing the *Benzene in Gasoline Regulations*;
- ongoing national and regional environmental emergency planning and review exercises;
- international exercises (e.g., implementation of the Stockholm Convention);
- pilot screening assessment initiative, involving 123 substances; and
- a “revisit” of the Ozone Annex in 2004, to document progress and identify and address any challenges.

3.3 Outcome Issues for Evaluation

This subsection presents evaluation findings concerning the following evaluation criteria, which are intended to assess the Department’s potential to achieve the expected outcomes associated with CEPA 1999:

- Have demonstrable results been documented against any expected outcomes?
- Given current processes and progress, what can be said about whether expected outcomes will or will not be realized in time?

Demonstrable and Documented Results

In most areas, it is too early to determine or report on demonstrable progress, as:

- the Department has only had five years in which to understand, resource and organize itself to deliver on the Act; and
- the results the Department expects to achieve with the Act have not been fully developed or articulated.

Nevertheless, Environment Canada has achieved demonstrable results in the following well-documented areas (more details are available in Section 2):

- Through the Green Lane and the CEPA Environmental Registry, Canadians have access to more and better information with respect to CEPA 1999.
- Monitoring, tracking and reporting systems associated with air quality and acid deposition have been strengthened and now provide nationwide coverage; these systems are being used in decision-making.
- Pollution prevention planning notices have provided industry the opportunity to identify and address toxic releases in a manner most appropriate to their operations.
- Preliminary categorization decisions have been made for about 17 000 substances on the Domestic Substances List; another 1000 substances have been identified for removal from the Domestic Substances List.
- Benzene concentrations in urban and rural areas have fallen significantly.
- The use of methyl *tertiary*-butyl ether (MTBE) in gasoline is approximately 95% lower than in 1998.
- Sulphur emissions remain well below the total allowable national emissions limit as documented in the Canada – United States Air Quality Agreement.
- On- and off-road vehicle, engine and equipment standards and standards associated with small spark and compression ignition engines are aligned with those of the United States; the standards will deliver significant reductions in the release of smog-forming emissions during the operational life of the equipment.
- Through environmental emergency planning regulations, more than 1500 facilities should be better prepared to prevent and respond to environmental emergencies.

Despite the progress identified above, the evaluation found that most program areas have not articulated long-term environmental objectives and rather focus on measuring and reporting on the completion of anticipated activities or the development of projected outputs. Until gaps in objective setting and measurement and reporting are addressed, the Department will face significant challenges in documenting demonstrable progress towards the Act's expected outcomes.

Realization of Expected Outcomes

Expected outcomes are likely to be achieved in areas that have been assessed as highest priority by the Environmental Protection Service Executive Committee assigned with management of the Clean Environment Business Line. These areas include:

- categorization of existing substances;
- pollution prevention planning;
- the Clean Air Agenda and the accompanying Federal Agenda on Cleaner Vehicles, Engines and Fuels;
- environmental emergency planning;
- new substance notification;
- eliminating releases of persistent, bioaccumulative and toxic substances; and
- regulated activities in selected sectors.

Expected outcomes are unlikely to be achieved without changes to current plans or resources in areas involving:

- the federal house provisions of Part 9; and
- the enabling provisions provided by the Act in relation to economic instruments, fees and charges and the recovery of costs and damages.

The evaluation was unable to make a determination of whether the Department was on track to achieve expected outcomes concerning broader risk management and compliance promotion and enforcement activities:

- During the evaluation period, the Department's compliance promotion and enforcement activities focused on restoring capacity and setting priorities among previously existing (prior to March 2000) and new (since March 2000) CEPA measures. Measurement and reporting systems capable of documenting progress towards expected outcomes (including awareness levels and compliance rates) are just now being introduced.
- With respect to risk management, available documentation indicates that reductions in the use and release of some substances are occurring due to the Department's development and implementation of CEPA 1999 and non-CEPA 1999 measures. However, overall changes (in terms of the environmental performance of targeted facilities and in terms of actual changes to the quality of the environment) have not been fully tracked and reported. Environment Canada recognizes these gaps and has launched the CEPA Compliance and Enforcement Performance Assessment Tracking Initiative to address these.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This final section of the evaluation report offers several broad conclusions and recommendations arising from the detailed findings presented in the previous sections.

4.1 Conclusions

1. Environment Canada is addressing its obligations under CEPA 1999.

CEPA 1999 is described as being an “enabling” Act that provides the Minister of the Environment with broad, discretionary powers for protecting the environment. The Act imposes, however, a significant number of new obligations on the Minister, while maintaining many obligations that previously existed for CEPA 1988. Limitations with respect to the resources available for implementation of CEPA 1999 have required the Department to establish explicit priorities. The highest priority is placed on meeting all mandated obligations. The Department is well aware of all formal Ministerial obligations under the Act, and it has established the organizational base and relevant processes and procedures and secured the necessary resources to ensure that all of its obligations are met.

2. Environment Canada has realized significant accomplishments in most program areas.

Of particular note, the Department:

- is on track and well positioned to satisfy the requirement to categorize all of the more than 23 000 substances on the Domestic Substances List prior to the September 2006 deadline imposed by the Act; preliminary categorization decisions have already been published for about 17 000 substances, and a further 1000 substances have been identified for removal from the Domestic Substances List following investigations that concluded that they were inappropriate for inclusion;
- has met all legislated timeline requirements associated with the proposal and finalizing of risk management measures and tools in response to all substances proposed, by the Ministers of Health and Environment, for addition to the CEPA 1999 Schedule 1 List of Toxic Substances; and
- has strengthened industry and interjurisdictional cooperation on environmental protection matters through non-CEPA 1999 initiatives.

Despite the volume and significance of accomplishments documented in this report, the volume of the mandated activity the Department expects to undertake upon the completion of the Domestic Substances List categorization exercise in September 2006 could greatly exceed activity levels experienced over the evaluation period. While resource requirements have been assessed and met, the anticipated volume of work may pose significant planning and coordination challenges within Environment Canada, among federal departments, between levels of government and with industry and other stakeholders.

In addition, there is a need for enhanced government-wide cooperation and clarity of mandate and responsibilities for managing certain types of new substances, specifically animate products of biotechnology, in areas involving aquatic organisms, pharmaceuticals, certain food products and transgenic animals.

3. The full potential of CEPA 1999 has yet to be realized.

Despite the real progress in the areas of Ministerial obligations, outputs and governance, Environment Canada, and more generally the Government of Canada, has yet to realize the full potential of CEPA 1999 to serve as the primary means of protecting environmental and human health in Canada. Several key aspects of the Department's implementation of CEPA 1999 need to be addressed before the Act's full potential can be realized.

Federal House Provisions

Key actions with respect to the federal house provisions of Part 9 of CEPA 1999 have not been initiated. The provisions give the government the authority to ensure that federal operations and operations on federal and Aboriginal lands are subject to the same environmental performance standards as those of equivalent operations in the communities in which they are located. The government has made very limited use of the CEPA 1999 Part 9 provisions. Among the identified priority actions for strengthening implementation of CEPA 1999 and that remain outstanding are:

- establishment of a focal point for departmental and Government of Canada activities respecting environmental matters and the federal house;
- technical investigation and scientific assessment of the risk from federal house facilities and facilities on federal and Aboriginal lands; and
- subsequent development of a strategic plan for managing federal house issues under the Act.

CEPA National Advisory Committee

Fundamental differences of opinion on the appropriate role for the federal government in environmental protection remain between the federal government and its provincial and territorial counterparts. These differences, however, have not precluded fruitful collaboration on specific environmental issues. These differences of opinion will need to be addressed, however, before broader harmonization of environmental protection standards across Canada will be realized. The CEPA National Advisory Committee is intended to provide the forum and process for addressing such issues; however, all parties to the committee expressed concerns about its current effectiveness, including the following:

- Aboriginal representatives maintain that the committee is an ineffective forum for addressing the concerns of Aboriginal peoples and communities.
- Provincial and territorial representatives on the committee expressed concern with respect to the volume and pace of activity to be considered by the committee and their jurisdictional capacities to respond in a timely manner. They also expressed strong concerns with perceived federal duplication of their own efforts.
- Federal representatives are concerned that committee members do not see the real impacts their efforts have had on shaping federal policies and risk management measures and tools. They are also concerned about declining attendance rates, due to travel restrictions and other budgetary limitations imposed within some provincial and territorial jurisdictions.

Internal and External Barriers

Barriers exist that restrict the use of the Act's provisions relating to:

- the use of economic instruments and fees and charges;
- cost recovery of both administrative costs and damages resulting from pollution incidents; and
- public actions to initiate investigations and recover damages to private property.

Environmental Outcomes

The Department has not yet determined or communicated the environmental outcomes it intends to achieve with the broad enabling powers provided by the Act (with the exceptions of the Clean Air Agenda and the broad guidance provided by the National Pollution Prevention Strategy and the Toxic Substances Management Policy). Moreover, the links between risk management measures and environmental objectives are not always clear. The expected outcomes as developed for the purposes of this evaluation do not have formal departmental support. External stakeholders have also identified the lack of clear environmental outcomes as a significant shortcoming. The Department will continue to face difficulties in assessing its progress under the Act unless clear outcomes and objectives are understood and agreed upon by all parties.

Monitoring and Reporting

It remains too early to determine or report on demonstrable progress in environmental improvements under CEPA 1999 in many program areas. Measurement and accompanying reporting systems to determine and report on demonstrable progress even at some future date have yet to be fully introduced by Environment Canada. The ultimate success of CEPA 1999 in addressing the challenges of environmental and human health protection may be determined by the ability to monitor and report progress.

4.2 Recommendations

1. Environmental Outcomes

The Government of Canada, led by Environment Canada should develop a set of clear and realistic environmental outcomes that it intends to achieve under the broad enabling powers provided by CEPA 1999. This should be undertaken in consultation with other jurisdictions and stakeholders. In this way, a common mission can be developed around how the Act's provisions are to be used in support of environmental and human health protection in Canada.

2. Monitoring and Reporting

Environment Canada should develop and introduce, on a priority basis, a comprehensive framework for monitoring and reporting on progress against environmental outcomes. Through this framework, decision-makers at all levels will have appropriate information to facilitate decision-making, and Canadians will be able to determine whether the Act is succeeding in protecting environmental and human health. Specifically, measurement and reporting systems need to be in place to assess progress at the levels of:

- individual risk management measures and tools; and
- departmental programs and priorities relevant to CEPA 1999.

These monitoring and reporting programs should address both:

- changes in the activities and performance of the targeted audiences; and
- changes in environmental quality.

3. Federal House

Environment Canada should address, on a priority basis, the lack of action on the federal house provisions under Part 9 of CEPA 1999. Action in this area can address a clear gap in

the current implementation of CEPA 1999 and support the Government of Canada's national leadership role in environmental and human health protection.

4. National Advisory Committee

Environment Canada should undertake actions to strengthen the role of the National Advisory Committee as an effective means of promoting interjurisdictional cooperation. The Department should acknowledge that provincial/territorial and Aboriginal representatives do not fully share its view of the committee's mandate and successes. It should work with its partners to forge a forum that better responds to the emerging needs and priorities of all jurisdictions.

5. Identification of Barriers

Environment Canada should undertake work to document, communicate and, where possible, address any internal and external barriers that relate to:

- the use of economic instruments, fees and charges;
- cost recovery of both administrative costs and damages resulting from pollution incidents; and
- public actions to initiate investigations and recover damages to private property.

6. Federal Coordination on New Substances

Environment Canada, in cooperation with Health Canada, should clearly document the full range of aspects for which CEPA 1999 is currently required to fulfil safety net provisions with respect to the management of new substances, specifically animate products of biotechnology and emerging technologies. The two departments should work with other federal departments to articulate clear timelines for developing regulations that will result in the management of these aspects of new substances and technologies by the most appropriate department, and under the most appropriate federal legislation.

APPENDIX I

SUMMARY OF CEPA 1999 MINISTERIAL OBLIGATIONS^{xxxiii}

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
1. Administration	1. Establish a National Advisory Committee – 6(1) 2. Make committee reports publicly available – 8 3. Publish draft agreements with Aboriginal people – 9(2) 4. Give notice on how comments on how draft were addressed – 9(4) 5. Publish final agreements with Aboriginal people – 9(6) 6. Report annually on administration under agreements with Aboriginal people – 9(8) 7. Publish draft equivalency agreements – 10(4) 8. Give notice on how comments on draft agreements were addressed – 10(6) 9. Publish final agreements on equivalency – 10(7) 10. Report annually on administration under equivalency agreements – 10(10)
2. Public participation	11. Establish an Environmental Registry – 12 12. Place notices and other documents made publicly available by the Minister on the Environmental Registry – 13(1) 13. Acknowledge receipt of application for investigation of offence within 20 days – 18 14. Report on progress of the investigation and action every 90 days – 19 15. Prepare a report when investigation is discontinued – 21(2) 16. Give notice of any environmental protection action – 26(1) and other matters -26(2)(b)
3. Information gathering, objectives, guidelines and codes of practice	17. Establish, operate and maintain a system for monitoring environmental quality (mandatory attributes specified) – 44(1)(a) 18. Conduct research and studies relating to environmental contamination arising from disturbances of ecosystems by human activity – 44(1)(c) 19. Create an inventory of and publish on a periodic basis data on environmental quality – 44(1)(d) 20. Establish, operate and publicize demonstration projects and make them available for demonstration – 44(1)(e) 21. Publish and distribute information respecting pollution prevention and environmental quality, and a periodic report on the state of the Canadian environment – 44(1)(f) 22. Conduct research relating to hormone-disrupting substances – 44(4) 23. Issue guidelines with respect to the use of information-gathering powers – 47(1) 24. Consult with provinces / Aboriginal governments in developing said guidelines – 47(2) 25. Establish (and publish) a national inventory of releases – 48; 50 26. Issue (and publish) environmental quality objectives and guidelines, release guidelines and codes of practice – 54(1); 54(4) 27. Offer to consult with provinces / Aboriginal governments on above – 54(3)
4. Pollution prevention	28. Publish notice when authorizing extension for pollution prevention planning – 56(4) 29. Develop guidelines relating to pollution prevention planning – 62(1)

^{xxxiii} Ministerial obligations preceded by conditional (“if... then...”) statements have not been included here.

