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Canadian Environmental Protection Act, 1999

Annual Report

for April 2011 to March 2012



*Canadian Environmental
Protection Act, 1999*

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Introduction

This Annual Report provides an overview of the results achieved under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) from April 1, 2011, to March 31, 2012. The publication of this report responds to the statutory requirement to provide annual reports to Parliament on the administration and enforcement of the Act.

The chapters in this report are organized based on the major parts of CEPA 1999, to enable readers to easily find results achieved under the Act and to compare those results from year to year. Each chapter contains introductory remarks that describe the applicable provisions of the Act, followed by a description of the key results achieved under that part during the reporting period.

This report includes the following mandatory information:

- Section 1.1 describes the activities of the National Advisory Committee. There were no other committees established under paragraph 7(1)(a) of CEPA 1999 during the reporting period.
- Section 1.2 describes the activities under the Canada–Ontario Agreement Respecting the Great Lakes Basin Ecosystem.
- Section 1.3 describes the activities under the Canada–Quebec Administrative Agreement.
- Section 1.4 describes the activities under the Canada–Saskatchewan Administrative Agreement.
- Section 1.5 describes the activities under the Canada–Alberta Equivalency Agreement.
- Section 3.2 provides examples of the types of research initiatives under way and their key contributions in the reporting period. Environment Canada and Health Canada scientists published numerous reports, papers, book chapters, articles and manuscripts on subjects related to CEPA 1999. This body of work appeared in books and scientific journals that are available in libraries and from the publishers.
- There were no activities under the international air pollution provisions (Division 6 of Part 7) of CEPA 1999 during the reporting period.
- There were no activities under the international water pollution provisions (Division 7 of Part 7) of CEPA 1999 during the reporting period.

The Chemicals Management Plan

The Chemicals Management Plan (CMP) is a program to protect Canadians and their environment from exposure to harmful chemicals. It includes a number of activities for which the obligations or authorities are spread throughout CEPA 1999. As such, the specific results achieved by the CMP under each part of the Act for the 2011–2012 reporting period can be found in the appropriate chapter of this report.

The Chemical Substances website (www.chemicalsubstances.gc.ca) provides more information on activities related to the CMP.

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Executive Summary

This Annual Report provides an overview of the results achieved under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) from April 1, 2011, to March 31, 2012.

In 2011–2012, Environment Canada consulted with the National Advisory Committee on various CEPA 1999 regulatory initiatives and reported on actions under three administrative agreements and one equivalency agreement. Under the Memorandum of Understanding on Environmental Cooperation in Atlantic Canada, Environment Canada worked with provincial counterparts to implement work plans that support CEPA 1999.

The CEPA Environmental Registry continued to provide public access to all CEPA-related initiatives. There were 38 public consultation opportunities published on the Registry in the reporting period.

Results were achieved under 13 environmental quality monitoring initiatives, such as the National Air Pollution Surveillance Network, the Canadian Air and Precipitation Monitoring Network, the Northern Contaminants Program, and greenhouse gas (GHG) monitoring. In 2011–2012, Environment Canada and Health Canada scientists published hundreds of articles, reports and papers. Much of this research is conducted in Canada and abroad in collaboration with other governments, academic institutions and industry. This report provides examples of research activities related to air quality, water, wildlife and soil, and human health.

In collaboration with provincial and territorial governments, three environmental quality guidelines, two for water and another for soil; seven guidelines under the Chemicals Management Plan (CMP), including five for water, one for sediment and one for tissue; four drinking-water quality guideline documents; and one air quality guideline were finalized in the reporting period. As well, many other guidelines were being developed during 2011–2012.

On August 27, 2011, Environment Canada also published in the *Canada Gazette*, Part I the proposed *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations*. These proposed Regulations would establish a performance standard for new coal-fired electricity units and units that have reached the end of their useful life.

Public reporting continued in 2011–2012 through the publication of Canadian Environmental Sustainability Indicators for air quality, water quality and GHG emissions; through the National Pollutant Release Inventory, which provides a publicly accessible inventory of pollutant releases (to air, water and land), disposals and transfers for recycling; and through the Greenhouse Gas Emissions Reporting Program.

In 2011–2012, draft or final assessment decisions were published for 661 existing substances or groups of substances, including 23 substances in the CMP Challenge program, 28 substances from the petroleum stream sector approach and 545 substances using the rapid screening approach under the CMP. Of the substances assessed, 8 were found or proposed to be found to meet the definition of toxic under CEPA 1999.

Various risk management measures were undertaken in 2011–2012. The Minister of the Environment and the Minister of Health proposed listing 8 substances or groups of substances in Schedule 1 of CEPA 1999 (the List of Toxic Substances), and the Governor-in-Council added 10 substances or groups of substances to Schedule 1 (some of which the ministers had proposed adding in the previous reporting year). Notices of intent to apply Significant New Activity Notices, which require new uses of a substance to be notified and assessed, were published for 65 existing substances, and final orders amending the Domestic Substances List to apply the Significant New Activity provisions were published for 10 substances. Environment Canada published 3 proposed

regulations and 1 final regulation under Part 5 of CEPA 1999. These included the proposed *Regulations Respecting Products Containing Certain Substances Listed in Schedule 1 to the Canadian Environmental Protection Act, 1999*, which would prohibit, with some exceptions, the manufacture, import and sale of mercury-containing products.

During the reporting period, three pollution prevention planning notices were in progress, one was published, and five pollution prevention planning notices were active. Through Environmental Performance Agreements, a number of companies have reduced or are working toward reducing their production, use or release of specific pollutants.

The Canadian public and environment continued to be protected from the possible risks associated with the introduction of new substances to the Canadian market. Environment Canada and Health Canada conducted 509 assessments of new chemicals, polymers or living organisms. The Minister of the Environment issued 23 Significant New Activity Notices and 11 Ministerial Conditions to prevent risks.

Work on animate products of biotechnology continued in 2011–2012. The first screening assessment report for existing micro-organisms was published for public comment in the *Canada Gazette*. During 2011–2012, 29 notifications were received for new animate products of biotechnology. This represents a 69% increase over last year and continues an upward trend in the number of notifications over the past 5 years.

Under Part 7 of CEPA 1999, the government published proposed amendments to the *Sulphur in Diesel Fuel Regulations* and finalized *Regulations Amending the Renewable Fuels Regulations*. Under Environment Canada's emissions verification testing program, 120 tests were performed on various types of vehicles and engines. To ensure regulatees are aware of their requirements under these regulations, compliance promotion activities were undertaken nationally and regionally.

Also under Part 7, 99 permits were issued for the disposal at sea of 4.64 million tonnes (t) of waste and other matter. Most of this was dredged material that was removed from harbours and waterways to keep them safe for navigation. As required by CEPA 1999, monitoring projects were completed on six disposal sites in the reporting period.

Environment Canada continued to implement the government's international obligations under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, through the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*. In calendar year 2011, imports and exports of these materials were 394 786 t and 460 707 t, respectively.

Under the *Environmental Emergency Regulations*, approximately 4200 facilities had filed Notices of Identification of Substance and Place as of March 31, 2012; of those facilities, approximately 2000 were required to prepare environmental emergency plans.

Promoting compliance with and enforcing CEPA 1999's regulations continues to be a priority. In 2011–2012, the number of designated persons with enforcement powers under CEPA 1999 included 199 enforcement officers, 36 officers from the Environmental Emergencies Program and 180 CEPA analysts. All designated officers were trained on the new *Environmental Enforcement Act*. This report provides examples of the numerous compliance-promotion projects undertaken by regional offices to increase the awareness and understanding of the law and its regulations, such as collaboration with First Nations and workshops on individual CEPA 1999 regulations. Enforcement officers conducted more than 5800 inspections during the reporting period, and more than 80 investigations were in various stages of progress.

1 Administration (Part 1)

Part 1 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) requires the ministers to establish the National Advisory Committee, composed of one representative for the federal Minister of the Environment and one for the federal Minister of Health, representatives from each province and territory, and not more than six representatives of Aboriginal governments from across Canada.

Part 1 allows the Minister of the Environment to negotiate an agreement with a provincial or territorial government, or an Aboriginal people, with respect to the administration of the Act. It also allows for equivalency agreements, which suspend the application of federal regulations in a province or territory that has equivalent regulatory provisions.

1.1 National Advisory Committee

The National Advisory Committee advises the ministers on certain actions taken under the Act, enables national cooperative action, and seeks to avoid duplication in regulatory activity among governments. The Committee serves as a single window in working with provincial and territorial governments and representatives of Aboriginal governments on consultations and offers to consult.

To carry out its duties in 2011–2012, the CEPA National Advisory Committee (NAC) held one teleconference meeting, and the NAC Secretariat corresponded regularly with committee members regarding various federal initiatives implemented under CEPA 1999. These initiatives included:

- updates on the implementation of Canada's Chemicals Management Plan (CMP), including various risk assessment and risk management activities of the CMP;
- update on the fifth meeting of the Conference of the Parties of the Rotterdam Convention;
- preparation and implementation of pollution prevention plans in respect of toxic substances;
- *Federal Renewable Fuels Regulations*;
- *Sulphur in Diesel Fuel Regulations*;

- 10th meeting of the Conference of the Parties to the Basel Convention;
- proposed *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*;
- Petroleum Sector Stream Approach, Stream 1;
- publication of Codes of Practice for various substances;
- proposed *Regulations Amending the On-Road Vehicle and Engine Emission Regulations (On-Board Diagnostic Systems for Heavy-Duty Engines and Other Amendments)*;
- publication of the *Regulations Amending the Off-Road Compression-Ignition Engine Emission Regulations*;
- updates on the 29th and 30th meeting of the Executive Body of the Convention on Long-Range Transboundary Air Pollution; and
- publication of the 2011 *Canada Gazette* notice for the National Pollutant Release Inventory (NPRI) and publication of reviewed 2010 NPRI data.