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
	30. Offer to consult with provinces / Aboriginal governments on above – 62(2)
5. Controlling toxic substances	31. Compile the Virtual Elimination List and establish levels of quantification – 65(2) 32. Establish release limits for substances on Virtual Elimination List – 65(3) 33. Maintain a Domestic Substances List (DSL) – 66(1) 34. Maintain a Non-Domestic Substances List – 66(2) and amend - 66(3)(4) 35. Publish the above lists – 66(5) 36. Offer to consult with provinces / Aboriginal governments on any Part 5 guidelines/interpretations – 69(2) 37. Publish any Part 5 guidelines/interpretations – 69(3) 38. Categorize all substances on the DSL by September 2006 – 73(1) 39. Conduct screening assessments, as dictated by categorization exercise – 74 40. Cooperate and develop procedures with other jurisdictions to exchange information – 75(2) 41. Review prohibitions/restrictions by other jurisdictions – 75(3) 42. Compile and publish a Priority Substances List (PSL) – 76(1); 76(6) 43. Offer to consult with provinces / Aboriginal governments on PSL – 76(2) 44. Respond to requests for additions to PSL within 90 days – 76(4) 45. Apply a weight of evidence approach and the precautionary principle during screening assessments, when reviewing decisions of other jurisdictions and when assessing PSL substances – 76.1 46. For substances declared toxic or capable of becoming toxic, the Minister must publish the “measure” the Minister proposes to take and a summary of the scientific considerations – 77(1) 47. Recommend addition to List of Toxic Substances where criteria in 77(3) are met – 77(3) 48. Propose implementation of virtual elimination for substances recommended for the List of Toxic Substances, if criteria in 77(4) are met – 77(4) 49. Publish summary of screening assessment and proposed measure and make assessment publicly available – 77(6) 50. Publish summary of review of decisions taken in other jurisdictions and proposed measure and make review publicly available – 77(6) 51. Publish summary of PSL risk assessment and proposed measure and make assessment publicly available – 77(6) 52. If a substance is recommended for addition to the List of Toxic Substances, the Minister must also publish a statement indicating the manner in which the Minister intends to develop a proposed regulation or instrument – 77(6c) 53. Make a recommendation for an order to add the substance to the List of Toxic Substances – 77(9) 54. Publish notice when determining that new or additional information is required to assess whether a substance specified on the PSL is capable of becoming toxic – 78 (2) 55. Require designated parties to prepare plans for substances on the Virtual Elimination List – 79(1) 56. Publish name of anyone granted a waiver with respect to new substances – 81(9)

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
	<p>57. Assess information provided with respect to new substances within specified time frames – 83(1)</p> <p>58. Assess information compulsorily gathered – 83(2) and give notification of extensions and termination 83 (5) and 83 (6)</p> <p>59. Publish notice of any conditions/prohibitions concerning new substances – 84(5)</p> <p>60. Add new substances to DSL if conditions in 87(1) and / or 87 (5) met</p> <p>61. Give priority to pollution prevention actions for those substances on the List of Toxic Substances – 90(1.1)</p> <p>62. Develop a proposed regulation or instrument within two years of recommendation for adding a substance to the List of Toxic Substances – 91(1)</p> <p>63. Specify dates on which preventative or control actions for implementation of virtual elimination are to take place –91 (2), take into account information on analytical methods and information provided in plans for determining level of quantification – 91(3), and take into account other relevant factors and information – 91(5)</p> <p>64. Publish summary of any additional measures Minister intends with respect to virtual elimination – 91(4)</p> <p>65. Finalize and publish regulation or control instrument within another 18 months – 92(1)</p> <p>66. Provide the committee with the opportunity to advise the Ministers before a regulation is made – 93 (3)</p> <p>67. Publish names of exporters and country of destination for persons exporting substances specified on the Schedule 3 Export Control List – s. 103.</p>
6. Animate products of biotechnology	<p>68. Add any substance to the DSL if it meets the criteria in 105(1) – 105(1)</p> <p>69. Publish the DSL and any amendments – 105(3) 105(2)</p> <p>70. Publish the name of any person granted a waiver with respect to animate products of biotechnology – 106(9)</p> <p>71. Assess information provided under 106(1), (3) or (4) and 107(1) within specified time – 108(1); 108(2)</p> <p>72. Publish conditions - 108 (5) and prohibitions – 109 (5) on the manufacture or import of a living organism</p> <p>73. Add a living organism to the DSL and amend the list if criteria in 112(1), 112(2) or 112(4) are met</p>
7. Controlling pollution and managing wastes	<p>74. Offer to consult with provinces and Aboriginal governments on any release guidelines, codes of practice or environmental objectives to prevent and reduce marine pollution from land-based sources – 121(2)</p> <p>75. Comply with Schedule 6 before issuing permits for disposal at sea – 127(3)</p> <p>76. Consult with foreign states likely to be affected (and the International Maritime Organization by disposal or incineration – 128(5)(a)</p> <p>77. Endeavour to follow recommendations of International Maritime Organization – 128(5)(b)</p> <p>78. Inform the International Maritime Organization of any action under 128 – 128(6)</p> <p>79. Permits shall specify condition – 129(1)</p> <p>80. Permits shall have an expiry date – 129(2)</p> <p>81. Monitor selected sites used for disposal/incineration at sea – 132</p> <p>82. Publish issued permits as soon as possible after issuance or within 30 days before first authorized date – 133(1)</p>

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
	<p>83. Offer to consult with provinces and Aboriginal governments on any regulations distinguishing among fuels – 140(4), or on any regulations regarding National Fuel Marks – 145(1)</p> <p>84. Upon receiving notice of vehicle/engine defect (157(1)), the Minister shall forward full particulars to each government – 157(6)</p> <p>85. May not detain vehicle engine equipment for more than 30 days after completion of tests unless proceedings are initiated – 159(3)</p> <p>86. Act on international air pollution in accordance with 166(2) and 166(3) only if conditions in 166(1) are met.</p> <p>87. Consult with responsible governments and offer them an opportunity to control or correct international air pollution from non-federal sources – 166(2)</p> <p>88. If conditions found in ss. 166(1) or (2) are met, then must either recommend regulations to Governor in Council regarding the international air pollution, or publish a notice for a pollution prevention plan under ss 56(1) – 166(3)</p> <p>89. When recommending regulations, take into account comments and notices of objection – 166(5)</p> <p>90. Advise foreign governments affected by or benefiting from regulations, prior to publication – 168(1)</p> <p>91. Advise foreign governments of any notices of objection – 168(3)</p> <p>92. Publish a report summarizing how written comments were addressed – 168(3)</p> <p>93. Where requesting a plan with respect to international air pollution, try to obtain samples of information from government for the area in which the person is situated – 172(2)</p> <p>94. Take measures to comply with 166 within 90 days of approval from Governor in Council – 173(5)</p> <p>95. Report annually on international air pollution administration – 174</p> <p>96. Act on international water pollution in accordance with 176(2) and 176(3) only if conditions in 176(1) are met.</p> <p>97. Consult with responsible governments and offer them an opportunity to control or correct international water pollution from non-federal sources – 176(2)</p> <p>98. If conditions found in ss. 176(1) or (2) are met, then must either recommend regulations to Governor in Council regarding the international water pollution, or publish a notice for a pollution prevention plan under ss. 56(1)– 176(3)</p> <p>99. When recommending international water regulations, take into account comments and notices of objection – 176(5)</p> <p>100. Advise foreign governments affected by or benefiting from regulations concerning international water pollution, prior to publication – 178(1)</p> <p>101. Advise foreign governments of any notices of objection – 178(3)</p> <p>102. Publish a report summarizing how written comments on proposed regulations were addressed – 178(3)</p> <p>103. Where requesting a plan with respect to international water pollution, try to obtain samples of information from government for the area in which the person is situated – 182(2)</p> <p>104. Take measures to comply with 176 within 90 days of approval from Governor in Council – 183(5)</p> <p>105. Report annually on administration of international water pollution – 184</p> <p>106. Consult with the government of the jurisdiction of destination before refusing to issue a permit to import – 185(3)</p>

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
	107. Publish notification of proposed import, export or transit of hazardous waste – 187 108. Publish any information received under regulations made for the purpose of this section – 189(2) 109. Publish any issued permits issued under this section for import, export or transit of hazardous waste – 190(4)
8. Environmental matters related to emergencies	110. Consult with provinces and Aboriginal governments on guidelines and codes of practice respecting environmental emergencies –197(1) 111. Publish any guidelines / codes of practice concerning environmental emergencies – 198
9. Government operations and federal and Aboriginal land	112. Establish objectives, guidelines and codes of practice concerning government operations and federal and Aboriginal lands – 208(1) 113. Offer to consult with provinces and Aboriginal governments on guidelines and codes of practice – 208(2)(a) 114. Offer to consult with provinces and Aboriginal governments on draft regulations – 209(3)(a)
10. Enforcement	115. Return any items seized as part of an enforcement investigation within 30 days of seizure, unless proceedings are instituted – 222(2) 116. Issue environmental protection order in writing, including items set out in 235(6)(a) – 235(6)(h) 117. Before issuing an environmental protection order, provide an oral or written notice and allow a reasonable opportunity for the person to make oral representations – 237(1) 118. Order of intent to issue an order shall contain the information specified in 237(2)(a) – 237(2)(c) 119. Establish and maintain a roster of review officers – 243 120. Appoint one review officer to act as Chief Review Officer – 244(1) 121. Publish the roster of review officers – 246 122. Include in the Environmental Registry a copy of all agreements and reports referred to in 300(2) and 303(1) – 301
11. Miscellaneous matters	123. Shall not disclose any information for which a request for confidentiality has been made – 314 124. Minister shall give notice of a proposed disclosure under ss. 315(1) – 315(2). 125. Offer to consult with the provinces and Aboriginal governments on guidelines, programs and other measures for the use of economic instruments developed under s. 322 – 323(1) 126. Publish any guidelines, programs or other measures concerning economic instruments – 324 127. Consult with any persons or organizations considered to be interested in the matter before making a regulation concerning fees and charges pursuant to s. 328 – 329 128. Publish all proposed orders and regulations – 332 129. Establish a board of review when a person or government files a notice of objection concerning proposed regulations regarding international air quality or disposal at sea – 333(3) 130. Establish a board of review when a person or government files a notice of objection to a proposed regulation under Part 9 or for controlling nutrients – 333(4) 131. Establish a board of review when a person files a notice of objection

Parts of CEPA 1999	Ministerial/Departmental Obligations (CEPA 1999 section)
	<p>with respect to a failure to make a determination as to whether a substance is toxic – 333(6)</p> <p>132. Make board of review reports publicly available as soon as possible after receipt – 340(2)</p> <p>133. Report to Parliament as soon as possible after the end of each fiscal year – 342</p> <p>134. Include in the annual report a report on research – 342(2)</p> <p>135. Refer administration of the Act to a standing committee of Parliament every five years – 343</p>

APPENDIX II

CEPA ACCOUNTABILITIES

Parts of CEPA 1999	Accountability
1. Administration	<p><i>National Advisory Committee:</i> Director General – Strategic Priorities Directorate</p> <p><i>Agreements:</i> Director General – Strategic Priorities Directorate</p> <p><i>Governance:</i> Assistant Deputy Minister – Environmental Protection Service, with support of Director General – Strategic Priorities Directorate</p>
2. Public participation	<p><i>Registry:</i> Director General – Environmental Technology Advancement Directorate</p> <p><i>Enforcement/Investigations:</i> Director General – National Programs Directorate</p>
3. Information gathering, objectives, guidelines and codes of practice	<p><i>State of Environment Reporting:</i> Director General – Knowledge Integration Directorate</p> <p><i>“Green Lane” and Other Public Awareness Components:</i> Director General – Client Service Transformation</p> <p><i>Monitoring:</i> varies with system (e.g., national air pollution monitoring: Director General – Environmental Technology Advancement Directorate). Director General – Risk Assessment Directorate has new responsibility to ensure that CEPA-related information is drawn and reported on from monitoring systems.</p> <p><i>Research – Hormone-disrupting Substances:</i> Director General – National Water Research Institute</p> <p><i>Research – Ecosystem Health and Environmental Quality:</i> Director General – National Water Research Institute</p> <p><i>Research – Vehicles, Engines, Equipment, Fuels:</i> Director General – Environmental Technology Advancement Directorate</p> <p><i>Test Method Development:</i> Director General – Environmental Technology Advancement Directorate</p> <p><i>Demonstration Projects:</i> Director General – Environmental Technology Advancement Directorate (except municipal wastewater – National Water Research Institute)</p> <p><i>Research – Environmental Emergencies:</i> Director General – Environmental Technology Advancement Directorate</p> <p><i>Research and Analysis in Support of Compliance and Enforcement:</i> Director General – Environmental Technology Advancement Directorate</p> <p><i>Toxics Inventory:</i> Director General – Risk Assessment Directorate</p> <p><i>Guidelines:</i> Director General – Air Pollution Prevention Directorate, as part of CEPA risk management</p>
4. Pollution prevention	<p>Director General – Pollution Prevention Directorate; functional lead for all risk management, including pollution prevention planning.</p> <p>Others may execute specifics, e.g., Director General – Environmental Technology Advancement Directorate for municipal wastewater, Regional Director of Quebec Region for textile mill effluents.</p>
5. Controlling toxic substances	<p><i>Risk Assessment:</i> Director General – Risk Assessment Directorate</p> <p>Note: Adding a substance to the List of Toxic Substances requires agreement with the Director General – Pollution Prevention Directorate, who is accountable for ensuring that CEPA 1999 instruments are proposed and finalized within the time frames specified under the Act.</p> <p><i>New Substances Program:</i> Director General – Risk Assessment Directorate</p>

Parts of CEPA 1999	Accountability
	<i>Risk Management:</i> Director General – Pollution Prevention Directorate, for development of risk management measures and tools; Director General – National Programs Directorate for compliance promotion and enforcement
6. Animate products of biotechnology	<i>New Substances Program:</i> Director General – Risk Assessment Directorate
7. Controlling pollution and managing wastes	<i>Nutrients:</i> N/A <i>Marine Environment and Disposal at Sea:</i> Director General – Pollution Prevention Directorate <i>Fuels, Vehicles, Engines and Equipment Emissions:</i> Director General – Air Pollution Prevention Directorate <i>International Air:</i> Director General – Air Pollution Prevention Directorate <i>International Water:</i> Director General – Pollution Prevention Directorate Note: The Act's international air and international water provisions are beyond normal program activities. Use of these authorities would be at the Ministerial level.
8. Environmental matters related to emergencies	Director General – National Programs Directorate
9. Government operations and federal and Aboriginal land	Director General – Pollution Prevention Directorate
10. Enforcement	Director General – National Programs Directorate (functional management to promote consistent national results) Director General – Regional offices (Operational management – compliance promotion and enforcement programs are delivered in regions) ^{xxxiv} Note: To keep Chief Review Officer's independence from departmental enforcement operations, the Assistant Deputy Minister – Human Resources and Service Innovation acts as focal point for departmental interactions with the Chief Review Officer on matters of budget, etc. The Director General – Strategic Priorities Directorate acts as link between the Department's Environmental Protection Service and Human Resources and Service Innovation, as required.
11. Miscellaneous matters	<i>Annual Report and Five-year Review:</i> Director General – Strategic Priorities Directorate Other accountabilities follow other programs, as above.

^{xxxiv} This is changing in response to Environment Canada's new governance structure.

APPENDIX III

SUMMARY OF IDENTIFIED PRIORITY ACTIONS ^{xxxv}

Parts of CEPA 1999	Planning Assumptions	Priority Actions
1. Administration	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ N/A
2. Public participation	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ N/A
3. Information gathering, objectives, guidelines and codes of practice	<ul style="list-style-type: none"> ▪ Investments made in strategic research areas, including: <ul style="list-style-type: none"> - collection and analysis of compliance samples - test protocols for new substances - research and development for enhanced monitoring of air quality and wastewater effluent - protocols, methods and standards for new technologies - identification of hazards - development, assessment and application of novel technologies for hazard assessment and risk assessment - existing water quality information is consolidated ▪ Information continues to be made available from: <ul style="list-style-type: none"> - Great Lakes Action Plan - Environmental Effects Monitoring (EEM) - National Pollutant Release Inventory (NPRI) - National Air Pollution Surveillance Network (NAPS) - Canadian Air and Precipitation Monitoring Network (CAPMoN) ▪ A monitoring and reporting focal point will be established 	<ul style="list-style-type: none"> ▪ Develop better science/policy linkages through effective priority setting and emerging issue identification ▪ Improve coordination of activities across research centres ▪ Establish a monitoring and reporting focal point to: <ul style="list-style-type: none"> - develop an approach to supply Canadians with relevant environmental information - consolidate results in a manner that supports CEPA 1999 policy delivery and decision-making - maintain good ambient air quality information - expand NPRI to include up to 10 new substances per year – in a format that is easily interpreted by Canadians
4. Pollution prevention	<ul style="list-style-type: none"> ▪ Use of a wide range of risk management measures and tools, including the number of pollution prevention plans 	<ul style="list-style-type: none"> ▪ N/A

^{xxxv} The information contained in this Annex provides a summary of the key planning assumptions developed to inform projections of future work loads. It also contains a summary of priority actions which the Department has identified for improving the effectiveness and efficiency of CEPA 1999 implementation."

Parts of CEPA 1999	Planning Assumptions	Priority Actions
	<p>implemented and their success managing toxic substances</p>	
<p>5. Controlling toxic substances</p>	<ul style="list-style-type: none"> ▪ Expect to “categorize in” 3450 substances, resulting in 138 individual substances being assessed per year ▪ Expect that 1% of screening-level risk assessment substances will require follow-up Priority Substances List (PSL) assessment (six per year) ▪ Volume of new substances notifications is growing quickly; expect about 1150 per year by 2011 ▪ Must assess data in notifications within 45 days, otherwise industry is free to proceed regardless of program suspicions/concerns ▪ Innovative assessment methodologies and tools developed ▪ Expect 10 substances per year to be declared toxic ▪ More than one instrument will need to be developed at least 75% of the time ▪ A majority of CEPA 1999 instruments will address more than one substance (multipollutant approach) ▪ One regulation per substance on Virtual Elimination List ▪ 50% of toxic substances will be covered by a regulation ▪ 25% of toxic substances will be covered by a code of practice ▪ For every 20 substances declared toxic, Environment Canada will develop: <ul style="list-style-type: none"> - 10 pollution prevention plans - 1 regulation for virtual elimination - 7 additional regulations - 3 codes of practice 	<ul style="list-style-type: none"> ▪ Develop an effective priority-setting mechanism that facilitates resource allocation by highest priority ▪ Leverage the work of, and seek harmonization with, other jurisdictions ▪ Place the onus on industry to provide information/data for the assessment process ▪ Make risk assessment decisions more quickly, with less stakeholder engagement and (at times) with fewer lines of evidence and thus greater uncertainty than with past PSL assessments ▪ Conduct PSL assessments on a highly selective basis, and carry these out in a streamlined and cost-effective manner ▪ Streamline new substances notification process on a continual basis ▪ Reduce New Substance Notification effort by 15% per notification by 2006 ▪ Implement changes stemming from chemical/polymer multistakeholder consultation process to: <ul style="list-style-type: none"> - increase transparency of New Substance Notification process - make New Substance Notification regulations more responsive in the global context - expand New Substance Notification more quickly to manage expected number of annual notifications - develop new regulations to enable environmental risk assessments of new food and drug substances before entering the market - establish existing substance priorities in conjunction with risk assessment program seek efficiencies by borrowing and adopting

Parts of CEPA 1999	Planning Assumptions	Priority Actions
		<p>tools used in other jurisdictions and by leveraging generic instruments to reduce development and implementation costs</p> <ul style="list-style-type: none"> - increase the application of voluntary initiatives to reduce the use of suspected toxics by industry, through the development and implementation of environmental performance agreements
<p>6. Animate products of biotechnology</p>	<ul style="list-style-type: none"> ▪ Volume of new substances notifications is growing quickly; expect about 100 biotech notifications per year by 2011 ▪ Must assess data in notifications within 45 days, otherwise industry is free to proceed regardless of program suspicions/concerns ▪ Innovative assessment methodologies and tools developed ▪ Listing of other acts proceeds 	<ul style="list-style-type: none"> ▪ Increase transparency of New Substance Notification process ▪ Make New Substance Notification regulations more responsive in the global context ▪ Expand New Substance Notification more quickly to manage expected number of annual notifications ▪ Develop new regulations to enable environmental risk assessments of new food and drug substances before entering the market
<p>7. Controlling pollution and managing wastes</p>	<ul style="list-style-type: none"> ▪ Core national and regional capacities for disposal at sea permits exist in Environment Canada and other departments ▪ Maintain a core capacity to implement and monitor the results of Canada's National Programme of Action for the Protection of the Marine Environment from Land-based Activities and the Regional Programme of Action for the Protection of the Arctic Marine Environment from Land-based Activities ▪ Develop, implement and maintain nine regulations concerning hazardous waste and polychlorinated biphenyls (PCBs) ▪ Mechanisms to receive notifications and issue permits established and maintained 	<ul style="list-style-type: none"> ▪ Increase capacity to respond to anticipated request for ocean disposal permits from offshore oil and gas sector ▪ Increase transparency of ocean disposal permitting system ▪ Build capacities and ensure that Environment Canada objectives and targets for pollution prevention and management of marine sources of pollution are considered by other departments ▪ Enhance coordination and consistency of marine environmental protection activities for land-based sources of marine pollution with other government departments and provinces ▪ Improve linkages and coordination with other ocean bodies, university groups and regional groups ▪ Leverage existing monitoring data and shellfish water quality data to support program goals

Parts of CEPA 1999	Planning Assumptions	Priority Actions
		and objectives <ul style="list-style-type: none"> ▪ Develop a performance measurement framework for the hazardous waste program ▪ Develop and harmonize standards for management of hazardous waste nationally, regionally and globally ▪ Explore opportunities to implement cost recovery within hazardous waste program ▪ Create an e-tracking system for hazardous waste in partnership with United States Environmental Protection Agency ▪ Increase the number of memoranda of understanding with provinces regarding the control of interprovincial movement of hazardous waste ▪ Promote national harmonization of criteria for environmentally sound management of hazardous waste
8. Environmental matters related to emergencies	<ul style="list-style-type: none"> ▪ Maintain a core capacity across regions to prepare for and respond to emergencies ▪ Ensure that industry and other first responders reduce the probability of accidental releases and the impacts associated with the release of high-risk substances ▪ Number of environmental emergency planning decisions taken on 10 CEPA 1999 toxics 	<ul style="list-style-type: none"> ▪ Remove backlog of assessing risk of emergencies from substances declared toxic ▪ Develop and implement a national strategic framework for implementation of the environmental emergencies program ▪ Review and maintain up-to-date agreements with partners ▪ Enhance capacity to seek compensation from polluters and restoration costs
9. Government operations and federal and Aboriginal land	<ul style="list-style-type: none"> ▪ Work to incorporate by reference provincial environmental laws into contract arrangements and/or appropriate federal legislation ▪ A focal point to manage and coordinate Part 9 issues and initiatives will be established 	<ul style="list-style-type: none"> ▪ A focal point will be established to undertake: <ul style="list-style-type: none"> - scientific assessment of risk from the federal house facilities and Aboriginal lands - technical investigation of the status of federal house facilities and Aboriginal land - consultation in the federal house and with Aboriginal groups on the setting of objectives, guidelines and codes of practice - standards and guideline development - risk management strategies

Parts of CEPA 1999	Planning Assumptions	Priority Actions
		and legislative and non-legislative instruments to address risks - compliance promotion and enforcement of relevant regulations and standards
10. Enforcement	<ul style="list-style-type: none"> ▪ For every 20 substances declared toxic, Environment Canada will develop 21 CEPA 1999 control instruments ▪ Compliance promotion will be delivered on all instruments ▪ Support for 23 enforcement officers at a cost of \$1.5 million will be available by 2007–08 ▪ New CEPA 1999 control instruments will involve complex multipollutant and/or sectoral approaches ▪ For every 20 substances declared toxic, 8 new regulations will be developed ▪ Increased inspections will result in increased (and more costly) enforcement ▪ Officers will be trained on new regulations; increase in environmental protection compliance orders and requests for review 	<ul style="list-style-type: none"> • Department will take a more streamlined, innovative approach to making industry aware of incoming control instruments ▪ Compliance promotion materials will be coordinated to avoid duplication and to effect efficient distribution across regions ▪ A national focal point for compliance promotion will be established ▪ A targeted approach to compliance promotion will be adopted by leveraging synergies between tools aimed at the same sector (as opposed to individual substances) ▪ More effective integration training of compliance promotion and enforcement officers ▪ Electronic enforcement tools (integrated database information system) developed ▪ Adopt a risk-based approach to enforcement ▪ Develop a strong intelligence program that targets potential violators before infractions occur ▪ Develop a performance measurement framework for the enforcement program ▪ Integrate enforcement with pollution prevention and other environmental stewardship initiatives
11. Miscellaneous matters	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ N/A

APPENDIX IV

CEPA 1999 EXPECTED OUTCOMES

Parts of CEPA 1999	Expected Outcomes/Intentions ^{xxxvi}
1. Administration	<i>Obligations</i> <ul style="list-style-type: none"> • None specified.
	<i>Advisory Committee</i> <ul style="list-style-type: none"> • None specified.
	<i>Agreements</i> <ul style="list-style-type: none"> • An increase in the harmonization of environmental standards and requirements across all Canadian jurisdictions.
	<i>Management and Accountability^{xxxvii}</i> <ul style="list-style-type: none"> • None specified.
2. Public participation	<i>Obligations</i> <ul style="list-style-type: none"> • None specified.
	<i>Informing the Public</i> <ul style="list-style-type: none"> • Canadians have better access to information.
	<i>Public Participation</i> <ul style="list-style-type: none"> • Canadians have the opportunity to initiate investigations of alleged offences, recover personal damage and economic loss, make personal claims and file citizens' suits.
3. Information gathering, objectives, guidelines and codes of practice	<i>Obligations</i> <ul style="list-style-type: none"> • None specified.
	<i>Information Gathering</i> <ul style="list-style-type: none"> • Environmental conditions are monitored, tracked and reported. • Information across disparate networks is extracted, analyzed and published in a way that influences internal decision-making and management by all levels of government. • Research and development and demonstration projects are supported.
	<i>Objectives, Guidelines, Codes of Practice</i> <ul style="list-style-type: none"> • The behaviour of Canadians, and industry in particular, is influenced by guidelines and codes.
4. Pollution prevention	<i>Obligations</i> <ul style="list-style-type: none"> • None specified.
	<i>Pollution Prevention Planning</i> <ul style="list-style-type: none"> • Where risks can be managed appropriately, industry is provided opportunities to identify and address toxic releases in a manner most appropriate to its operations.
5. Controlling toxic substances	<i>Obligations</i> <ul style="list-style-type: none"> • All time-bound obligations are satisfied.
	<i>Assessing Existing Substances</i> <ul style="list-style-type: none"> • All substances on the Domestic Substances List are categorized by September 2006.

^{xxxvi} Expected outcomes/intentions have been developed through a review of the outcomes specified in the Treasury Board Submission 2003 "Budget 2003 Investment for CEPA (Technical Annex)" and of those of the Clean Environment Business Line "Air Result" and "Toxics Result." The Department is currently working to make those outcomes/intentions more comprehensive and hence more reflective of Environment Canada's intended outcomes relating to CEPA 1999.

^{xxxvii} For convenience, lines of inquiry concerning overarching CEPA 1999 Management and Accountability have been positioned under Part 1 (Administration).