For more information, please consult www.ec.gc.ca/cepregistry/gene_info/nac.cfm.

1.2 Canada–Ontario Agreement Respecting the Great Lakes Basin Ecosystem

Since 1971, Canada and Ontario have worked together through the Canada–Ontario Agreement Respecting the Great Lakes Basin Ecosystem (www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=B903EE0D-1). This agreement guides the efforts of Canada and Ontario in achieving a healthy, prosperous and sustainable Great Lakes Basin ecosystem for present and future generations, and is the principal mechanism for meeting Canada's obligations under the Canada–United States Great Lakes Water Quality Agreement (www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=88A2FOE3-1). The 2007–2012 Canada–Ontario

Agreement Respecting the Great Lakes Basin Ecosystem comprises 13 goals, 37 results and 189 specific commitments in 4 priority areas:

- designated Areas of Concern¹ (AOCs) in the Great Lakes Basin;
- harmful pollutants;
- lake and basin sustainability; and
- coordination of monitoring, research and information.

Annex 1: The Areas of Concern Annex

Annex 1 comprises two goals, described below.

The first goal is to complete priority actions for restoring water quality and ecosystem health resulting in the formal delisting of four Canadian AOCs (Nipigon Bay, Jackfish Bay, Wheatley Harbour and St. Lawrence River (Cornwall)).

In 2011–2012, all of the remaining priority remedial actions in these AOCs had either been completed or the necessary funding commitments were made to projects being implemented. Wheatley Harbour was delisted by Canada as an AOC in April 2010. In the Nipigon Bay AOC, upgrades continued at the Town of Nipigon wastewater system, and the community of Red Rock initiated an evaluation and environmental assessment of wastewater system upgrade options. The project to upgrade the Cornwall wastewater treatment plant in the St. Lawrence AOC is expected to be completed in 2014. Canada and Ontario determined that Jackfish Bay is now an Area in Recovery (an area where all required remedial actions have been taken, but time is needed for the ecosystem to recover), which was formally recognized in May 2011.

The second Annex 1 goal is to make significant progress toward Remedial Action Plan implementation, environmental recovery and restoration of beneficial uses in the other

¹ An Area of Concern (AOC) is a location that has experienced environmental degradation. Under Annex 2 of the Canada–United States Great Lakes Water Quality Agreement, 42 AOCs were identified and one more (Erie, Pennsylvania) was added later. Currently there are 9 AOCs in Canada, 25 AOCs in the United States, and 5 additional AOCs shared by both countries. For more information on AOCs, see www.ec.gc.ca/raps-pas/default.asp?lang=En&n=A290294A-1.

11 Canadian AOCs. In January 2012, the Stage 2 Remedial Action Plan Report for the Canadian portion of the Detroit River AOC was released. The report includes a comprehensive assessment of the current status of beneficial use impairments (BUI) in the AOC, an evaluation of the remedial actions to restore beneficial uses that were undertaken from 1998–2008, and recommendations regarding the remaining remedial actions (their priority, the proposed timelines, and the agency or organization that should be responsible for implementing the remedial actions). The report has been reviewed by Canadian and U.S. agencies, stakeholders, the public, and the International Joint Commission.

In May 2011, Canada and Ontario published the BUI Status Report on Canadian Areas of Concern. BUIs are a framework of 14 environmental quality indicators established through the Great Lakes Water Quality Agreement that define the status of an AOC. This report provides a detailed review of the status of BUIs as well as an overview of the history, Remedial Action Plan partners, and key remedial and restoration actions completed and remaining in each of the AOCs to September 2010.

Through the Great Lakes Action Plan's Great Lakes Sustainability Fund (GLSF), projects were carried out in collaboration with other stakeholders to (1) improve water quality by controlling point and non-point sources of contamination, (2) restore fish habitat and wildlife habitat, and (3) characterize contaminated sediment and develop contaminated sediment management plans in AOCs.

In 2011–2012, the GLSF continued to support work in the Bay of Quinte, Niagara River, St. Lawrence River (Cornwall), Hamilton Harbour, Toronto, St. Clair River and Detroit River AOCs, to develop and implement stewardship initiatives and deliver programs that reduce nutrient inputs to watercourses from urban and rural non-point sources. In the Bay of Quinte AOC, the fund continued to support the development of an integrated pollution prevention and control plan for municipalities bordering the bay. In the Toronto Region AOC, the fund continued to support the Sustainable Technologies Evaluation Program, which evaluates the effectiveness of technologies that mitigate impacts of stormwater, promotes the adoption of low-impact development approaches and best practices, provides information

on sustainable technologies to rural and urban landowners, and transfers green technologies to municipalities and the development industry.

The fund supported a number of projects to restore habitat in AOCs, including wetlands and habitat in Cootes Paradise in the Hamilton Harbour AOC, fish habitat on the Canard River in the Detroit River AOC, new stream habitat and headwater wetlands in the Toronto Region AOC, and shoreline habitat in the Niagara River and St. Clair River AOCs.

In 2011–2012, the GLSF also supported the development of a plan to manage contaminated sediments in the Peninsula Harbour AOC; the development of a management strategy on the ecological and human health risks of contaminated sediments in the river in the St. Marys River AOC; and the continuation of risk assessment of the mercury-contaminated sediment in the Canadian side of the St. Clair River AOC.

Annex 2: The Harmful Pollutants Annex

Annex 2 addresses both past (“legacy”) and ongoing sources of pollution in the Great Lakes Basin. Annex 2 takes a substance- and/or sector-based approach to reducing and preventing releases throughout the basin, with a goal to virtually eliminate persistent bioaccumulative toxic substances. Environment Canada’s efforts to assess and manage the risks posed by commercial chemicals under the CMP support the delivery of Annex 2 commitments.

A commitment to facilitate information sharing between Canada and Ontario’s respective chemical management plans under a 2011–2012 extension of the Canada–Ontario Agreement was implemented. Toxics reduction efforts previously undertaken through the Great Lakes Binational Toxics Strategy (GLBTS) have now been integrated into federal CMP risk management strategies.

After more than 10 years of binational effort, 2011–2012 marked a transition year for the GLBTS as negotiations continued on an amended Great Lakes Water Quality Agreement. It is expected that the amended Agreement will set the path forward for the management of chemicals of concern.

Annex 3

The goal of Annex 3 of the Canada–Ontario Agreement is to achieve commitments to restore beneficial uses in open lake waters through Lakewide Management Plan activities. Stakeholders were actively engaged through participation in the development and updating of these plans. Monitoring and surveillance work also continued with the objective of gaining a better understanding of the state of, and trends in, the Great Lakes ecosystem.

Environment Canada, in collaboration with the United States Environmental Protection Agency (U.S. EPA), regularly reports on the ecological health of the Great Lakes ecosystem. In 2011, the State of the Great Lakes Ecosystem Conference was held in Erie, Pennsylvania. This was the 9th State of the Great Lakes Ecosystem Conference since 1994. The conference and associated report continues to be an effective means of developing binational consensus on the state of the lakes and communicating this information to stakeholders and the public.

More than 230 delegates from Canadian and American federal, state, provincial and local government and/or agencies and universities as well as stakeholders were in attendance, along with over 100 individuals participating via Internet broadcast.

Over 50 draft indicator reports and a draft Great Lakes ecosystem status and trends summary report were presented at the conference. When finalized, these indicator reports will form the basis of the 2012 Canada–United States State of the Great Lakes Report.

- Environment Canada, in cooperation with the U.S. EPA, co-chairs binational Lakewide Management Plans under the Canada–United States Great Lakes Water Quality Agreement. The plans identify binational ecological objectives and management strategies, including scientific priorities for data collection to fill knowledge gaps in ecosystem status and trends. In 2011–2012, a number of Lakewide Management Plan reports and activities were undertaken: The 2011 annual Lakewide Management Plan reports were published for each of the Great Lakes.

- Implementation of the draft Lake Superior Aquatic Invasive Species Complete Prevention Plan was initiated.
- Environment Canada continued to participate in a number of key Canadian watershed and coastal initiatives, including the Lake Huron Southeast Shore and Southern Georgian Bay Coastal Initiatives, and the Grand River Water Management Plan. These initiatives seek to develop mechanisms for the protection and restoration of Lake Huron and Lake Erie, respectively.

In 2011–2012, the Western Lake Erie Watershed Priority Natural Area Inter-agency Collaborative Agreement was signed. The purpose of the agreement between Environment Canada, the Department of Fisheries and Oceans, Ontario Ministry of Natural Resources, Essex Region Conservation Authority, and Ducks Unlimited Canada is to enhance collaboration and coordination of resource management programs and projects that protect and restore natural heritage features in Canadian waters and the watershed of the Detroit River and Western Lake Erie, including Point Pelee and Pelee Island.

The Great Lakes Nutrient Initiative program was announced in Budget 2011 to improve nearshore water and ecosystem health and better address the presence of phosphorous in the Great Lakes and has been approved by Cabinet.