Parts of CEPA 1999	Expected Outcomes/Intentions ^{xxxvi}
	<p><i>New Substances</i></p> <ul style="list-style-type: none"> • Eliminate overlap and duplication with other acts. • CEPA 1999 functions as an effective safety net for areas not covered by other federal Acts. • Unauthorized use of new substances will be prevented. <p><i>Risk Management (General)</i></p> <ul style="list-style-type: none"> • Releases of toxic substances are prevented or reduced. • The use of existing substances in products and industrial and commercial processes is better managed. • Releases of known persistent, bioaccumulative and inherently toxic substances from human-caused sources are virtually eliminated. <p><i>Risk Management (Air)</i></p> <ul style="list-style-type: none"> • Reductions of releases of smog-forming emissions from major industrial sources. • Reduction of nitrogen oxide emissions. • Reductions of volatile organic compound emissions from various products. • Prevent and reduce domestic and global emissions of hazardous air pollutants. • Protect the ozone layer from ozone-depleting substances. • Reductions of acid deposition below critical levels.
6. Animate products of biotechnology	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • All time-bound obligations are satisfied <p><i>Assessment of Animate Products of Biotechnology</i></p> <ul style="list-style-type: none"> • Eliminate overlap and duplication with other acts. • CEPA 1999 functions as an effective safety net for areas not covered by other federal acts. <p><i>Management of Animate Products of Biotechnology</i></p> <ul style="list-style-type: none"> • Releases of toxic or harmful animate products of biotechnology are prevented or reduced. • Unauthorized use of new animate products of biotechnology is prevented.
7. Controlling pollution and managing wastes	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Division 1: Nutrients</i></p> <ul style="list-style-type: none"> • Growth of vegetation caused by the release of nutrients is prevented or reduced. <p><i>Division 2: Protection of the Marine Environment</i></p> <ul style="list-style-type: none"> • Protection of marine environment from land-based sources of pollution. <p><i>Division 3: Disposal at Sea</i></p> <ul style="list-style-type: none"> • Enhanced management of materials disposed of at sea. <p><i>Division 4: Fuels and Division 5: Vehicle, Engine and Equipment Emissions</i></p> <ul style="list-style-type: none"> • Reduction of smog-forming emissions from fuels, vehicles, engines and equipment. <p><i>Division 6: International Air Pollution</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Division 7: International Water Pollution</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Division 8: Control of Movement of Hazardous Waste</i></p> <ul style="list-style-type: none"> • Increased harmonization of approach across Canadian jurisdictions. and a commitment to raise Canadian standards to those in the United States.
8. Environmental matters related to	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • None specified.

Parts of CEPA 1999	Expected Outcomes/Intentions ^{xxxvi}
	<p><i>Environmental Emergencies</i></p> <ul style="list-style-type: none"> • Emergency preparedness, prevention response and recovery more effective. • Plans in place for toxic substance whose accidental release poses a significant risk. • Regulations in place that enable efficient recovery of costs.
9. Government operations and federal and Aboriginal land	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Federal House</i></p> <ul style="list-style-type: none"> • Federal operations and those of federal works and undertakings will be held to the same environmental protection and prevention standards as the communities in which they operate. • Operations on Aboriginal lands will be held to the same environmental protection and prevention standards as comparable operations on adjacent non-Aboriginal lands.
10. Enforcement	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Enforcement</i></p> <ul style="list-style-type: none"> • Increased awareness of enforceable CEPA 1999 instruments and related obligations. • The rate of compliance with enforceable CEPA 1999 instruments improves. • Enforcement is carried out in a fair, consistent and predictable manner. • Facilities return to compliance more quickly through the use of more flexible enforcement tools.
11. Miscellaneous matters	<p><i>Obligations</i></p> <ul style="list-style-type: none"> • None specified. <p><i>Economic Instruments</i></p> <ul style="list-style-type: none"> • Economic instruments (such as trading systems) are used to achieve environmental objectives where appropriate. <p><i>Cost Recovery</i></p> <ul style="list-style-type: none"> • Cost recovery of departmental efforts related to the control or cleanup of pollution is pursued consistent with government policy.

APPENDIX V EVIDENCE COLLECTION TEMPLATE

	Evaluator:	
	Date:	
Part:		
Sub-Part/Division:		
Line of Inquiry under Consideration:	<i>For example:</i> <ul style="list-style-type: none"> ▪ Obligation satisfied ▪ Priorities established and implemented ▪ Resources sufficient ▪ Identified priority action initiated ▪ Identified planning assumption used ▪ Etc. (other line of inquiry) 	
Details:	<i>For example:</i> <ul style="list-style-type: none"> ▪ Specific section of Act ▪ Specific obligation in question ▪ Specific priority action being considered ▪ Etc. 	
Related Expected Outcome:	(As per evaluation framework, where applicable)	
Issue Assessment:	<i>For example:</i> <ul style="list-style-type: none"> ▪ Obligation has been fulfilled ▪ Priority action has been initiated ▪ Resource requirements have not been assessed ▪ Measurement and reporting are taking place ▪ Strategic reviews have not been undertaken ▪ Etc. 	
Source and Nature of Evidence:	<i>For example:</i> <ul style="list-style-type: none"> ▪ CEPA 1999 Annual Report 2003 p. XX (and details) ▪ Clean Environment Business Line Plan 2001–2003 p. XX (and details) ▪ Interview with department personnel (position and date) (and details) ▪ Etc. 	
Other Comments:		

APPENDIX VI SUMMARY EVIDENCE TEMPLATE

	Senior Evaluator:	
	Date:	
Part:		
Sub-Part/Division:		
PROGRESS ISSUES	Assessment	
Are Ministerial obligations being satisfied?		
What has been done (2000–2004)?		
Have the identified priority actions for strengthening the implementation of CEPA 1999 been initiated?		
What improvements in implementation have been made since 1999, with what results?		
What major issues / challenges / contextual factors have been identified? Addressed?		
What progress has been made in harmonizing activities/processes with provinces?		
What progress has been made in coordinating activities/processes with those of other OECD jurisdictions?		
PROCESS ISSUES		
Have expected outcomes/goals/objectives been established? Are these agreed to?		
Have roles and accountabilities been established? Are these being acted upon?		
Has an implementation strategy with timelines, priorities and resources been established?		
Have resource needs been assessed and met? Are the identified planning assumptions being used in planning process?		
Has a measurement and reporting system been put in place to track progress towards strategic goals / expected outcomes?		
What organizational learning activities have taken place?		
OUTCOME ISSUES		
Have demonstrable results been documented against any expected outcomes?		
Given current processes and progress, what can be said about whether expected outcomes will or will not be realized, in time?		

APPENDIX VII

GUIDE TO STAKEHOLDER INTERVIEWS

Introduction

Environment Canada has contracted Stratos Inc. to perform an independent third-party evaluation of the *Canadian Environmental Protection Act, 1999* (CEPA 1999), in support of the five-year Parliamentary Review. This evaluation will be based on documentary *evidence* gathered to indicate progress made in meeting the Department's expected environmental outcomes for CEPA 1999. It supplements a separate consultation exercise under way to gather stakeholder *experiences* with CEPA 1999.

Interviews with selected stakeholders will contribute to the evaluation of CEPA 1999. The goal of these interviews is to acquire evidence regarding the questions posed below, which relate to both the progress made on CEPA 1999 and the role of Environment Canada in this regard.

Overview Questions

1. What is your experience with CEPA? Which areas of CEPA are you actively engaged or concerned with?
2. What progress has been made in meeting the intent of CEPA 1999? (Note any evidence available.)
 - What achievements are you aware of? What areas are most promising?
 - Where has there been a lack of progress? What do you think is having an impact on making progress?
3. Overall, has Environment Canada been successful in delivering on CEPA? (What evidence would speak to this success?)
4. Is Environment Canada aligning its programs and standards with others involved in environmental protection across Canada (e.g., provinces/territories)? (Note any evidence available.)
5. Is Environment Canada working together and coordinating with others involved in environmental protection (e.g., other federal departments, provinces/territories, internationally, etc.)? (If so, please explain.)
6. Is Environment Canada providing the conditions or environment that supports the work that others (e.g., public, industry, other levels of government, etc.) need to do to contribute to CEPA's objectives on environmental protection and pollution prevention? (Note any evidence available.)

Specific Questions for National Advisory Committee (NAC) Members Only

7. How well is CEPA NAC working? (Note any evidence available.)
8. Is there any evidence that NAC is influencing Environment's Canada decision-making on CEPA?
9. Are any changes required?

APPENDIX VIII STAKEHOLDER INTERVIEWS

	Name	Affiliation
CEPA National Advisory Committee		
1	Paul Glover	Health Canada
2	Joe Muldoon	Saskatchewan
3	Keith Leggat	Alberta
4	Marcel Gaucher	Quebec (Observer)
5	Julie Schroeder for Ian Smith	Ontario
6	Perry Haines	New Brunswick
7	Don Jardine	Prince Edward Island
8	Emery Paquin	Northwest Territories
9	Alan Penn	Cree Regional Authority
Others		
1	Sandra Schwartz and James Carroll	Office of the Minister of the Environment
2	Michel Arès	Environment Canada Legal Counsel
3	Isabelle Proulx for Richard Tudor Price	Agriculture and Agri-Food Canada
4	Trish MacQuarrie	Pest Management Regulatory Agency
5	Stephen Yarrow for Gary Koivisto	Canadian Food Inspection Agency
6	Barbara Craig	Indian and Northern Affairs Canada
7	Doug May for Richard Wex	Fisheries and Oceans Canada
8	Denis Lagacé	Natural Resources Canada
9	Marc-Yves Bertin	Privy Council Office
10	Peigi Wilson	Assembly of First Nations
11	Catherine Cobden for Avrim Lazar	Forest Products Association of Canada
12	Justyna Laurie-Jean for Gord Peeling	Mining Association of Canada
13	Nancy Coulas	Association of Manufacturers and Exporters of Canada
14	Chris Tebbs	International Drycleaning
15	Paul Muldoon	Canadian Environmental Law Association
16	Susan Sang for Julia Langer	World Wildlife Fund
17	Bruce Walker	STOP, Montreal
18	John Jackson	Great Lakes United
19	Clyde Graham for Roger Larson	Canadian Fertilizer Institute
20	Claude André Lachance	DOW Chemicals
21	Michael Cloghesy	Centre Patronal de l'Environnement
22	Mark Winfield	Pembina Institute
23	Bea Olivastri	Friends of the Earth
24	Al Hamilton	Sifto Salt

APPENDIX IX

OVERVIEW OF RISK MANAGEMENT MEASURES AND TOOLS DEVELOPED (2000–2004)

1. Regulations

- Prohibition of Certain Toxic Substances Regulations, 2003 – SOR/2003-99
- Regulations Amending Certain Regulations Made under Section 209 of the *Canadian Environmental Protection Act, 1999* (Miscellaneous Program) – SOR/2000-105
- Federal Halocarbon Regulations, 2003 – SOR/2003-289
- Regulations Amending Certain Regulations Made under Subsection 93(1) of the *Canadian Environmental Protection Act, 1999* (Miscellaneous Program) – SOR/2000-102
- Regulations Amending the Gasoline Regulations – SOR/2003-106
- Environmental Emergency Regulations – SOR/2003-307
- Regulations Amending the Ozone-depleting Substances Regulations, 1998 – SOR/2002-100
- Regulations Amending the Benzene in Gasoline Regulations – Proposed, Part I of the *Canada Gazette*, February 1, 2003
- Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations – SOR/2003-79
- Solvent Degreasing Regulations – SOR/2003-283
- Tributyltetradecylphosphonium Chloride Regulations – SOR/2000-66
- On-Road Vehicle and Engine Emission Regulations – SOR/2003-2
- Off-Road Small Spark-Ignition Engine Emission Regulations – SOR/2003-355
- Sulphur in Gasoline Regulations – SOR/99-236
- Sulphur in Diesel Fuel Regulations – SOR/2002-254

2. Pollution Plan Requirements

Final *Canada Gazette* Notices:

- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Dichloromethane
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans for Inorganic Chloramines and Chlorinated Wastewater Effluents
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Acrylonitrile
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Nonylphenol and its Ethoxylates Contained in Products
- Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Nonylphenol and its Ethoxylates Used in the Wet Processing Textile Industry and Effluents From Textile Mills that Use Wet Processing

Proposed Notice in *Canada Gazette*, Part I:

- Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Specified Toxic Substances Released from Base Metals Smelters and Refineries and Zinc Plants

3. Codes of Practice

- Environmental Code of Practice for Non-Integrated Steel Mills – EPS 1/MM/8 – March 2001
- Environmental Code of Practice for Integrated Steel Mills – EPS 1/MM/7 – March 2001
- Code of Practice for the Reduction of Dichloromethane Emissions from the Use of Paint Strippers in Commercial Furniture Refinishing and Other Stripping Applications – EPS 1/CC/4
- CEPA 1999 Code of Practice for the Environmental Management of Road Salts –, April 3, 2004

4. Guidelines

Note: This list does not include guidelines prepared by the Canadian Council of Ministers of the Environment, guidelines for implementation of certain parts of or authorities under the Act or notification and testing guidelines.

- Guideline for the Release of Ammonia Dissolved in Water Found in Wastewater Effluents¹⁰⁰
- Guidelines for Volatile Organic Compounds in Consumer Products¹⁰¹
- New Source Emission Guidelines for Thermal Electricity Generation¹⁰²
- Environmental Choice Program – Guideline on Renewable Low-impact Electricity¹⁰³
- Notice with respect to the Guidelines for the Reduction of Ethylene Oxide Releases from Sterilization Applications¹⁰⁴

5. Environmental Performance Agreements

Environmental Performance Agreements negotiated based on Environment Canada's Policy Framework (June 2001)

- Environmental Performance Agreement Between Her Majesty the Queen in Right of Canada as represented by the Minister of the Environment represented by the Regional Director General, Environment Canada, Ontario Region (herein after called Environment Canada) and Specialty Graphic Imaging Association and Participating Facilities in Ontario
- Environmental Performance Agreement Between Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment, and Her Majesty the Queen in Right of Canada, as represented by the Minister of Industry, and the Automotive Parts Manufacturers' Association, a non-profit organization, and the Participating Member Companies
- A Cooperative "Environmental Emissions Monitoring, Inspection and Product Stewardship Program" Between Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment and Members of the Refractory Ceramic Fibre Industry
- Environmental Performance Agreement Respecting the Production and Distribution of 1,2-Dichloroethane Between Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment and Dow Chemical Canada Inc.