Great Lakes and Regional Environmental Quality Monitoring and Surveillance Program

The binational Cooperative Science and Monitoring Initiative (CSMI) is a five-year rotational program that coordinates research and monitoring, from planning through to data synthesis and reporting, to ensure the most effective and efficient use of resources. Coordinated field activities occur on each lake once every five years. The complete cycle for each lake involves two years of planning, one year of field activity and two years of analysis, synthesis and reporting.

- In 2011–2012, field work was coordinated and conducted in Lake Superior. Priority issues identified include the status of chemicals of concern and chemicals of immediate concern in Lake Superior’s ecosystem, the status of the lower food web, the early detection of aquatic

invasive species, and a study of native fish species in the lake, including a lakewide juvenile Lake Sturgeon index survey.

- In 2011–2012, the Lake Ontario Lakewide Management Plan held a binational workshop in Burlington, Ontario, to review results from the 2008 CSMI field year, specifically the lower food web status, lakewide fishery assessment and understanding nearshore offshore nutrient transport. Two project planning meetings were also held in spring 2012 to review and update binational priorities, which include: tributary monitoring and research to better understand nutrient loading impacts on nearshore and open waters and to improve the understanding of nutrient cycling within the lake to inform and direct management action.

1.3 Canada–Quebec Administrative Agreement

Administrative agreements concerning the pulp and paper sector have been in place between Quebec and the Government of Canada since 1994. The fourth agreement expired on March 31, 2007. On June 13, 2009, the proposed Canada–Quebec Pulp and Paper and Metal Mining Sectors Administrative Agreement was published in the *Canada Gazette*, Part I. The Minister published his response to the comments received on February 6, 2010, in the *Canada Gazette*. The parties have continued to cooperate, in keeping with the spirit of the draft agreement.

As with the previous agreements, the draft fifth agreement recognizes Quebec as the principal interlocutor for engaging with the pulp and paper and metal mining sectors pursuant to the following four federal regulations:

- *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations* made pursuant to CEPA 1999;
- *Pulp and Paper Mill Defoamer and Wood Chip Regulations* made pursuant to CEPA 1999;
- *Pulp and Paper Effluent Regulations* made pursuant to the *Fisheries Act*; and
- *Metal Mining Effluent Regulations* made pursuant to the *Fisheries Act*.

Under the agreement, the province acts as a “single window” for gathering regulatory information from Quebec pulp and paper manufacturers and forwards such information to Environment Canada to help the Department implement CEPA 1999 and the *Fisheries Act*, as well as their regulations. Both levels of government retain full responsibility for carrying out inspections and investigations and for taking appropriate enforcement measures in order to ensure compliance with their respective requirements.

During this reporting period, 96 reports produced by pulp and paper facilities in Quebec were examined to verify that the facilities were in compliance with the applicable regulations. As well, both parties shared compliance verification reports at two meetings of the management committee, on October 19, 2011, and on March 28, 2012.

To view the draft agreement, consult www.gazette.gc.ca/rp-pr/p1/2009/2009-06-13/html/notice-avis-eng.html#d101.

1.4 Canada–Saskatchewan Administrative Agreement

The Canada–Saskatchewan Administrative Agreement, in force since September 1994, is a work-sharing arrangement covering certain provincial legislation and seven CEPA 1999 regulations, including two regulations related to the pulp and paper sector, two regulations on ozone-depleting substances, and two regulations on PCBs. There were no prosecutions under these regulations in Saskatchewan under this agreement in 2011–2012.

To view the agreement, consult www.ec.gc.ca/ee-ue/default.asp?lang=En&n=91B094B6-1.

1.5 Canada–Alberta Equivalency Agreement

CEPA 1999 provides for equivalency agreements where provincial or territorial environmental legislation has provisions that are equivalent to the CEPA 1999 provisions. The intent is to eliminate the duplication of environmental regulations.

Under the 1994 Agreement on the Equivalency of Federal and Alberta Regulations for the Control of Toxic Substances, the following CEPA 1999 regulations, or parts thereof, do not apply in Alberta:

- *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations* (all sections);
- *Pulp and Paper Mill Defoamer and Wood Chip Regulations* (4(1), 6(2), 6(3)(b), 7 and 9);
- *Secondary Lead Smelter Release Regulations* (all sections); and
- *Vinyl Chloride Release Regulations, 1992* (all sections).

There are no longer any operating vinyl chloride plants or lead smelters in Alberta, and therefore no compliance issues to report under the *Vinyl Chloride Release Regulations, 1992* or the *Secondary Lead Smelter Release Regulations*.

The Canada–Alberta Agreement is currently under review. Until its renewal, Environment Canada and Alberta Environment continue to work together in the spirit of the agreement.

Alberta Environment indicated that, in 2011–2012, there were no reported violations by the four pulp and paper mills regulated under the pulp and paper regulations.

For more information about the agreement, consult www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=5CB02789-1.

1.6 Memorandum of Understanding on Environmental Cooperation in Atlantic Canada

Efforts in 2011–2012 focused on implementing the Water and Environmental Enforcement Annex Work Plans under the Memorandum of Understanding on Environmental Cooperation signed in 2008 between the Minister of the Environment and the ministers of the environment of the four Atlantic provinces.

A key deliverable of the Water Annex Work Plan was the organization of the 2nd Annual Atlantic Federal-Provincial Water Workshop and Science Exchange Forum in Halifax, Nova Scotia. The workshop resulted in an agreement to reduce the number of priorities to be pursued under the Water Annex Work

Plan in 2012–2013. Priorities include: Community Funding Optimization; Climate Change Impacts and Adaptation; Water Availability Indicators; Federal-Provincial Water Monitoring Working Group (Environment Canada and Atlantic Provinces); and Federal-Provincial Emerging Water Issues.

Through the Environmental Enforcement Annex Work Plan, federal and provincial environmental enforcement officers conducted joint fieldwork and investigations in the three Maritime provinces. In addition, federal-provincial collaboration focused on enhancing collective environmental enforcement capacity through joint training and development of enforcement officers (e.g., internal investigation, environmental investigation).

1.7 Environmental Occurrences Notification Agreements

Federal, provincial and territorial laws require, in most cases, notification of the same environmental emergency or environmental occurrence, such as an oil or chemical spill. To reduce duplication of effort, Environment Canada and Fisheries and Oceans Canada entered into environmental occurrences notification agreements with the governments of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, the Northwest Territories and Yukon.

These notification agreements came into effect on March 25, 2011, on the day the *Release and Environmental Emergency Notification Regulations* under CEPA 1999 and the *Deposit out of the Normal Course of Events Notification Regulations* under the *Fisheries Act* came into force.

The purpose of the notification agreements is to establish a streamlined notification system for persons required to notify federal and provincial/territorial governments of an environmental emergency or environmental occurrence. Under these notification agreements, 24-hour authorities operating for the provinces and territories receive notifications of environmental emergencies or environmental occurrences, on behalf of Environment Canada, and transfer this information to the Department.

In 2011–2012, Environment Canada continued to work with its provincial and territorial counterparts to implement the notification agreements. The implementation of the agreements included the establishment of management committees and the development of standard operating procedures for the collection and processing of notifications of environmental occurrences.

To view the notification agreements, consult www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=5200AB4B-1.

2 Public Participation (Part 2)

Part 2 of CEPA 1999 provides for the establishment of an environmental registry, whistleblower protection, and the right of an individual to request an investigation and pursue court action.

2.1 CEPA Environmental Registry

The CEPA Environmental Registry was launched on Environment Canada's website with the proclamation of CEPA 1999 on March 31, 2000. Since that time, ongoing efforts have been made to increase the Registry's reliability and ease of use. The Registry encompasses thousands of CEPA-related documents and references. It has become a primary source of environmental information for the public and private sectors, both nationally and internationally, and has been used as a source of information in university and college curricula.

From April 2011 to March 2012, over 160 requests for CEPA-related information were received in the Registry mailbox (ceparegistry@ec.gc.ca) or

Environment Canada's general mailbox (enviroinfo@ec.gc.ca). Many of these requests were for information on the assessment reports of Batch 11 and 12, substances identified under the Challenge program, a key element of the CMP. Other requests involved pollution, proposed regulations, guidelines, codes of practice, importing chemicals, biotechnology, permits, the Export Control List, and the Domestic Substances List.

The Registry is located at www.ec.gc.ca/lcpe-cepa.

2.2 Public Consultations

During 2011–2012, there were 38 opportunities posted on the Environmental Registry for stakeholders and the public to consult.

Please see <http://ec.gc.ca/lcpe-cepa/eng/participation/default.cfm?n=FBC634F3-1>.

3 Information Gathering, Objectives, Guidelines and Codes of Practice (Part 3)

Part 3 of CEPA 1999 requires that the Minister of the Environment issue environmental quality objectives and guidelines, substance-release guidelines, and codes of practice. The Minister of Health is required to issue objectives, guidelines and codes of practice with respect to the elements of the environment that may affect the life and health of Canadians. Part 3 of CEPA 1999 also provides for research, information gathering, the creation of inventories and reporting.

3.1 Monitoring

In Canada, environmental quality monitoring is carried out through partnerships among provincial, territorial and federal governments, municipalities, universities, air and water associations, environmental groups, and volunteers.

In 2011–2012, a broad range of monitoring activities was undertaken in support of the Clean Air Regulatory Agenda and the Chemicals Management Plan (CMP), as well as the Northern Contaminants Program, the Great Lakes Surveillance Program and other initiatives that focus on specific areas such as greenhouse gases, transboundary groundwater, and the environmental impacts of industrial effluents from activities such as mining and pulp and paper production.

In addition, work continued within several regional, national and global monitoring networks, including the National Air Pollution Surveillance Network, the Canadian Air and Precipitation Monitoring Network, the Integrated Atmospheric Deposition Network, the Global Atmospheric Passive Sampling (GAPS) Network, and the Freshwater Inventory and Surveillance of Mercury Network.

In addition to data collection and reporting on a wide range of environmental issues, monitoring efforts in 2011–2012 also included upgrades to monitoring technologies and to data reporting and database infrastructure.

For more information about monitoring activities, visit: www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=F79B71E4-1.

3.2 Research

Research conducted under CEPA 1999 focuses on pollution prevention and environmental contamination. The research is used to: evaluate the impact of toxic substances and other substances of concern on the environment and human health; determine the extent of ecological and human health exposure to contaminants; monitor changes to the environment over time; guide risk assessments; develop preventive and control measures by identifying pollution prevention and technology solutions; and provide specialized sampling and analytical techniques used in compliance promotion and enforcement.

A broad range of research was undertaken in 2011–2012, including: laboratory and field studies; development and testing of new models and methods; climate model enhancement; development of sampling methodology; development of analytical tools; development of Canadian Ambient Air Quality Standards for targeted air pollutants; and analytical tool updates using scientific and economic research.

Research activities covered a significant number of subjects across the spectrum of air, climate, water, wildlife, soil and human health, many of which were in support of the Integrated Oil Sands Monitoring Plan, the Clean Air Regulatory Agenda or the Chemicals Management Plan. Areas of investigation included: air quality in key regions; vehicle emissions and alternative fuels; atmospheric and aquatic fate of CMP priority chemicals; siloxanes; climate trends and variations; impacts of climate change; wastewater effluents; legacy and emerging contaminants; mercury; ambient air pollution; indoor air quality; nanomaterials; biotechnology microbes; and human, bird and wildlife exposure to various chemicals and pollutants.

For more information about research activities, visit: www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=163364B7-1.

3.3 Objectives, Guidelines and Codes of Practice

3.3.1 Environmental Quality Guidelines

Environmental quality guidelines specify recommendations in quantitative or qualitative terms to support and maintain particular uses of the environment. Table 1 lists the environmental quality guidelines that were published or being developed

nationally through the Canadian Council of Ministers of the Environment (CCME) in 2011–2012. During the same period, Environment Canada developed federal environmental quality guidelines for various chemicals identified in the CMP (Table 1). Where federal priorities align with those of the CCME (i.e., those of the various provincial and territorial jurisdictions), the federal environmental quality guidelines will be tabled with the CCME for consideration as national values.

Table 1: Environmental quality guidelines from April 2011 to March 2012

<i>Canadian Council of Ministers of the Environment (federal, provincial and territorial)</i>		
Environmental Compartment	Published	In Progress
Water	<ul style="list-style-type: none"> • Chloride • Trichlorfon 	<ul style="list-style-type: none"> • Cadmium • Glyphosate • Manganese • Nitrate • Trichlorfon • Zinc
Soil	<ul style="list-style-type: none"> • N-Hexane 	<ul style="list-style-type: none"> • Barium • Glycols • Methanol • Nickel • Zinc
<i>Chemicals Management Plan (federal)</i>		
Environmental Compartment	Approved	In Progress
Water	<ul style="list-style-type: none"> • PBDEs • Cobalt • Hydrazine • Vanadium • Pentachlorophenol 	<ul style="list-style-type: none"> • Bisphenol A • Chlorinated paraffins • HBCD • PFOS • TBBPA • Triclosan
Sediment	<ul style="list-style-type: none"> • PBDEs 	<ul style="list-style-type: none"> • Chlorinated paraffins • PBDEs
Tissue	<ul style="list-style-type: none"> • PBDEs 	<ul style="list-style-type: none"> • Bisphenol A • Chlorinated paraffins • HBCD • PFOS • TBBPA
Soil		<ul style="list-style-type: none"> • HBCD • PFOS • TBBPA

Note: Hexabromocyclododecane (HBCD); polybrominated diphenylethers (PBDEs); perfluorooctane sulphonate (PFOS); tetrabromobisphenol-A (TBBPA).

3.3.2 Drinking Water Quality Guidelines

Health Canada works in collaboration with the provinces and territories to develop the Guidelines for Canadian Drinking Water Quality and their

supporting documents. Priorities for developing guidelines are also established in consultation with the provinces and territories.

Health-based guideline values are developed for drinking water contaminants that are found or expected to be found in drinking water supplies across Canada at levels that could lead to adverse health effects.

Guidance documents are also developed under the Guidelines for Canadian Drinking Water Quality to provide operational or management guidance related to specific drinking water-related issues (such as boil-water advisories) or to make risk assessment

information available when a guideline is not deemed necessary (such as controlling corrosion in drinking-water distribution systems).

The Guidelines for Canadian Drinking Water Quality are used by all provinces and territories as a basis to establish their own regulatory requirements to ensure the quality of drinking water in their own jurisdictions.

Table 2 lists the documents that were completed or in progress in 2011–2012.

Table 2: Guideline documents for Canadian drinking water quality from April 2011 to March 2012

Finalized – publication pending	In Progress
<ul style="list-style-type: none"> • Protozoa • Heterotrophic plate count • <i>E. coli</i> • Total coliforms 	<ul style="list-style-type: none"> • 1,2-dichloroethane • 2,4-dichlorophenoxyacetic acid • Ammonia • Chromium • Nitrate/nitrite • Selenium • Tetrachloroethylene • Vinyl chloride • Lead • Bromate • Aluminum • Manganese • pH • Atrazine • Waterborne bacterial pathogens • Overarching document • Microcystins • Uranium • Turbidity • Toluene, ethylbenzene and xylenes

3.3.3 Air Quality Guidelines

In 2011–2012, Health Canada published the following notices in the *Canada Gazette*, Part I:

- Finalized Residential Indoor Air Quality Guidelines for Toluene on July 30, 2011 (www.gazette.gc.ca/rp-pr/p1/2011/2011-07-30/pdf/g1-14531.pdf#page=17, pp. 17–20).
- Proposed Residential Indoor Air Quality Guideline for Fine Particulate Matter [2.5 microns] (www.gazette.gc.ca/rp-pr/p1/2011/2011-08-20/pdf/g1-14534.pdf#page=4, pp. 4–7).

3.4 State of the Environment Reporting

Environmental indicators provide a straightforward and transparent way to convey the state of Canada's environment. The Canadian Environmental Sustainability Indicators (CESI) are a system of national environmental indicators used to inform citizens about current environmental status and trends and to provide policy makers and researchers with a baseline of comprehensive, unbiased and authoritative information about key environmental issues. CESI systematically measures progress towards the goals and targets established through the Federal Sustainable Development Strategy.

The selection of environmental indicators is based on a number of key criteria. Indicators must be relevant to the government's policy direction. They must be useful and easily understood by decision makers and the public, built on consistent and solid methodology that is comparable over time and across geographies, and based on high-quality data expected to be maintained and updated for the foreseeable future.

The indicators are prepared by Environment Canada with the support of other federal departments, including Health Canada, Statistics Canada, Natural Resources Canada, Agriculture and Agri-Food Canada, and Fisheries and Oceans Canada, as well as their relevant provincial and territorial counterparts. CESI publishes extensive environmental baseline data from statistical surveys, environmental measurement networks and research that supports the government's environmental initiatives. The CESI website presents national and regional results, along with the methodology that explains the indicator, and links to related socio-economic issues and information. It provides results and information for 32 environmental indicators, including greenhouse gas emissions, air quality, water quality and protected areas. Below are the 2011–2012 national results for a selection of the key CESI indicators:

- Air quality: Nationally, average concentrations of ground-level ozone in the air increased by approximately 9% from 1990 to 2009. No trend in the average concentration of fine-particulate matter in the air was detected between 2000 and 2009.
- GHG emissions: Canada's total GHG emissions in 2009 were 690 megatonnes of carbon dioxide equivalent. This concentration represents a decrease from the 2008 level of 732 megatonnes.

- Freshwater quality: Freshwater quality for the protection of aquatic life for the 2007 to 2009 period was rated as excellent or good at 71 sites (41%), fair at 67 sites (39%), marginal at 30 sites (17%) and poor at 5 sites (3%).
- Protected areas: As of 2012, Canada had protected 9.8% of its land area and about 0.7% of its marine territory. Since 1990, the overall protected area in Canada has nearly doubled.