Agreements Respecting Environmental Performance Negotiated Prior to the Publication of the Policy Framework (June 2001)

- Canadian Chemical Producers' Association (CCPA) and Governments of Canada, Ontario and Alberta Memorandum of Understanding for Environmental Protection Through Action Under CCPA Responsible Care®
- Environmental Management Agreement among Dofasco Inc.; Her Majesty the Queen in Right of Canada as represented by the Minister of the Environment; and the Ministry of Environment, Province of Ontario

- Environmental Management Agreement between Algoma Steel Inc. and Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment and Her Majesty the Queen in Right of Ontario, as represented by the Minister of the Environment

6. Other

- Canada-wide Standards for Mercury Emissions – Endorsed by CCME Council of Ministers, June 2000
- Canada-wide Standard for Mercury-containing Lamps – Endorsed by CCME Council of Ministers, April–May 2001
- Canada-wide Standard on Mercury for Dental Amalgam Waste – Endorsed by CCME Council of Ministers, September 2001
- Canada-wide Standards for Dioxins and Furans: Iron Sintering Plants – Endorsed by CCME Council of Ministers, March 2003
- Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces – Endorsed by CCME Council of Ministers, March 2003
- Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers – Endorsed by CCME Council of Ministers, May 2001
- Canada-wide Standards for Dioxins and Furans: Incineration – Endorsed by CCME Council of Ministers, May 2001
- Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste – Accepted in principle by CCME Council of Ministers, April 2003
- Canada-wide Standard for Benzene: Phase 1 – Endorsed by CCME Council of Ministers, June 5–6, 2000
- Canada-wide Standard for Benzene: Phase 2 – Endorsed by CCME Council of Ministers, September 22–23, 2001
- Recommendations for the Design and Operation of Wood Preservation Facilities
- Best Management Practices for the Control of Benzene Emissions from Glycol Dehydrators – Canadian Association of Petroleum Producers, November 2000 (2000-0035)
- Updated Canadian Standards Association standards for new, wood-burning appliances (March 2003)

APPENDIX X

RISK MANAGEMENT MEASURES AND RELATED TIMELINES FOR THOSE SUBSTANCES ADDED TO CEPA 1999 SCHEDULE 1 DURING THE EVALUATION PERIOD

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
1	47	Bromochloro methane, which has the molecular formula CH ₂ BrCl	September 2, 2000 ¹⁰⁵	January 3, 2001 ¹⁰⁶	Regulations Amending the Ozone-depleting Substances Regulations, 1998	September 2, 2000	Regulations Amending the Ozone-depleting Substances Regulations, 1998	January 3, 2001
2	48	Acetaldehyde, which has the molecular formula C ₂ H ₄ O	June 10, 2000 ¹⁰⁷	April 26, 2001 ¹⁰⁸	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	March 30, 2002 ¹⁰⁹ Targeted for Q2 2005 May 8, 2004 ¹¹⁰	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGI – January 1, 2003 ¹¹¹ CGII – targeted for Q4 2005 CGII – February 23, 2005 ¹¹²
3	49	1,3-Butadiene, which has the molecular formula C ₄ H ₆	June 10, 2000	April 26, 2001	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	March 30, 2002 Targeted for Q2 2005 May 8, 2004	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGII – January 1, 2003 CGII – targeted for Q4 2005 CGII – February 23, 2005
4	50	Acrylonitrile, which has the molecular formula C ₃ H ₃ N	June 10, 2000	April 26, 2001	Pollution Prevention Plans for Acrylonitrile	May 25, 2002 ¹¹³	Pollution Prevention Plans in Respect of Acrylonitrile	CGI – May 24, 2003 ¹¹⁴

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
5	51	Respirable particulate matter less than or equal to 10 microns	June 10, 2000	April 26, 2001	On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations Pollution Prevention Plan for releases from copper and zinc smelters/refineries	March 30, 2002 May 8, 2004 September 25, 2004 ¹¹⁵	On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations Reviewing comments	CGII – January 1, 2003 CGII – February 23, 2005 Required before March 25, 2006
6	52	Acrolein, which has the molecular formula C ₃ H ₄ O	June 10, 2000	April 26, 2001	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	March 30, 2002 Targeted for Q2 2005 May 8, 2004	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGII – January 1, 2003 CGII – targeted for Q4 2005 CGII – February 23, 2005
7	53	Ammonia, which has the molecular formula NH ₃	June 23, 2001 ¹¹⁶	December 12, 2002 ¹¹⁷	Pollution Prevention Plan for inorganic chloramines, ammonia and chlorinated wastewater	June 7, 2003 ¹¹⁸	Guideline for the release of ammonia dissolved in water found in wastewater effluents	CGII – December 4, 2004 ¹¹⁹
8	54	Nonylphenol and its ethoxylates	June 23, 2001	December 12, 2002	Pollution Prevention Plan for effluents from textile mills and nonylphenol and its ethoxylates	June 7, 2003	Pollution Prevention Plans in respect of effluents from textile mills that use wet processing and nonylphenol and its ethoxylates	CGI – December 4, 2004
9	55	Effluents from textile mills that use wet processing	June 23, 2001	December 12, 2002	Pollution Prevention Plan for effluents from textile mills and nonylphenol and its ethoxylates	June 7, 2003	Pollution Prevention Plans in respect of effluents from textile mills that use wet processing and nonylphenol and its ethoxylates	CGI – December 4, 2004
10	56	Inorganic chloramines, which have the molecular formula NH _n Cl _(3-n)	June 23, 2001	December 12, 2002	Pollution Prevention Plan for inorganic chloramines, ammonia and chlorinated wastewater	June 7, 2003	Pollution Prevention Plans for inorganic chloramines and chlorinated wastewater effluents	CGII – December 4, 2004

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
11	57	Ethylene oxide, which has the molecular formula H_2COCH_2	April 27, 2002 ¹²⁰	June 4, 2003 ¹²¹	Guidelines for the Reduction of Ethylene Oxide Releases from Sterilization Applications	April 3, 2004 ¹²²	In development	Targeting CGII – Fall 2005
12	58	Formaldehyde, which has the molecular formula CH_2O	April 27, 2002	June 4, 2003	Off-Road Small Spark-Ignition Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	March 29, 2003 ¹²³ May 8, 2004	Off-Road Small Spark-Ignition Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGII – November 19, 2003 ¹²⁴ CGII – February 23, 2005
13	59	N-Nitrosodimethylamine, which has the molecular formula $C_2H_6N_2O$	April 27, 2002	June 4, 2003	Off-Road Small Spark-Ignition Engine Emission Regulations Total, Partial or Conditional Prohibition of Certain Toxic Substances Regulations	March 29, 2003 April 3, 2004	Off-Road Small Spark-Ignition Engine Emission Regulations Prohibition of Certain Toxic Substances Regulations, 2005	CGII – March 9, 2005 ¹²⁵
14	60	Gaseous ammonia, which has the molecular formula NH_3 (g)	July 27, 2002 ¹²⁶	July 2, 2003 ¹²⁷	No requirement to develop instrument			
15	61	Ozone, which has the molecular formula O_3	July 27, 2002	July 2, 2003	No requirement to develop instrument			
16	62	Nitric oxide, which has the molecular formula NO	July 27, 2002	July 2, 2003	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	March 30, 2002 Targeted for Q2 2005 May 8, 2004	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGII – January 1, 2003 CGII – targeted for Q4 2005 CGII – February 23, 2005
17	63	Nitrogen dioxide, which has the molecular formula NO_2	July 27, 2002	July 2, 2003	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-Road Vehicle and	March 30, 2002 Targeted for Q2 2005	On-Road Vehicle and Engine Emission Regulations Regulations Amending the On-	CGII – January 1, 2003 CGII – targeted

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
					Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	May 8, 2004	Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	for Q4 2005 CGII – February 23, 2005
18	64	Sulphur dioxide, which has the molecular formula SO ₂	July 2, 2002	July 2, 2003	Sulphur in Diesel Fuel Regulations Regulations Amending the Sulphur in Diesel Fuel Regulations Pollution Prevention Plan for releases from copper and zinc smelters/refineries Off-Road Compression-Ignition Engine Emission Regulations	December 22, 2001 ¹²⁸ February 1, 2003 ¹²⁹ September 25, 2004 May 8, 2004	Sulphur in Diesel Fuel Regulations Regulations Amending the Sulphur in Diesel Fuel Regulations Reviewing comments Off-Road Compression-Ignition Engine Emission Regulations	CGII – July 31, 2002 ¹³⁰ CGII – October 8, 2003 ¹³¹ Required before March 25, 2006 CGII – February 23, 2005
19	65	Volatile organic compounds that participate in atmospheric photochemical reactions, with specified exclusions	July 27, 2002	July 2, 2003	VOC Guidelines 2003: Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks Environmental Guidelines for the Reduction of Volatile Organic Compound Emissions from the Plastics Processing Industry Guidelines for the Reduction of VOC Emissions in the Wood Furniture Manufacturing Sector Guidelines for Volatile Organic Compounds in Consumer Products National Standards and Guidelines for the Reduction of Volatile Organic Compounds from Canadian	NA	VOC Guidelines 2003: Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks Environmental Guidelines for the Reduction of Volatile Organic Compound Emissions from the Plastics Processing Industry Guidelines for the Reduction of VOC Emissions in the Wood Furniture Manufacturing Sector Guidelines for Volatile Organic Compounds in Consumer Products National Standards and	NA

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
					Commercial/Industrial Surface Coating Operations – Automotive Refinishing National Standards for the Reduction of Volatile Organic Compound Content of Canadian Commercial/Industrial Surface Coating Products – Automotive Refinishing Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	Targeted for Q2 2005 May 8, 2004	Guidelines for the Reduction of Volatile Organic Compounds from Canadian Commercial/Industrial Surface Coating Operations – Automotive Refinishing National Standards for the Reduction of Volatile Organic Compound Content of Canadian Commercial/Industrial Surface Coating Products – Automotive Refinishing Regulations Amending the On-Road Vehicle and Engine Emission Regulations Off-Road Compression-Ignition Engine Emission Regulations	CGII – targeted for Q4 2005 CGII – February 23, 2005
20	66	Hexachlorobutadiene (HCBd), which has the molecular formula C ₄ Cl ₆	June 1, 2002 ¹³²	August 13, 2003 ¹³³	Total, Partial or Conditional Prohibition of Certain Toxic Substances Regulations	April 3, 2004	Prohibition of Certain Toxic Substances Regulations, 2005	CGII – March 9, 2005
21	67	Particulate matter containing metals that is released in emissions from copper smelters or refineries, or from both	November 2, 2002 ¹³⁴	August 13, 2003	Pollution Prevention Plan for releases from copper and zinc smelters/refineries	September 25, 2004 ¹³⁵	Reviewing comments	Required before March 25, 2006
22	68	Particulate matter containing metals that is released in emissions from zinc plants	November 2, 2002	August 13, 2003	Pollution Prevention Plan for releases from copper and zinc smelters/refineries	September 25, 2004	Reviewing comments	Required before 25 March 2006
23		Road salts that contain	December 1, 2001 ¹³⁶	NA	Code of Practice for the Environmental	September 20, 2003 ¹³⁷	Code of Practice for the	CGI – April 3, 2004 ¹³⁸

	Schedule 1 Listing Number	Substance	Date of Proposed Listing (CGI)	Date of Final Listing (CGII)	Proposed Measure	Date of Proposed Measure Publication (CGI)	Final Measure	Date of Final Measure Publication
		inorganic chloride salts with or without ferrocyanide salts			Management of Road Salts		Environmental Management of Road Salts	
24		2-Methoxy-ethanol	October 25, 2003 ¹³⁹	March 9, 2004	Addition to the Prohibition of Certain Toxic Substances Regulations (Note: This substance has not yet been declared toxic)	Summer 2005		
25		2-Butoxy-ethanol	October 25, 2003	March 9, 2004	Regulations (under development)			
26		Tetrachlorobenzenes	April 24, 2004 ¹⁴⁰	Proposed June 2005	Addition to the Prohibition of Certain Toxic Substances Regulations (Note: This substance has not yet been declared toxic)	Summer 2005		
27		Pentachlorobenzene	April 24, 2004	Proposed June 2005	Addition to the Prohibition of Certain Toxic Substances Regulations (Note: This substance has not yet been declared toxic)	Summer 2005		
28		Perfluorooctane sulfonate (PFOS) and its salts	October 2, 2004 ¹⁴¹	Pending information obtained from Notice	This substance has not yet been declared toxic	January 15, 2005 ¹⁴²	To be determined	To be determined
29		Polybrominated diphenyl ethers (PBDEs)	May 8, 2004 ¹⁴³	Targeted for mid-2005		Spring 2006		

APPENDIX XI

RISK MANAGEMENT MEASURES AND TOOLS INTRODUCED FOR SUBSTANCES ALREADY EXISTING ON CEPA 1999 SCHEDULE 1 AT THE TIME THE ACT ENTERED INTO FORCE

Substance (Listed by Schedule 1 Number)	Measures and Tools
4. Chlorofluorocarbons: totally halogenated chlorofluorocarbons, which have the molecular formula $C_nCl_xF_{(2n+2-x)}$	<p>Regulations Amending Certain Regulations Made under Section 209 of the <i>Canadian Environmental Protection Act, 1999</i> (Miscellaneous Program), SOR/2000-105¹⁴⁴</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000¹⁴⁵</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2¹⁴⁶</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100¹⁴⁷</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315¹⁴⁸</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289¹⁴⁹</p>
7. Lead	Regulations Amending the Gasoline Regulations, SOR/2003-106 ¹⁵⁰
8. Mercury	<p>Canada-wide Standards for Mercury Emissions¹⁵¹ Endorsed by CCME Council of Ministers, June 2000</p> <p>Canada-wide Standard for Mercury-Containing Lamps¹⁵² Endorsed by CCME Council of Ministers, April–May 2001</p> <p>Canada-wide Standard on Mercury for Dental Amalgam Waste¹⁵³ Endorsed by CCME Council of Ministers, September 2001</p> <p>Environmental Emergency Regulations, SOR/2003-307¹⁵⁴</p>
9. Vinyl chloride	Environmental Emergency Regulations, SOR/2003-307
10. Bromochlorodifluoromethane, which has the molecular formula CF_2BrCl	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
11. Bromotrifluoromethane, which has the molecular formula CF_3Br	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
12. Dibromotetrafluoroethane,	Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000

Substance (Listed by Schedule 1 Number)	Measures and Tools
<p>which has the molecular formula $C_2F_4Br_2$</p>	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
<p>14. Dibenzo-<i>para</i>-dioxin, which has the molecular formula $C_{12}H_8O_2$</p>	<p>Canada-wide Standards for Dioxins and Furans: Iron Sintering Plants¹⁵⁵ Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces¹⁵⁶ Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers¹⁵⁷ Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Incineration¹⁵⁸ Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste¹⁵⁹ Accepted in principle by CCME Council of Ministers, April 2003</p> <p>Environmental Code of Practice for Non-Integrated Steel Mills¹⁶⁰ EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills¹⁶¹ EPS 1/MM/7 – March 2001</p>
<p>15. Dibenzofurans, which have the molecular formula $C_{12}H_8O$</p> <p>same information as 14.</p>	<p>Canada-wide Standards for Dioxins and Furans: Iron Sintering plants Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Incineration Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste Accepted in principle by CCME Council of Ministers, April 2003</p> <p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
<p>16. Polychlorinated dibenzo-<i>para</i>-dioxins, which have the molecular formula $C_{12}H_{(8-n)}O_2Cl_n$, where “n” is greater than 2</p> <p>Same information as 14.</p>	<p>Canada-wide Standards for Dioxins and Furans: Iron Sintering plants Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Incineration</p>

Substance (Listed by Schedule 1 Number)	Measures and Tools
	<p>Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste Accepted in principle by CCME Council of Ministers, April 2003</p> <p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
<p>17. Polychlorinated dibenzofurans, which have the molecular formula $C_{12}H_{(8-n)}OCl_n$, where “n” is greater than 2</p> <p>Same information as 14.</p>	<p>Canada-wide Standards for Dioxins and Furans: Iron Sintering Plants Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Incineration Endorsed by CCME Council of Ministers, May 2001</p> <p>Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste Accepted in principle by CCME Council of Ministers, April 2003</p> <p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
<p>18. Tetrachloromethane (carbon tetrachloride), which has the molecular formula CCl_4</p>	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
<p>19. 1,1,1-Trichloroethane</p>	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
<p>20. Bromofluorocarbons other than those set out in items 10 to 12</p>	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p>

Substance (Listed by Schedule 1 Number)	Measures and Tools
	Federal Halocarbon Regulations, 2003, SOR/2003-289
21. Hydrobromofluorocarbons, which have the molecular formula $C_nH_xF_yBr_{(2n+2-x-y)}$, in which $0 < n < 3$	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
22. Methyl bromide	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p> <p>Environmental Emergency Regulations, SOR/2003-307</p>
23. Bis(chloromethyl) ether, which has the molecular formula $C_2H_4Cl_2O$	<p>Environmental Emergency Regulations, SOR/2003-307</p> <p>Prohibition of Certain Toxic Substances Regulations, 2003, SOR/2003-99¹⁶²</p>
24. Chloromethyl methyl ether, which has the molecular formula C_2H_5ClO	<p>Environmental Emergency Regulations, SOR/2003-307</p> <p>Prohibition of Certain Toxic Substances Regulations, 2003, SOR/2003-99</p>
25. Hydrochlorofluorocarbons, which have the molecular formula $C_nH_xF_yCl_{(2n+2-x-y)}$, in which $0 < n < 3$	<p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2000</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2001-2</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2002-100</p> <p>Regulations Amending the Ozone-depleting Substances Regulations, 1998, SOR/2004-315</p> <p>Federal Halocarbon Regulations, 2003, SOR/2003-289</p>
26. Benzene, which has the molecular formula C_6H_6	<p>Environmental Emergency Regulations, SOR/2003-307</p> <p>Best Management Practices for the Control of Benzene Emissions from Glycol Dehydrators¹⁶³ Canadian Association of Petroleum Producers, November 2000 (2000-0035)</p> <p>Canada-wide Standards for Dioxins and Furans: Iron Sintering Plants Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces Endorsed by CCME Council of Ministers, March 2003</p> <p>Canada-wide Standard for Benzene: Phase 1¹⁶⁴ Endorsed by CCME Council of Ministers, June 5–6 2000</p> <p>Canada-wide Standard for Benzene: Phase 2¹⁶⁵ Endorsed by CCME Council of Ministers, September 22–23, 2001</p>

Substance (Listed by Schedule 1 Number)	Measures and Tools
	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
28. Inorganic arsenic compounds	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p> <p>New Source Emission Guidelines for Thermal Electricity Generation, 2003¹⁶⁶</p>
29. Benzidine	Prohibition of Certain Toxic Substances Regulations, 2005, SOR/2005-41 Published in CGII on March 9, 2005
31. Inorganic cadmium compounds	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
32. Chlorinated wastewater effluents	Preparation and Implementation of Pollution Prevention Plans for Inorganic Chloramines and Chlorinated Wastewater Effluents ¹⁶⁷ December 2004
36. 1,2-Dichloroethane (DCE)	<p>Environmental Performance Agreement Respecting the Production and Distribution of 1,2-Dichloroethane Between Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment and Dow Chemical Canada Inc., 2001¹⁶⁸</p> <p>Environmental Emergency Regulations, SOR/2003-307</p>
37. Dichloromethane (DCM)	<p>Code of Practice for the Reduction of Dichloromethane Emissions from the Use of Paint Strippers in Commercial Furniture Refinishing and Other Stripping Applications¹⁶⁹ EPS 1/CC/4 – June 2003</p> <p>Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Dichloromethane¹⁷⁰ November 2003</p>
39. Hexachlorobenzene (HCB)	Prohibition of Certain Toxic Substances Regulations, 2005, SOR/2005-41 Published in CGII on March 9, 2005
40. Inorganic fluorides	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p>
41. Refractory ceramic fibres	Environmental Performance Agreements: A Cooperative “Environmental Emissions Monitoring, Inspection and Product Stewardship Program” between Her Majesty the Queen in Right of Canada, as represented by the Minister of the Environment and Members of the Refractory Ceramic Fibre Industry, 2001–2002 ¹⁷¹
42. Oxidic, sulphidic and soluble inorganic nickel compounds	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills EPS 1/MM/7 – March 2001</p> <p>New Source Emission Guidelines for Thermal Electricity Generation, 2003</p>
43. Polycyclic aromatic hydrocarbons	<p>Environmental Code of Practice for Non-Integrated Steel Mills EPS 1/MM/8 – March 2001</p> <p>Environmental Code of Practice for Integrated Steel Mills</p>

Substance (Listed by Schedule 1 Number)	Measures and Tools
	EPS 1/MM/7 – March 2001
44. Tetrachloroethylene	Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations, SOR/2003-79 ¹⁷² Solvent Degreasing Regulations, SOR/2003-283 ¹⁷³
45. Trichloroethylene (TCE)	Solvent Degreasing Regulations, SOR/2003-283
46. Tributyltetradecylphosphonium chloride, which has the molecular formula C ₂₆ H ₅₆ P·Cl	Tributyltetradecylphosphonium Chloride Regulations, SOR/2000-66 ¹⁷⁴

APPENDIX XII

RISK ASSESSMENT PROGRESS MADE ON PRIORITY SUBSTANCES LISTS 1 AND 2 AND DOMESTIC SUBSTANCES LIST SUBSTANCES SINCE COMING INTO FORCE OF CEPA 1999

Substance	PSL1 or PSL2 / DSL	Assessment	Result
Aniline ¹⁷⁵	PSL1 – Follow-up	Proposed suspect toxic	Reviewing new use pattern data
Bis(2-chloroethyl) ether ¹⁷⁶	PSL1 – Follow-up	Proposed suspect toxic	Proposed no further action
Chlorinated paraffins ¹⁷⁷	PSL1 – Follow-up	Health toxic (1994) No conclusion on environment	Performed research to fill environment gap Assessment and conclusion revised (publication pending)
3,5-Dimethylaniline ¹⁷⁸	PSL1 – Follow-up	Proposed suspect toxic	Proposed no further action
Di- <i>n</i> -octyl phthalate ¹⁷⁹	PSL1 – Follow-up	Not toxic	
Non-pesticidal organotin compounds ¹⁸⁰	PSL1 – Follow-up	Not toxic	
1,1,2,2-Tetrachloroethane ¹⁸¹	PSL1 – Follow-up	Not toxic	
Acetaldehyde ¹⁸²	PSL2	Toxic	Added to Schedule 1
Acrolein ¹⁸³	PSL2	Toxic	Added to Schedule 1
Acrylonitrile ¹⁸⁴	PSL2	Toxic	Added to Schedule 1
Aluminum chloride, aluminum nitrate and aluminum sulphate ¹⁸⁵	PSL2	Extension granted	
Ammonia in the aquatic environment ¹⁸⁶	PSL2	Toxic	Added to Schedule 1
1,3-Butadiene ¹⁸⁷	PSL2	Toxic	Added to Schedule 1
Butylbenzylphthalate ¹⁸⁸	PSL2	Not toxic	
Carbon disulfide ¹⁸⁹	PSL2	Not toxic	
Chloroform ¹⁹⁰	PSL2	Not toxic	
<i>N,N</i> -Dimethylformamide ¹⁹¹	PSL2	Not toxic	
Ethylene glycol ¹⁹²	PSL2	Extension granted	
Ethylene oxide ¹⁹³	PSL2	Toxic	Added to Schedule 1
Formaldehyde ¹⁹⁴	PSL2	Toxic	Added to Schedule 1
Hexachlorobutadiene ¹⁹⁵	PSL2	Toxic	Added to Schedule 1 Meets virtual elimination criteria
Inorganic Chloramines ¹⁹⁶	PSL2	Toxic	Added to Schedule 1
2-Methoxyethanol, 2-Ethoxyethanol, 2-Butoxyethanol ¹⁹⁷ <ul style="list-style-type: none"> • 2-Methoxyethanol • 2-Ethoxyethanol • 2-Butoxyethanol 	PSL2	Toxic Not toxic Toxic	Added to Schedule 1 No action Added to Schedule 1
<i>N</i> -Nitrosodimethylamine ¹⁹⁸	PSL2	Toxic	Added to Schedule 1
Nonylphenol and its ethoxylates ¹⁹⁹	PSL2	Toxic	Added to Schedule 1
Phenol ²⁰⁰	PSL2	Not toxic	
Releases from primary and secondary copper smelters and refineries ²⁰¹	PSL2	Toxic	Added to Schedule 1
Releases from primary and secondary zinc smelters and refineries ²⁰²	PSL2	Toxic	Added to Schedule 1
Releases of radionuclides from nuclear	PSL2	Proposed as toxic	Reviewing public

Substance	PSL1 or PSL2 / DSL	Assessment	Result
facilities (impact on non-human biota) ²⁰³			comments
Respirable particulate matter less than or equal to 10 microns ²⁰⁴	PSL2	Toxic	Added to Schedule 1
Road salts ²⁰⁵	PSL2	Toxic	CGI – Proposed addition to Schedule 1
Textile mill effluents ²⁰⁶	PSL2	Toxic	Added to Schedule 1
Polybrominated diphenyl ethers (PBDEs) ²⁰⁷	DSL	Proposed as toxic and proposed to meet virtual elimination criteria	Reviewing public comments
Perfluorooctane sulfonate, its salts and its precursors that contain the C ₈ F ₁₇ SO ₂ or C ₈ F ₁₇ SO ₃ moiety ²⁰⁸	DSL	Proposed as toxic and proposed to meet virtual elimination criteria	Reviewing public comments

Formative Evaluation of CEPA 1999

Annex 1: Summary of Stakeholder Views

ANNEX 1

SUMMARY OF STAKEHOLDER VIEWS

Purpose

Interviews with key stakeholders external to the Environmental Protection Service were conducted to gain an understanding of their overall assessment of the degree to which CEPA 1999 is meeting its intent, as well as the Department's role. The results of these interviews complement the evidence-based approach taken for the evaluation and assist in determining external perceptions, opinions and views on the implementation of CEPA 1999.

Methodology

Forty-one individuals were invited to participate in this part of the evaluation; 33 were interviewed. Telephone and in-person interviews were conducted in late November and December 2004. The individuals interviewed included:

- 10 representatives from federal government departments, including two Environment Canada officials;
- seven representatives from provincial and territorial governments, all of whom were members of the CEPA National Advisory Committee (NAC);
- eight representatives from industry;
- six individuals from environmental non-governmental organizations; and
- two individuals from Aboriginal organizations.

All interviews were based on the same set of questions. However, there were additional questions for NAC members. The interview guide and the list of interviewees are provided in **Appendix VII** and **Appendix VIII**, respectively. Evidence to support their views was requested and provided where possible.

Findings

Stakeholder Familiarity with CEPA 1999

Stakeholders' familiarity with CEPA 1999 was varied. Most had very specific views only on those issues or questions that directly affected them. Most stakeholders focused on the provisions of the Act addressing toxic substances (including the Priority Substances List, the Domestic Substances List, the National Pollutant Release Inventory, and the risk categorization/assessment process). Few had an overview of the Act as a whole. As a group, non-governmental organizations generally had the broadest understanding of the Act's numerous provisions.

Coordination with Other Federal Government Departments and Agencies

The interviews with federal officials showed that familiarity with the Act among federal departments other than Environment Canada and Health Canada varied significantly from department to department. However, all interviewees recognized the complexity of implementing CEPA 1999. Most departments noted that coordination within the federal family was taking place.

A number of departments were fully satisfied with their relationship with Environment Canada on CEPA matters. A few departments, however, wanted their relationship with the Department enhanced. These departments believe that while better coordination between Environment Canada and other departments is needed, the Department is trying to do too much on its own and not making sufficient use of others' expertise. The revitalization of the

Directors General Committee on Toxics is seen as a venue for networking, exchanging information and identifying concerns.