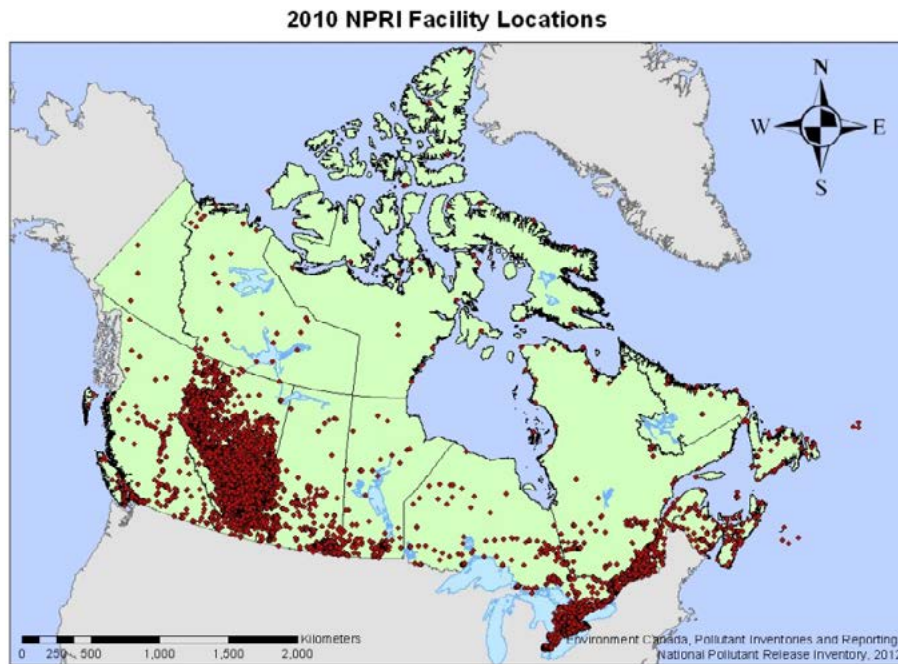
3.5 Gathering and Reporting of Pollution and Greenhouse Gas Information

3.5.1 National Pollutant Release Inventory

The National Pollutant Release Inventory (NPRI) is Canada's legislated, publicly accessible national inventory of pollutant releases (to air, water and land), disposals and transfers for recycling. The NPRI includes information reported by industrial facilities that meet certain criteria. It also includes emission estimates for a number of key air pollutants from other sources such as motor vehicles, residential heating, forest fires and agriculture. Over 8000 facilities, located in every province and territory, reported to the NPRI for 2010 (see Figure 1).

The NPRI supports the identification and management of risks to the environment and human health, including the development of policies and regulations on toxic substances and air quality. Public access to the NPRI encourages industry to prevent and reduce pollutant releases and improves public understanding about pollution and environmental performance in Canada.

Figure 1: Location of facilities that reported to the NPRI in 2010



The following NPRI data were made publicly available in 2011–2012:

- the 2010 NPRI facility-reported data and summary report (published in March 2012); and
- the 2010 national air pollutant emissions data and trends for all sources (published in February 2012).

Environment Canada continued a number of initiatives to improve the quality of NPRI data during 2011–2012. For example, the Department worked with industrial sectors and provincial governments to improve technical guidance information for facilities that report to the NPRI. The Department also published additional information to assist data users in how to use and interpret NPRI data.

For further information, consult www.ec.gc.ca/inrp-npri.

3.5.2 Greenhouse Gas Emissions Reporting Program

Environment Canada requires reporting of GHG emissions from facilities (mostly large industrial operations) through its Greenhouse Gas Emissions Reporting Program (GHGRP). The GHGRP is part of Environment Canada’s ongoing effort to develop, in

collaboration with the provinces and territories, a single, domestic, mandatory GHG reporting system, in order to meet the GHG reporting needs of all jurisdictions and to minimize the reporting burden for industry and government.

The main objectives of the GHGRP are to provide Canadians with information on GHG emissions, support the development of regulations, support provincial and territorial requirements for GHG emissions information, and validate estimates presented in the National GHG Inventory. The data are reported through a single reporting system, by facilities, to Environment Canada.

For 2010, 537 facilities reported to the GHGRP. The 2010 facility-reported data and related overview report were prepared for public release as part of a broader departmental consolidated release of GHG information products to occur in April 2012. The consolidated release, which also includes the National GHG Inventory and updated CESI GHG indicators, provides Canadians with a coherent picture of emission levels across the country. The facility-reported data is available through data tables, an online query tool and a downloadable file.

For further information, consult www.ec.gc.ca/ges-ghg.

3.5.3 Single Window Reporting Initiative

In 2011, the Single Window Reporting Initiative, an initiative managed by Environment Canada in collaboration with various partners, launched its expanded single, harmonized online system for regulatory reporting of air emissions and pollutant releases. The system reduces burden on industry and improves compliance with Canadian environmental regulations. It also supports the shared interest across jurisdictions of tracking and reporting progress on the reduction of GHG

emissions and pollutant releases. Environment Canada's NPRI (see section 3.5.1) and GHGRP (see section 3.5.2), as well as the CMP and other activities related to CEPA 1999 provisions, are using the Single Window Reporting System for their environmental data collection efforts. This initiative will continue to expand as additional partners integrate their GHG and pollutants reporting requirements into the Single Window Reporting System. For further information, consult <https://ec.ss.ec.gc.ca>.

4 Pollution Prevention (Part 4)

Part 4 of CEPA 1999 provides the authority for the establishment of a national pollution prevention information clearinghouse to facilitate the collection, exchange and distribution of information regarding pollution prevention.

Part 4 of the Act also provides the authority for the Minister of the Environment to require the preparation and implementation of pollution prevention plans. The use of pollution prevention planning requirements for risk management is described in Chapter 5, “Controlling Toxic Substances” (see 5.1.3.4).

4.1 Canadian Pollution Prevention Information Clearinghouse

The Canadian Pollution Prevention Information Clearinghouse (CPPIC) is a public website that provides Canadians with links to over 1800 resources

containing comprehensive information and tools from Canada and around the world to strengthen their capacity to prevent pollution. In 2011–2012, CPPIC was successfully upgraded to meet the government’s Common Look and Feel standards, and 134 new records were added to the clearinghouse. Thirty-four percent (34%) of the new records are Canadian and 10% are bilingual, both increases over 2010–2011 numbers. Almost half of all new records (47%) are applicable to manufacturing sectors, while nearly a third of all new records (30%) are applicable to private households.

5 Controlling Toxic Substances (Part 5)

Part 5 of CEPA 1999 includes specific provisions for data collection, assessment and management of new and existing substances in Canada. CEPA 1999 introduced a requirement for the government to sort through, or “categorize,” the substances on the Domestic Substances List. The categorization process identified substances that:

- were suspected to be inherently toxic to humans or to the environment, and are persistent (take a very long time to break down) and/or bioaccumulative (collect in living organisms and end up in the food chain); or
- present the greatest potential for exposure to Canadians.

As a result of the September 2006 completion of the categorization exercise, Environment Canada and Health Canada identified approximately 19 000 substances that needed no further action at that time and approximately 4300 chemical substances that needed screening assessments. These 4300 substances are being addressed under the CMP. Activities under the CMP include data collection, risk assessment, risk management, research, compliance promotion, enforcement and monitoring/surveillance.

In October 2011, the government renewed its commitment to pursue the CMP for the next five years. This next phase will build on successes and lessons learned from the first phase of the CMP and will continue to focus efforts to protect the health of Canadians and their environment. Key elements of the next phase of the CMP will include:

- completing assessments of approximately 500 substances across 9 categories; these categories represent substances that have been grouped based on shared similar characteristics (such as structural or functional similarities);
- investing in additional research for substances like BPA, flame retardants and substances that affect hormone function;
- addressing approximately 1000 additional substances in the next 5 years through other initiatives, including rapid screening of substances;

- updating the commercial use information of substances through mandatory reporting to inform risk assessment and risk management activities;
- continuing the assessment and management (where required) of priority substances identified through the first phase of the CMP (e.g., petroleum sector stream substances and the Challenge).

5.1 Existing Substances

5.1.1 Assessments

The Challenge

Through the Challenge program of the CMP, the government committed to addressing the 200 highest-priority substances. These 200 substances were divided into a number of smaller groups or “batches” that were addressed sequentially. Each batch of substances in the Challenge progressed through various information gathering, screening assessment, risk management, and compliance promotion and enforcement (where appropriate) stages. Through this process, these substances have been assessed, and to date 42 have been found to meet one or more of the criteria in section 64 of CEPA 1999. During the 2011–2012 period, risk assessment and risk management work was ongoing to complete this initiative.

The Groupings Initiative

One of the current key initiatives under the CMP is the Groupings Initiative where the Government of Canada has announced it will assess and manage, where appropriate, the potential health and ecological risks associated with nine groups of substances. On October 8, 2011, an announcement was published in the *Canada Gazette*, Part I. This initiative includes:

- aromatic azo- and benzidine-based substances;
- boron-containing substances;

- certain internationally classified substances with potential for exposure to individuals in Canada;
- certain organic flame retardants;
- cobalt-containing substances;
- methylenediphenyl diisocyanates and diamines;
- phthalates;
- selenium-containing substances;
- substituted diphenylamines.

In December 2011, a Notice was issued in the *Canada Gazette*, Part I under section 71 of CEPA 1999. This Notice collected information on a subset of the aromatic azo- and benzidine-based substances covered in this initiative.

The Petroleum Sector Stream Approach

The Petroleum Sector Stream Approach includes approximately 160 substances identified as priorities for action through the categorization process and that were set aside to be addressed in a sectoral approach. A large portion of high-priority petroleum substances are used or manufactured during petroleum refining or bitumen/heavy crude oil upgrading activities. Data collection, risk assessment and, where appropriate, risk management is continuing on this initiative.

In December 2011, a Notice was issued in the *Canada Gazette* on Stream 4 substances. This notice collected information on a subset of the Petroleum Sector Stream Approach Substances that are likely used outside the petroleum sector, are not primarily used as fuels, and may be present in products available to consumers.