Health Canada's relationship with Environment Canada on CEPA matters is important and complex, as the two Ministers jointly administer the Act. Health Canada officials are generally satisfied with their relationship with their Environment Canada counterparts, although some Health Canada managers expressed concern about the interdepartmental relationship on CEPA. These managers believe that Environment Canada has treated their department as a junior rather than an equal partner on CEPA 1999 and has not been prepared to listen fully to their concerns. They recognize, however, that Environment Canada's senior management is aware of the problem and is addressing it.

International Collaboration

Internationally, Environment Canada is seen as successful in promoting cooperation, building on the work of others and taking a leadership role in some files (e.g., persistent organic pollutants). However, some see that there are gaps in implementation and, occasionally, leadership on Environment Canada's part. One interviewee noted that there is no obvious link between the federal-provincial diplomacy at the National Advisory Committee and Environment Canada's international diplomacy on toxic substances (e.g., through North American Regional Action Plans and the Stockholm Convention on Persistent Organic Pollutants). In the view of that individual, the advisory committee members are not made sufficiently aware of the international obligations that the federal government is assuming, and Environment Canada does a poor job of communicating the relevance of international commitments to domestic policy. In addition, it was noted that both government and industry appear to have withdrawn somewhat from international cooperation recently as a result of budget constraints.

Alignment with Provinces and Territories

Stakeholder views on provincial and territorial alignment of objectives, standards, approaches and instruments were mixed. While they agreed on some examples of federal-provincial harmonization (including the National Pollutant Release Inventory and Ontario Regulation 127 to provide a single window for the reporting of certain industrial emissions), they also disagreed about how other examples should be interpreted. For example, some interviewees saw Canada-wide Standards as indicating a greater harmonization of federal, provincial and territorial approaches. Others noted that the name itself was misleading: the standards are not Canada-wide (because Quebec does not participate), and many of them are more like guidelines. Some stakeholders also noted that there do not appear to be consequences when provinces fail to implement these standards.

All but one of the provincial and territorial officials interviewed as part of this evaluation expressed the view that CEPA implementation was becoming a growing issue in federal-provincial-territorial environmental relations. They perceived that Environment Canada was intruding into areas that provincial and territorial governments had traditionally managed. As a result, they noted that the federal government is increasingly overlapping with and duplicating provincial control measures. This conclusion was strongly disputed by Environment Canada representatives, who have found no areas of duplication or overlap and stated that they have ensured efforts to work with the provinces and territories in all areas.

It is important to note that Environment Canada and the provinces define overlap and duplication differently: the Department defines duplication as two jurisdictions imposing the

same regulatory requirements on the same substance to the same standard. The provinces and territories, meanwhile, tend to define duplication as two jurisdictions regulating in the same area, even if the regulatory requirements are different. As a result, federal and provincial/territorial officials interpreted the same events very differently. Proposals cited as examples of Environment Canada flexibility (e.g., its acceptance of provincial control measures on road salt and crankcase oil) were viewed as examples of jurisdictional battles by provincial and territorial representatives.

The industry representatives interviewed recognized Environment Canada's efforts to work collaboratively with the provinces. Non-governmental organization representatives also believed that provincial claims about duplication were exaggerated. Another interviewee suggested that some provinces complained about federal intrusion even when they could not document their own environmental protection efforts in the area in question.

Finally, there was considerable support among provincial and territorial interviewees for the proposed sector sustainability table process recently established in Environment Canada.

CEPA National Advisory Committee

All but one of the provincial and territorial interviewees expressed disappointment with the National Advisory Committee. Views ranged from the committee not being viable to it being a "waste of time." Several noted that attendance at advisory committee meetings had been declining and that small jurisdictions were having difficulty with the volume of information distributed. Environment Canada officials, on the other hand, thought that the committee was generally fulfilling its intended role and influencing departmental thinking and actions. These departmental officials provided several pieces of evidence illustrating where the committee's advice had influenced decision-making.

These differences reveal a lack of consensus about the purpose and role of the National Advisory Committee. Some committee members interviewed would like the group to function more as a partnership to pursue common priorities, and not focus strictly on CEPA priorities. Some provinces would like the committee to play more of a decision-making function in choosing risk management measures and tools. They also have suggested that a provincial or territorial representative co-chair the committee and that it be made a subcommittee of the Canadian Council of Ministers of the Environment to create a more equal relationship on these matters between the federal government and the provinces and territories.

Environment Canada has a different interpretation of the purpose and role of the advisory committee. The Department considers the committee to be strictly an advisory group to its Minister. Environment Canada representatives have worked to ensure that the committee functions effectively. They have surveyed members to assess satisfaction and have recently taken steps to strengthen the committee's functioning, designating a more senior official to serve as chair, making formal offers to consult with the provinces and territories and developing longer-term planning agendas.

Representatives of Aboriginal organizations^{xxxviii} stated in interviews that the National Advisory Committee does not address the environmental protection issues of greatest concern to them. Nor does it represent the most appropriate forum for obtaining Aboriginal input, in their view. They raised the following issues around Aboriginal representation on the committee:

^{xxxviii} These interviewees were not primarily members of the National Advisory Committee itself.

- CEPA 1999 defines Aboriginal government too narrowly, thereby excluding potential Aboriginal participants.
- Environment Canada should consider consolidating the various consultative channels it has established to seek Aboriginal input (i.e., have a single committee of Aboriginal advisors under both CEPA 1999 and the *Species at Risk Act*).
- The Assembly of First Nations welcomed the recognition that Aboriginal peoples should be at the table; however, the relatively small number of Aboriginal seats makes it difficult to represent the full range of Aboriginal interests.

Conditions to Support the Environmental Efforts of Others

Most interviewees acknowledged that Environment Canada's implementation of CEPA 1999 as a piece of enabling legislation is part of the foundation for their own environmental protection efforts. The Department is seen as having made good efforts to support the work of others through its consultations and by providing public information. Several provincial interviewees noted that Environment Canada's scientific work contributes significantly to their own environmental protection programs. As well, some non-governmental organizations noted the value of the National Pollutant Release Inventory as a tool to improve corporate environmental performance. Other interviewees noted that CEPA 1999 sets a high standard for transparency on a range of environmental issues.

Recognizing these efforts, most non-governmental organizations also thought that Environment Canada could do more to support the environmental efforts of others. They suggested that the public should be consulted earlier in the decision-making process and that environmental groups should have access to more financial support to participate meaningfully in Environment Canada's various consultation processes. Finally, it was noted that Environment Canada could better integrate its environmental information to give the public a more complete profile of a facility or an issue and that the CEPA Environmental Registry should be more interactive and used more effectively as a vehicle for information and public input on decisions.

Summary – Perceptions on Achievements/Progress

Many stakeholders prefaced their comments by indicating that it was too early to assess progress made on CEPA 1999, given the complexity and scope of the Act and the relatively short period since enactment. They also noted the lack of identified environmental outcomes in the Act against which to measure progress and the fact that Environment Canada had only recently received additional resources for CEPA 1999 implementation. Both factors made it difficult to adequately assess progress, in their view.

The implementation of CEPA 1999 is seen to be a major accomplishment by interviewees. The Act is recognized as posing a significant coordination challenge to the Department. The Department was commended for the substantial intellectual investment it has made in understanding and implementing the new Act. Interviewees highlighted the following strengths of CEPA 1999 over the first five years of implementation:

- the Clean Air Agenda, resulting in the reduction of sulphur in fuels, cleaner engines and controls for ozone precursors;
- the innovative categorization process, with Canada being a world leader;
- the mandating of the previously voluntary reporting of selected pollutant releases (however, many industry representatives also criticized the National Pollutant Release Inventory for the reporting costs it imposes on them);
- an implementation of a framework for action on toxics based on the time-bound requirements included under Part 5 of the Act;

- the emergency planning and emergency preparedness regulations, with effective and well-managed consultations;
- more focused information requests to industry;
- a general increase in awareness about environmental issues in industry and a priority on technology development to address CEPA-related issues; and
- transparency provisions (e.g., the Environmental Registry, annual reports, public consultations) to increase information about CEPA 1999 and pollution prevention.

Stakeholders also noted several areas where, in their view, there has been insufficient progress to date:

- *Promoting pollution prevention:* According to several representatives of non-government organizations, government and industry, Environment Canada has not institutionalized a pollution prevention culture in the Department yet, and they are disappointed by what they viewed as the small number of pollution prevention plans that have been formally published so far.
- *Using the full suite of risk management instruments available and relying on regulations as the automatic default approach:* Stakeholders believe that Environment Canada needs to assess the strengths and weaknesses of the various policy tools at its disposal and have a more rigorous framework to guide the selection of instruments.
- *Slow progress:* Many non-governmental organization representatives complain that Environment Canada is moving too slowly, given the importance of the issues at stake. They are particularly concerned with what they see as low levels of enforcement activities and actions.
- *Inflexibility:* Many of the provincial representatives noted the inflexibility in the risk management process and the time-bound requirements specified in Part 5 of the Act. They would like to see an option that would allow Environment Canada to delay action on an issue while it negotiated a common approach with the provinces and territories. By contrast, non-governmental organization representatives and Environment Canada officials believe that time-bound provisions of Part 5 of the Act are a very important provision of CEPA 1999 and that their advantages far outweigh any disadvantages.
- *Insufficient research:* Several interviewees (mostly non-governmental organization and Aboriginal representatives) were concerned that Environment Canada is conducting insufficient research on key emerging issues, including endocrine disrupting substances.
- *Lack of progress on filling the regulatory gap that exists concerning reserve lands:* Some interviewees in government and Aboriginal organizations noted that addressing this gap is an obligation under the Act and that little tangible progress has been made. More generally, these interviewees believed that Environment Canada has not made effective use of the Part 9 federal house provisions.
- *Insufficient resources:* Stakeholders feel that a lack of staffing and funding has led to low levels of activity in several areas of Ministerial discretion (including enforcement, some research and control of consumer products that contain toxic chemicals). In the view of most non-governmental organizations, insufficient resources also have resulted in an undue reliance on self-reporting by industry in determining the effectiveness of CEPA 1999 regulations.
- *Insufficient progress in improving the National Pollutant Release Inventory.*
- *Lack of consistency in the interpretation of the Act:* Some interviewees believed that inconsistency in interpretation of the Act has resulted in a piecemeal approach to

- implementation. Others noted a discontinuity between risk assessment and risk management activities, which they believe has hurt the implementation of the Act.
- *Lack of progress on access to information and transparency in reporting on environmental matters:* Interviewees were pleased with the Department's success in ensuring that information respecting the sulphur content of fuels is now made available to the public, but expressed concern that this has not provided a precedent to ensure that other compliance-related information can be made publicly available.
 - *Addressing matters of greatest concern to Aboriginal organizations.*
 - *Collection of sufficient information to measure the effectiveness of its risk management instruments.*

Industry representatives interviewed indicated satisfaction with the implementation of CEPA 1999, with few exceptions (such as risk assessment) and did not express major concerns. Even the industry representatives who were concerned with Environment Canada's risk assessment approach tended to be satisfied with its risk management approach. However, several industry representatives did express concern about the "all or nothing" definition of toxicity, which can lead to such widely different substances as dioxin and road salt both being categorized under the Act as "toxic." They believe that finding that a substance is "toxic" creates a public stigma for products or production processes, with adverse financial implications for industry. Accordingly, some industry and provincial representatives would like to see a middle ground, where a substance would be identified as "of concern" and therefore requiring management, but not be labelled as toxic.

Formative Evaluation of CEPA 1999

Annex 2: Web Site References

ANNEX 2

WEB SITE REFERENCES

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- ¹⁰⁷ Date of Proposed Listing (CGI) – June 10, 2000
<http://canadagazette.gc.ca/partI/2000/20000610/html/regle-e.html>
- ¹⁰⁸ Date of Final Listing (CGII) – April 26, 2001
<http://canadagazette.gc.ca/partI/2001/20010509/html/sor147-e.html>
- ¹⁰⁹ Date of Proposed Measure Publication (CGI) – March 30, 2002
<http://canadagazette.gc.ca/partI/2002/20020330/html/regle1-e.html#i1>
- ¹¹⁰ Date of Proposed Measure Publication (CGI) – May 8, 2004
<http://canadagazette.gc.ca/partI/2004/20040508/html/regle1-e.html#2>
- ¹¹¹ Date of Final Measure Publication (CGII) – January 1, 2003
<http://canadagazette.gc.ca/partI/2003/20030101/html/sor2-e.html>
- ¹¹² Date of Final Measure Publication (CGII) – February 23, 2005
<http://canadagazette.gc.ca/partI/2005/20050223/html/sor32-e.html>
- ¹¹³ Date of Proposed Measure Publication (CGI) – May 25, 2002
<http://canadagazette.gc.ca/partI/2002/20020525/html/notice-e.html#i4>
- ¹¹⁴ Date of Final Measure Publication (CGI) – May 24, 2003
<http://canadagazette.gc.ca/partI/2003/20030524/html/notice-e.html>
- ¹¹⁵ Date of Proposed Measure Publication (CGI) – September 25, 2004
<http://canadagazette.gc.ca/partI/2004/20040925/html/notice-e.html>
- ¹¹⁶ Date of Proposed Listing (CGI) – June 23, 2001
http://www.ec.gc.ca/Ceparegistry/documents/notices/g1-13525_n1.pdf
- ¹¹⁷ Date of Final Listing (CGII) – December 12, 2002
<http://canadagazette.gc.ca/partI/2003/20030101/html/sor10-e.html>
- ¹¹⁸ Date of Proposed Measure Publication (CGI) – June 7, 2003
<http://canadagazette.gc.ca/partI/2003/20030607/html/notice-e.html>
- ¹¹⁹ Date of Final Measure Publication (CGII) – December 4, 2004
<http://canadagazette.gc.ca/partI/2004/20041204/html/notice-e.html>
- ¹²⁰ Date of Proposed Listing (CGI) – April 27, 2002
<http://canadagazette.gc.ca/partI/2002/20020427/html/regle-e.html>
- ¹²¹ Date of Final Listing (CGII) – June 4, 2003
<http://canadagazette.gc.ca/partI/2003/20030604/html/sor172-e.html>
- ¹²² Date of Proposed Measure Publication (CGI) – April 3, 2004
<http://canadagazette.gc.ca/partI/2004/20040403/html/notice-e.html>

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- ¹²³ Date of Proposed Measure Publication (CGI) – March 29, 2003
<http://canadagazette.gc.ca/partI/2003/20030329/html/regle1-e.html#i1>
- ¹²⁴ Date of Final Measure Publication (CGII) – November 19, 2003
<http://canadagazette.gc.ca/partI/2003/20031119/html/sor355-e.html>
- ¹²⁵ Date of Final Measure Publication (CGII) – March 9, 2005
http://www.ec.gc.ca/ceparegistry/documents/regs/q2-13905_r1.pdf
- ¹²⁶ Date of Proposed Listing (CGI) – July 27, 2002
<http://canadagazette.gc.ca/partI/2002/20020727/html/regle-e.html#i39>
- ¹²⁷ Date of Final Listing (CGII) – July 2, 2003
<http://canadagazette.gc.ca/partI/2003/20030702/html/sor229-e.html>
- ¹²⁸ Date of Proposed Measure Publication (CGI) – December 22, 2001
<http://canadagazette.gc.ca/partI/2001/20011222/html/regle-e.html#i1>
- ¹²⁹ Date of Proposed Measure Publication (CGI) – February 1, 2003
<http://canadagazette.gc.ca/partI/2003/20030201/html/regle2-e.html>
- ¹³⁰ Date of Final Measure Publication (CGII) – July 31, 2002
<http://canadagazette.gc.ca/partI/2002/20020731/html/sor254-e.html>
- ¹³¹ Date of Final Measure Publication (CGII) – October 8, 2003
<http://canadagazette.gc.ca/partI/2003/20031008/html/sor319-e.html>
- ¹³² Date of Proposed Listing (CGI) – June 1, 2002
<http://canadagazette.gc.ca/partI/2002/20020601/html/regle1-e.html#i1>
- ¹³³ Date of Final Listing (CGII) – August 13, 2003
<http://canadagazette.gc.ca/partI/2003/20030813/html/sor270-e.html>
- ¹³⁴ Date of Proposed Listing (CGI) – November 2, 2002
<http://canadagazette.gc.ca/partI/2002/20021102/html/regle1-e.html#i64>
- ¹³⁵ Date of Proposed Measure Publication (CGI) – September 25, 2004
<http://canadagazette.gc.ca/partI/2004/20040925/html/notice-e.html>
- ¹³⁶ Date of Proposed Listing (CGI) – December 1, 2001
<http://canadagazette.gc.ca/partI/2001/20011201/html/regle-e.html#i1>
- ¹³⁷ Date of Proposed Measure Publication (CGI) – September 20, 2003
<http://canadagazette.gc.ca/partI/2003/20030920/html/notice-e.html>
- ¹³⁸ Date of Final Measure Publication (CGI) – April 3, 2004
<http://canadagazette.gc.ca/partI/2004/20040403/html/notice-e.html>

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<http://canadagazette.gc.ca/part1/2003/20031025/html/regle13-e.html>
- ¹⁴⁰ Date of Proposed Listing (CGI) – April 24, 2004
<http://canadagazette.gc.ca/part1/2004/20040424/html/regle1-e.html>
- ¹⁴¹ Date of Proposed Listing (CGI) – October 2, 2004
<http://canadagazette.gc.ca/part1/2004/20041002/html/notice-e.html#i4>
- ¹⁴² Date of Proposed Measure Publication (CGI) – January 15, 2005
<http://canadagazette.gc.ca/part1/2005/20050115/html/notice-e.html>
- ¹⁴³ Date of Proposed Listing (CGI) – May 8, 2004
<http://canadagazette.gc.ca/part1/2004/20040508/html/notice-e.html>
- ¹⁴⁴ *Regulations Amending Certain Regulations Made under Section 209 of the Canadian Environmental Protection Act, 1999 (Miscellaneous Program)*, SOR/2000-105
http://canadagazette.gc.ca/partII/tempAscii/g2-13407_e.txt
- ¹⁴⁵ *Regulations Amending the Ozone-depleting Substances Regulations, 1998*, SOR/2000
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- ¹⁴⁶ *Regulations Amending the Ozone-depleting Substances Regulations, 1998*, SOR/2001-2
http://canadagazette.gc.ca/partII/tempAscii/g2-13501_e.txt
- ¹⁴⁷ *Regulations Amending the Ozone-depleting Substances Regulations, 1998*, SOR/2002-100
<http://canadagazette.gc.ca/partII/2002/20020313/html/sor100-e.html>
- ¹⁴⁸ *Regulations Amending the Ozone-depleting Substances Regulations, 1998*, SOR/2004-315
http://canadagazette.gc.ca/partII/tempAscii/g2-13501_e.txt
- ¹⁴⁹ *Federal Halocarbon Regulations, 2003*, SOR/2003-289
<http://canadagazette.gc.ca/partII/2003/20030827/html/sor289-e.html>
- ¹⁵⁰ *Regulations Amending the Gasoline Regulations*, SOR/2003-106
<http://canadagazette.gc.ca/partII/2003/20030409/html/sor106-e.html>
- ¹⁵¹ Canada-wide Standards for Mercury Emissions
http://www.ccme.ca/assets/pdf/mercury_emis_std_e1.pdf
- ¹⁵² Canada-wide Standard for Mercury-containing Lamps
http://www.ccme.ca/assets/pdf/merc_lamp_standard_e.pdf
- ¹⁵³ Canada-wide Standard on Mercury for Dental Amalgam Waste
http://www.ccme.ca/assets/pdf/cws_merc_amalgam_e.pdf

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- ¹⁵⁴ *Environmental Emergency Regulations, SOR/2003-307*
<http://canadagazette.gc.ca/partII/2003/20030910/html/sor307-e.html>
- ¹⁵⁵ Canada-wide Standards for Dioxins and Furans: Iron Sintering plants
http://www.ccme.ca/assets/pdf/dnf_sintering_cws_e.pdf
- ¹⁵⁶ Canada-wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces
http://www.ccme.ca/assets/pdf/dnf_steel_cws_e.pdf
- ¹⁵⁷ Canada-wide Standards for Dioxins and Furans: Coastal Pulp and Paper Boilers
http://www.ccme.ca/assets/pdf/d_and_f_standard_e.pdf
- ¹⁵⁸ Canada-wide Standards for Dioxins and Furans: Incineration
http://www.ccme.ca/assets/pdf/d_and_f_standard_e.pdf
- ¹⁵⁹ Canada-wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste
http://www.ccme.ca/assets/pdf/d_f_conicalwaste_cws_e.pdf
- ¹⁶⁰ Environmental Code of Practice for Non-Integrated Steel Mills
<http://www.ec.gc.ca/nopp/docs/cp/1mm8/en/1mm8e.pdf>
- ¹⁶¹ Environmental Code of Practice for Integrated Steel Mills
<http://www.ec.gc.ca/nopp/docs/cp/1mm7/en/toc.cfm>
- ¹⁶² *Prohibition of Certain Toxic Substances Regulations, 2003, SOR/2003-99*
<http://canadagazette.gc.ca/partII/2003/20030409/html/sor99-e.html>
- ¹⁶³ Best Management Practices for the Control of Benzene Emissions from Glycol Dehydrators
http://www.capp.ca/default.asp?V_DOC_ID=770
- ¹⁶⁴ Canada-wide Standard for Benzene: Phase 1
http://www.ccme.ca/assets/pdf/benzene_std_june2000_e.pdf
- ¹⁶⁵ Canada-wide Standard for Benzene: Phase 2
http://www.ccme.ca/assets/pdf/benzene_cws_phase2_e.pdf
- ¹⁶⁶ New Source Emission Guidelines for Thermal Electricity Generation
<http://www.ec.gc.ca/CEPARRegistry/documents/glines/thermal/gl.cfm>
- ¹⁶⁷ Notice requiring the preparation and implementation of pollution prevention plans for inorganic chloramines and chlorinated wastewater effluents
<http://canadagazette.gc.ca/partI/2004/20041204/html/notice-e.html>

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http://www.ec.gc.ca/epa-epe/en/DETAIL.cfm?par_docID=3&par_actn=s1&par_type=2
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http://www.ec.gc.ca/ceparegistry/documents/code/furn_ref/toc.cfm
- ¹⁷⁰ Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Dichloromethane
http://www.ec.gc.ca/NOPP/DIVISION/EN/detail.cfm?par_docID=243
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<http://www.ec.gc.ca/epa-epe/rcf/en/index.cfm>
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<http://canadagazette.gc.ca/partII/2003/20030312/html/sor79-e.html/>
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<http://canadagazette.gc.ca/partII/2003/20030813/html/sor283-e.html>
- ¹⁷⁴ *Tributyltetradecylphosphonium Chloride Regulations*, SOR/2000-66
http://canadagazette.gc.ca/partII/tempAscii/g2-13406_e.txt
- ¹⁷⁵ Aniline
<http://canadagazette.gc.ca/partI/2002/20021005/html/notice-e.html>
- ¹⁷⁶ Bis(2-chloroethyl) ether
<http://canadagazette.gc.ca/partI/2005/20050219/html/notice-e.html>
- ¹⁷⁷ Chlorinated paraffins
http://www.hc-sc.gc.ca/hecs-sesc/exsd/pdf/chlorinated_paraffins_waxes.pdf
- ¹⁷⁸ 3,5-Dimethylaniline
<http://canadagazette.gc.ca/partI/2005/20050219/html/notice-e.html#i5>
- ¹⁷⁹ Di-*n*-octyl phthalate
http://www.ec.gc.ca/substances/ese/eng/psap/assessment/PSL1_di_n_octyl_phthalate_followup.txt
- ¹⁸⁰ Non-pesticidal organotin compounds
http://www.ec.gc.ca/substances/ese/eng/psap/PSL1_organotins.cfm#Synopsis
- ¹⁸¹ 1,1,2,2-Tetrachloroethane

- http://www.ec.gc.ca/substances/ese/eng/psap/assessment/PSL1_TCE_followup_ec.t
[xt](#)
- 182 Acetaldehyde
<http://www.ec.gc.ca/substances/ese/eng/psap/final/acetaldehyde.cfm>
- 183 Acrolein
<http://www.ec.gc.ca/substances/ese/eng/psap/final/acrolein.cfm>
- 184 Acrylonitrile
<http://www.ec.gc.ca/substances/ese/eng/psap/final/acrylonitrile.cfm>
- 185 Aluminum chloride, aluminum nitrate and aluminum sulphate
<http://www.ec.gc.ca/substances/ese/eng/psap/final/aluminum.cfm>
- 186 Ammonia in the aquatic environment
<http://www.ec.gc.ca/substances/ese/eng/psap/final/ammonia.cfm>
- 187 1,3-Butadiene
<http://www.ec.gc.ca/substances/ese/eng/psap/final/butadiene.cfm>
- 188 Butylbenzylphthalate
<http://www.ec.gc.ca/substances/ese/eng/psap/final/bbp.cfm>
- 189 Carbon disulfide
<http://www.ec.gc.ca/substances/ese/eng/psap/final/cs2.cfm>
- 190 Chloroform
<http://www.ec.gc.ca/substances/ese/eng/psap/final/chloroform.cfm>
- 191 *N,N*-Dimethylformamide
<http://www.ec.gc.ca/substances/ese/eng/psap/final/DMF.cfm>
- 192 Ethylene glycol
<http://www.ec.gc.ca/substances/ese/eng/psap/final/ethyleneglycol.cfm>
- 193 Ethylene oxide
<http://www.ec.gc.ca/substances/ese/eng/psap/final/ethyleneoxide.cfm>
- 194 Formaldehyde
<http://www.ec.gc.ca/substances/ese/eng/psap/final/formaldehyde.cfm>
- 195 Hexachlorobutadiene
<http://www.ec.gc.ca/substances/ese/eng/psap/final/HCBD.cfm>
- 196 Inorganic chloramines
<http://www.ec.gc.ca/substances/ese/eng/psap/final/chloramines.cfm>
- 197 2-Methoxyethanol, 2-Ethoxyethanol, 2-Butoxyethanol
<http://www.ec.gc.ca/substances/ese/eng/psap/public/glyclos.cfm>

- ¹⁹⁸ N-Nitrosodimethylamine
<http://www.ec.gc.ca/substances/ese/eng/psap/final/NDMA.cfm>
- ¹⁹⁹ Nonylphenol and its ethoxylates
<http://www.ec.gc.ca/substances/ese/eng/psap/final/npe.cfm>
- ²⁰⁰ Phenol
<http://www.ec.gc.ca/substances/ese/eng/psap/final/phenol.cfm>
- ²⁰¹ Releases from primary and secondary copper smelters and refineries
<http://www.ec.gc.ca/substances/ese/eng/psap/final/CuZn.cfm>
- ²⁰² Releases from primary and secondary zinc smelters and refineries
<http://www.ec.gc.ca/substances/ese/eng/psap/final/CuZn.cfm>
- ²⁰³ Releases of radionuclides from nuclear facilities (impact on non-human biota)
http://www.ec.gc.ca/substances/ese/eng/psap/public/reports/radionuclides_e.pdf
- ²⁰⁴ Respirable particulate matter less than or equal to 10 microns
<http://www.ec.gc.ca/substances/ese/eng/psap/final/PM-10.cfm>
- ²⁰⁵ Road salts
<http://www.ec.gc.ca/substances/ese/eng/psap/final/roadsalts.cfm>
- ²⁰⁶ Textile mill effluents
<http://www.ec.gc.ca/substances/ese/eng/psap/final/tme.cfm>
- ²⁰⁷ Polybrominated diphenyl ethers (PBDEs)
http://www.ec.gc.ca/CEPARRegistry/documents/subs_list/PBDE_draft/PBDE_TOC.cfm
- ²⁰⁸ Perfluorooctane sulfonate, its salts and its precursors that contain the C₈F₁₇SO₂ or C₈F₁₇SO₃ moiety
http://www.ec.gc.ca/CEPARRegistry/documents/subs_list/PFOS/PFOS_TOC.cfm