The Polymers Approach

In March 2012, the Government of Canada released its proposed polymer approach for a 60-day public comment period. A tiered approach is proposed, taking into account the data requirements in the New Substances Program under CEPA 1999 and the timing of upcoming information-gathering initiatives.

The Rapid Screening Approach

The rapid screening approach uses a series of qualitative and quantitative steps to efficiently evaluate the likelihood that a substance may cause harm, given conservative estimates of exposure. At each step in the rapid screening process, any substance that appears to present a potential for harm will be identified as requiring further assessment. For those substances that pass through all steps of the rapid screening without being identified as requiring further assessment, the government will conclude that the substances do not meet any of the criteria as set out under section 64 of CEPA 1999.

The Domestic Substances List Inventory Update

In 2011 and 2012, the Government of Canada conducted consultations with stakeholders on the lessons learned and proposed approach to the second phase of the Domestic Substances List Inventory Update to be implemented in 2012.

Screening Assessments

Screening assessments are conducted to determine whether substances meet or are capable of meeting the criteria in section 64² of CEPA 1999. The results of the screening assessments are published in draft form on the Chemical Substances website, and the ministers of the Environment and Health publish a notice in the *Canada Gazette*, Part I. Interested parties can file written comments on the measure the ministers proposed and on the scientific considerations on the basis of which the measure is proposed during a 60-day public comment period. After taking into consideration comments received, the ministers may, if they deem it appropriate, revise the screening assessment report and the proposed measure.

² Under section 64 of CEPA 1999, a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that:

- (a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- (b) constitute or may constitute a danger to the environment on which life depends; or
- (c) constitute or may constitute a danger in Canada to human life or health.

Table 3 lists the 2011–2012 assessment conclusions and measures for 661 existing substances. This total reflects draft and/or final assessment decisions for 23 substances in batches 1, 2, 6, 8 and 11 of the challenge, 28 substances from the petroleum stream

sector approach, as well as assessment decisions for 545 substances or groups of substances through a rapid screening approach.

More information can be found at www.chemicalsubstances.gc.ca.

Table 3: Summary of existing substance assessment decisions published from April 2011 to March 2012

(NFA, no further action; PSL1, First Priority Substances List; SNAc, Significant New Activity; VE, virtual elimination; PMRA, Pest Management Regulatory Agency)

Substances or Number of Substances	Type of Assessment	Meet s. 64 Criteria	Proposed SNAc	Proposed Measure	Draft Notice*	Final Notice*
Triclosan	Screening Pilot Project – joint with PMRA	Yes		Add to Schedule 1	2012 Mar. 31	
Cyclopentasiloxane, decamethyl-	Challenge – Batch 2	No		NFA	2008 May 17	2012 Feb. 25
DecaBDE	Human Health State of the Science	n/a		n/a	2012 Feb. 11	
1,2-Dibromoethane	Screening Pilot Project	Yes		Add to Schedule 1	2011 Dec. 17	
1,1-Dichloroethene	Screening Pilot Project	No		NFA	2011 Dec. 17	
Aniline	PSL1 follow-up	No		NFA	2010 Nov. 6	2011 Dec. 10
Quinoline	Screening Pilot Project	Yes		Add to Schedule 1	2010 July 31	2011 Nov. 19
Propanedinitrile, [[4-[[2-(4-cyclohexylphenoxy)ethyl]ethylamino]-2-methylphenyl]methylene]-	Challenge – Batch 1	No		NFA	2010 July 3	2011 Sept. 10
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-	Challenge – Batch 6	Yes		Add to Schedule 1	2010 Oct. 2	2011 Sept 10
2,7-Naphthalenedisulfonic acid, 3-[[2,2'-dimethyl-4'-[[4-[[4-methylphenyl]sulfonyloxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-4-hydroxy-, disodium salt	Challenge – Batch 6	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Butanamide, 2,2'-[[3,3'-dimethoxy [1,1'-biphenyl]-4,4'-diyl]bis(azo)]bis [N-(2-methylphenyl)-3-oxo-	Challenge – Batch 6	No		NFA	2010 Oct. 2	2011 Sept. 10
Phenol, 4-[[2-methoxy-4-[[4-nitrophenyl]azo]phenyl]azo]-	Challenge – Batch 6	No		NFA	2010 Oct. 2	2011 Sept. 10
Phosphonic acid, [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]-, monoethyl ester, calcium salt (2:1)	Challenge – Batch 8	No		NFA	2010 Oct. 2	2011 Sept 10
Hexanedioic acid, bis(2-ethylhexyl) ester	Challenge – Batch 11	Yes		Add to Schedule 1	2010 Oct. 2	2011 Sept. 10
2-Propanone, reaction products with diphenylamine	Challenge – Batch 11	Yes		Add to Schedule 1	2010 Oct. 2	2011 Sept. 10

Table 3 (Continued)

Substances or Number of Substances	Type of Assessment	Meet s. 64 Criteria	Proposed SNAc	Proposed Measure	Draft Notice*	Final Notice*
1,4-Benzenediamine, N,N'-mixed tolyl and xylyl derivs.	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
1,4-Benzenediamine, N,N'-mixed Ph and tolyl derivs.	Challenge – Batch 11	Yes		Add to Schedule 1	2010 Oct. 2	2011 Sept. 10
2-Furancarboxaldehyde	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
Ethanedial	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
2-Propenoic acid, ethyl ester	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
Hexanoic acid, 2-ethyl-	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
Bismuthine, triphenyl-	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Cyclotetrasiloxane, heptamethylphenyl-	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Benzene, 1,1'-(chlorophenylmethylene)bis [4-methoxy-	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Phenol, 2-phenoxy-, trichloro deriv.	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Siloxanes and Silicones, Me 3,3,3-trifluoropropyl, Me vinyl, hydroxy-terminated	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
Siloxanes and Silicones, di-Me, reaction products with Me hydrogen siloxanes and 1,1,3,3-tetramethyldisiloxane	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Siloxanes and Silicones, di-Me, hydrogen-terminated	Challenge – Batch 11	No		NFA	2010 Oct. 2	2011 Sept. 10
Phenol, 4,4'-(1-methylethylidene)bis-, reaction products with hexakis (methoxymethyl)melamine	Challenge – Batch 11	No	Yes	NFA	2010 Oct. 2	2011 Sept. 10
Hexabromocyclododecane	Screening Pilot Project	Yes		Add to Schedule 1 and the implementation of VE	2010 Aug. 28	2011 Nov. 12
Long-chain chlorinated alkanes (carbon chain length 18-38)	Human Health State of the Science	n/a		n/a	2011 Sept. 3	
8 Substances	Petroleum Sector Stream 1 – heavy fuel oils and gas oils	No	Yes	NFA	2010 May 29	2011 Sept. 3
20 Substances	Petroleum Sector Stream 1 – low-boiling-point naphthas	No	Yes	NFA	2010 Aug. 14	2011 Sept. 3

Table 3 (Concluded)

Substances or Number of Substances	Type of Assessment	Meet s. 64 Criteria	Proposed SNAC	Proposed Measure	Draft Notice*	Final Notice*
53 Substances with High Hazard Potential	Screening Assessment	No	Yes	NFA	2011 July 2	
3 Substances	Screening Assessment – Micro-organisms – <i>Pseudomonas aeruginosa</i>	No	Yes	NFA	2011 July 2	
Chlorinated naphthalenes	Screening Assessment	Yes		Add to Schedule 1, and the implementation of VE	2009 July 18	2011 July 2
545 Substances	Rapid Screening Approach	No		NFA	2011 June 18	

* The dates are those on which the draft and final notices were published in the *Canada Gazette*, Part I.

5.1.2 Siloxane D5 Board of Review

The Siloxane D5 Board of Review was established by the Minister of the Environment under subsection 333(1) of CEPA 1999. The mandate of the Board of Review was to inquire into the nature and extent of the danger posed by siloxane D5, which is one of many silicone-based substances in use in Canada.

The Board conducted a scientific review of studies and reports on siloxane D5, and assessed the extent of the danger posed by the substance. The Board took into account both the information considered in the 2009 screening assessment plus additional scientific information that had become available since that time. This included 47 new scientific studies from industry, 24 published scientific studies, 6 scientific reports from Environment Canada, and 3 reports from other regulatory jurisdictions. The Board of Review submitted its report, together with its recommendations and the evidence that was presented to it, to the Minister of the Environment on October 20, 2011.

The report can be found at <http://cdr-siloxaned5-bor.ca/default.asp?lang=En&n=9320DEF6-1>.

In February 2012, after consideration of all available information including the Board's report and recommendations, the Government of Canada published a revised final decision on Siloxane D5 in the *Canada Gazette*, Part I. The government concluded that D5 is not entering the environment in a quantity or under conditions that constitute a

danger to the environment. The final decision can be found at <http://gazette.gc.ca/rp-pr/p1/2012/2012-02-25/html/notice-avis-eng.html#d121>.

5.1.3 Risk Management

For chemical substances assessed and found to meet the definition of toxic, steps are taken to control their use and prevent, reduce or eliminate their release into the environment. This is known as "risk management." Risk management instruments include regulations, pollution prevention (P2) plans, environmental performance agreements, permits, charges, substance lists, guidelines and codes of practice. These instruments can address any aspect of the substance's life cycle, from the research and development stage through manufacture, use, storage, transport and ultimate disposal or recycling. In addition to implementing existing risk management instruments during the reporting period, 26 risk management instruments were published to address toxic substances.

5.1.3.1 Addition of Substances to Schedule 1

Along with the results of the screening assessment, the ministers must publish in the *Canada Gazette* their final recommendation to the Governor in Council by choosing one of the following three options: adding a substance to Schedule 1 of CEPA 1999 (the List of Toxic Substances), adding it to the Priority

Substances List for further assessment, or concluding that no further action is necessary for the substance.

Ministers may recommend the addition of a substance to Schedule 1 of CEPA 1999 to the Governor in Council if a screening assessment shows that a substance meets one or more of the criteria in section 64 of CEPA 1999. The Governor in Council may then approve an order specifying its

formal addition to Schedule 1. The decision to recommend adding substances to Schedule 1 of CEPA 1999 obliges the ministers to develop risk management instruments.

Table 4 lists the substances or groups of substances that were proposed to be added to Schedule 1 of CEPA 1999 in 2011–2012. Table 5 lists the substances or groups of substances that were added to Schedule 1 in 2011–2012.

Table 4: Proposed orders adding substances to Schedule 1 of CEPA 1999 from April 2011 to March 2012

Substance	Draft Order*
Quinoline	2011 Dec. 17
Hexabromocyclododecane	2011 Dec. 10
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-	2011 Oct. 15
Hexanedioic acid, bis(2-ethylhexyl) ester	2011 Oct. 15
Reaction products of 2-propanone with diphenylamine, containing diisopropyldimethylacridan	2011 Oct. 15
N,N-mixed phenyl and tolyl derivatives of 1,4-benzenediamine	2011 Oct. 15
Mercury and its compounds	2011 Oct. 1
Polychlorinated naphthalenes, which have the molecular formula $C_{10}H_{8-n}Cl_n$ in which “n” is greater than 1	2011 Aug. 6

* The dates are those on which the draft orders were published in the *Canada Gazette*, Part I.

Table 5: Orders adding substances to Schedule 1 of CEPA 1999 from April 2010 to March 2011

Substance	Final Order*
Propane, 2-nitro-	2012 Mar. 28
Benzene, 1-methyl-2-nitro-	2012 Mar. 28
Phenol, 2,6-bis(1,1-dimethylethyl)-4-(1-methylpropyl)-	2012 Mar. 28
Methylum, [4-(dimethylamino)phenyl]bis[4-(ethylamino)-3-methylphenyl]-, acetate	2012 Mar. 28
Benzene, (chloromethyl)-	2011 Dec. 21
Methanone, bis[4-(dimethylamino)phenyl]-	2011 Dec. 21
2-Butanone, oxime	2011 Dec. 21
n-Butyl glycidyl ether	2011 Dec. 21
Chlorinated alkanes that have the molecular formula $C_nH_xCl_{(2n+2-x)}$ in which $10 \leq n \leq 20$	2011 Oct. 12
Tributyltins, which contain the grouping (C4H9)3Sn and Tetrabutyltins, which have the molecular formula (C4H9)4Sn	2011 July 6

* The dates are those on which the final orders were published in the *Canada Gazette*, Part II.

5.1.3.2 Significant New Activity Notices

Significant New Activity Notices can be issued for a chemical substance so that any major changes in the way it is used are reported to the Government of Canada. This approach ensures that government experts can evaluate whether a new use poses a risk to human health or the environment, and determine the conditions under which the new use will be allowed, if at all.

In 2011–2012, Notices of intent to apply the Significant New Activity provisions of CEPA 1999 were published for 65 substances, and final orders were published for 10 substances (Table 6). A person who intends to use, manufacture or import any of these substances for a new activity must provide prescribed information prior to initiating the new activity.

Table 6: Significant New Activity Notices and Orders for existing substances from April 2011 to March 2012

Assessment	Substances or Number of Substances	Notice of Intent*	Final Order*
Batch 1	4 substances	2010 July 3	2011 Dec. 21
Batch 3	3 substances	2011 Apr. 2	Pending
Batch 4	2 substances	2011 July 30	Pending
Batch 5	1 substance	2011 July 30	Pending
Batch 6	1 substance	2011 Nov. 26	Pending
Batch 7	2 substances	2012 Mar. 3	Pending
Batch 11	6 substances	2010 Oct. 2	2011 Sep. 14
Not In Commerce Substances with High Hazard Potential	53 substances	2011 July 2	Pending
Micro-organisms	3 substances	2011 July 2	Pending

* The dates are those on which the notices of intent and final orders were published in the *Canada Gazette*, Part I and Part II, respectively. Note that registration of final orders usually occurs before the order is published.

5.1.3.3 Regulations

On February 26, 2011, Environment Canada published the proposed *Regulations Respecting Products Containing Certain Substances Listed in Schedule 1 to the Canadian Environmental Protection Act, 1999*. Mercury and mercury compounds were the only substances targeted by the proposed regulations. The proposed regulations were published for a 75-day comment period, which ended on May 12, 2011. Comments were received from industry, non-governmental organizations and the public. A Response to Comments document was published in November 2011 (www.ec.gc.ca/mercure-mercury/default.asp?lang=En&n=E4070F21-1). The final regulations are targeted for publication by the fall of 2012, with a delayed entry into force.

On July 23, 2011, Environment Canada published the proposed *Prohibition of Certain Toxic Substances Regulations, 2012*. The regulations would prohibit the manufacture, use, sale, offer for sale or import of benzenamine, N-phenyl, reaction products with styrene and 2,4,4-trimethylpentene, short-chain chlorinated alkanes, polychlorinated naphthalenes and tributyltins in Canada, and of products

containing these substances. These substances would be added to the list of substances already controlled under the *Prohibition of Certain Toxic Substances Regulations, 2005* and their subsequent amendments. The final regulations are expected to be published in early 2013.

On August 27, 2011, the proposed *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations* were published in the *Canada Gazette*, Part I. The regulatory approach applies a stringent performance standard to new coal-fired units and units that have reached the end of their economic life. Publication in the *Canada Gazette*, Part I initiated a 60-day formal public comment period. Comments received were taken into consideration in the refinement of the proposed regulations in preparation for the final publication in the *Canada Gazette*, Part II. The final regulations were published in 2012.

Table 7 lists all of the proposed and final regulations published under Part 5 of CEPA 1999 in 2011–2012.

Table 7: Regulations from April 2011 to March 2012

Substances	Draft Notice*	Final Regulations*
<i>Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2012</i>	2011 July 23	
<i>Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations</i>	2011 Aug. 27	
<i>Regulations Amending the Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements)</i>	2010 May 22	2011 Oct. 12
<i>Export of Substances on the Export Control List Regulations</i>	2011 Aug. 06	

* The dates are those on which the draft notice and final regulations were published in the *Canada Gazette*, Part I and Part II, respectively. Note that registration of final orders usually occurs before the order is published.

5.1.3.4 Pollution Prevention Planning

The provisions within Part 4 of CEPA 1999 allow the Minister of the Environment to require designated persons to prepare, implement and report on pollution prevention (P2) plans for toxic substances.

P2 planning notices provide the flexibility for industry to determine the best methods within their processes and activities to meet the risk management objective within the notice.

In fiscal year 2011–2012, three proposed notices and one final notice were published; five other P2 planning notices were active. For further information on P2 planning, consult www.ec.gc.ca/planp2-p2plan/default.asp?lang=En&n=F7B45BF5-1.

Pollution Prevention Planning Notices published

Polyurethane and other foam sector (except polystyrene) – toluene diisocyanates

A final P2 planning notice published in the *Canada Gazette*, Part II on November 26, 2011, addresses harmful substances implicated in the polyurethane and other foam sector (except polystyrene). This sector-based P2 planning notice will allow the addition of other substances, as may be required in the future, with substance-specific risk management objectives and requirements.

The first group of substances to be addressed is toluene diisocyanates, which are used to manufacture polyurethane foam used in household furniture, automotive upholstery, and packaging. This P2 planning notice may affect up to 50 facilities.

Synthetic rubber manufacturing sector – isoprene

A proposed notice published in the *Canada Gazette*, Part I on January 1, 2011, addresses harmful substances that are released from resin and synthetic rubber manufacturing industries. This was followed by a 60-day comment period. Comments received were considered during the development of the final notice, which will be published in 2012.

This sector-based P2 planning notice will allow the addition of other substances, as may be required in the future, with substance-specific risk management objectives and requirements. The first substance addressed by the notice is isoprene or 1,3 butadiene, 2-methyl-. The substance is used mainly in the production of rubber for vehicle tires and inner tubes, a wide variety of products including medical equipment, toys, shoe soles, textiles, paints, and

pressure-sensitive adhesives. This P2 planning notice will currently have an impact on one facility within the resin and synthetic rubber sector.

Cyclotetrasiloxane, octamethyl- (siloxane D4) in industrial effluents

A proposed notice was published in the *Canada Gazette*, Part I on January 15, 2011, and was followed by a 60-day comment period. In addition, an information session was held on October 26, 2011, where stakeholders were given further opportunity to provide their comments. The comments received were then considered during the development of the final notice, which will be published in 2012. The notice requires that industrial facilities manufacturing or using D4 or a mixture containing D4 above a given threshold develop and implement a plan to keep effluents below a set standard. Thirty-four facilities are expected to be subject to this P2 planning notice, mostly in Ontario and Quebec.

Active Pollution Prevention Planning Notices

Dental Amalgam

On April 18, 2009, a proposed P2 planning notice under CEPA 1999 was published in the *Canada Gazette*, Part I outlining requirements for the owners and/or operators of certain dental facilities to prepare and implement P2 plans with respect to mercury releases from dental amalgam waste.

The final notice was published on May 8, 2010. The notice applies to dental facilities that have not implemented all of the best management practices set out in Appendix A of the notice or in the Memorandum of Understanding Respecting the Implementation of the Canada-wide Standard on Mercury for Dental Amalgam Waste between the Canadian Dental Association and Environment Canada for the voluntary implementation of the Canada-wide Standard on Mercury for Dental Amalgam Waste.

The deadlines for declarations of preparation and implementation were September 13 and December 13, 2010, respectively. A lower number of schedules than expected were received, prompting Environment Canada to commission a survey of dentists across Canada in order to evaluate the level of implementation of the best management practices

listed in the P2 Notice. The final version of the survey is expected in June 2012 and will provide Environment Canada with information on how to best target activities to increase compliance with the P2 Notice.

Mercury releases from mercury switches in end-of-life vehicles

This notice applies to certain vehicle manufacturers and steel mills, and it required preparation of a P2 plan by July 2008. The risk management objective is to reduce releases of mercury to the environment through participation in a mercury switch management program. Interim progress reports were submitted in 2009 to Environment Canada. All reporting companies indicated that 64 011 switches were collected in 2008, the first year of the switch collection program. This represented a capture rate of 19.7%. The submission deadline for declarations of implementation was in January 2012.

Preliminary analysis of these declarations indicate that the risk management objective of reducing releases of mercury to the environment through participation by vehicle manufacturers and steel mills in a mercury switch management program in Canada has been achieved. However, it was found that there are fewer switches available for collection than originally estimated, and therefore the recovery target of 90% could not be reached. A final performance report on this P2 Notice will be published in 2012.

Base metal smelters and refineries, and zinc plants

This notice applies to 11 base metal smelters and refineries, and zinc plants. Nine of these facilities are subject to 2008 and 2015 annual limit targets for air releases of sulphur dioxide and PM. In addition, one of these nine facilities is subject to a 2008 annual limit target for mercury and another facility is subject to a 2008 annual limit target for dioxins and furans. In 2010, one facility permanently ceased its operations while another shut down its copper smelting operations only. Environment Canada received annual interim reports from the facilities, and analysis of the 2011 data show the following emission reductions:

- The sector reported additional reductions in 2011 over previous years for all toxic substances released. These reductions are attributed mainly to the closure of two facilities; one of them was the largest source of air pollutants from the sector.
- Facilities reported overall reductions of 50% for sulphur dioxide, 61% for PM, 83% for mercury, 56% for arsenic, 85% for cadmium, 55% for lead, 70% for nickel, and 36% for dioxins and furans, compared with 2005 releases.

To date, progress towards achieving the limit targets for the four toxic substances is as follows:

- **Sulphur dioxide:** eight out of nine facilities met the 2008 limit targets, and five out of nine facilities have met the 2015 limit targets.
- **Particulate matter:** all facilities (nine out of nine) met the 2008 limit targets, and seven out of nine have met the 2015 limit targets.
- **Mercury:** the only facility subject to the mercury limit target met the 2008 target.
- **Dioxins and furans:** the only facility subject to the dioxins and furans limit target has met the 2008 target.

Four facilities have submitted their declarations of implementation, which state that these facilities have declared that the P2 plan requirements have been fully implemented either because all the tasks set out in their P2 plan had been completed or because of a partial or complete cessation of their operations.

Nonylphenol and its ethoxylates contained in products

Manufacturers and importers are required to consider reducing the total quantity of nonylphenol and its ethoxylates (NPE) used to manufacture products and imported in products by 95%. The P2 planning notice is successfully reducing NPE use. Overall on-site use of nonylphenol and its ethoxylates was reduced by approximately 96%. Importation of nonylphenol and its ethoxylates was reduced by approximately 94%.

Inorganic chloramines and chlorinated wastewater effluents

This notice applies to owners or operators of 85 wastewater systems that in 2004 or 2005 discharged, to surface waters, 5000 cubic metres per day or more of effluent with a total residual chlorine concentration of greater than 0.02 mg/L. The risk management objective is to achieve and maintain a concentration of total residual chlorine that is less than or equal to 0.02 mg/L in the effluent released to surface water, by December 15, 2009. The deadline for submitting a declaration that the P2 plan had been implemented was July 15, 2010. As of March 31, 2012, 69 wastewater system operators had declared that they had fully implemented their plans, while an additional 2 systems have been granted time extensions to implement their plans, for which the deadlines have not yet passed.

5.1.3.5 Environmental Performance Agreements

Environment Canada uses a range of tools to protect the environment, including voluntary, non-regulatory agreements with industry that commit certain sectors or companies to specific challenges or performance levels. An Environmental Performance Agreement is negotiated around the key principles and design criteria outlined in Environment Canada's Policy Framework for Environmental Performance Agreements (www.ec.gc.ca/epe-epa/default.asp?lang=En&n=564C0963-1).

Environmental Performance Agreement on production of hydrochlorofluorocarbons in Canada with E.I. DuPont Canada Company

This performance agreement came into effect on January 1, 2010. As a result, DuPont agreed to limit its annual production level of HCFCs in Canada to no more than 122.9 ozone-depleting potential tonnes, which represents 15% of Canada's baseline production level (or an 85% reduction). This is well below the 75% reduction required by the Montreal Protocol on Substances that Deplete the Ozone Layer.

In January 2012, E.I. DuPont Canada submitted its second annual report under this agreement. DuPont's production level of HCFCs in Canada conforms to the performance objective of the agreement.

Environmental Performance Agreement with Rio Tinto Alcan concerning atmospheric emissions of polycyclic aromatic hydrocarbons (PAHs)

The performance objectives outlined in the agreement are being achieved at all covered facilities. Since 2007, Rio Tinto Alcan's PAH emissions have been reduced by more than 110 tonnes, and further reductions are expected before the agreement ends in 2015. Environment Canada publishes an annual report update that is available at www.ec.gc.ca/epe-epa/default.asp?lang=En&n=5BE979CD-1#X-201006160806394.

Environmental Performance Agreement with the Vinyl Council of Canada and the Tin Stabilizers Association

Under this five-year agreement (2008–2013), the two industrial organizations implement a best management practices guideline to minimize releases of the organotin-based stabilizers used in polyvinyl chloride processing.

A key element of this agreement is a requirement to verify whether the practices set out in the guideline have been implemented by the approximately 34 affected facilities.

A verification team consisting of industry and Environment Canada representatives will conduct site visits during the duration of the agreement. Remedial action plans are developed and implemented where required to address any deficiencies identified by the verification team. All facilities visited by the verification team to date had either already implemented practices set out in the guideline or have in place an action plan and schedule to address and remedy any deficiencies identified by the team.

In February 2012, Environment Canada published the third annual progress report, which summarized the results of the site verifications conducted during the March 10, 2010–March 9, 2011, period. This report is available at www.ec.gc.ca/epe-epa/default.asp?lang=En&n=980ED2A4-1.

Environmental Performance Agreement respecting perfluorinated carboxylic acids (PFCAs) and their precursors in perfluorinated products sold in Canada

In March 2010, the Environmental Performance Agreement respecting long-chain PFCAs and their precursors in perfluorinated products was finalized. This agreement is a key component of a comprehensive Action Plan for PFCAs that was published in 2006. The agreement is intended to incite participating companies to:

- work towards the reduction of residual perfluorooctanoic acid (PFOA), residual long-chain PFCAs and residual precursors in their perfluorochemical products sold in Canada, and by 95% by December 31, 2010, and to eliminate them by December 31, 2015;
- collect and report information on their perfluorochemical products sold in Canada that contain PFOA, long-chain PFCAs and precursors (residual and non-residual).

Companies participating in this agreement have submitted baseline and annual reporting data, and the data received from companies demonstrates that significant progress is being made in reaching the targets set out in the agreement and that companies are reducing residual PFOA and long-chain PFCAs in their perfluorochemical products sold in Canada. This agreement is available at www.ec.gc.ca/epe-epa/default.asp?lang=En&n=AE06B51E-1.

5.1.3.6 Codes of Practice

Codes of practice are issued by the Minister of Environment under 54(1) of CEPA 1999. Environmental codes of practice specify procedures, practices or quantities of releases relating to facilities and activities during any phase of development and operation involving a substance, and any subsequent monitoring activities.

A final Code of Practice for the Management of Tetrabutyltin in Canada was published on November 5, 2011, to minimize the releases of tetrabutyltin to the aquatic environment. The Code identifies best management procedures and practices for activities involving the import, distribution,

manufacture and use of tetrabutyltin. The Code is available at www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=B5292A55-1.

5.1.3.7 Use of Monitoring and Surveillance to Measure Performance of Risk Management Activities

The CMP Monitoring and Surveillance Program collects data on the concentration of chemical substances in environmental compartments at locations across Canada. Environmental compartments include surface water, sediment, air, aquatic biota and wildlife. Wastewater system influent, effluent and biosolids as well as landfill leachate and gas are also monitored at select locations representing a range of input and treatment system types.

The program has collected data on many substances including PBDEs, perfluorinated compounds (including PFOS and PFCAs), HBCD, siloxanes, triclosan, BPA and metals in relevant compartments, to provide measured environmental data for risk assessment and risk management decision making. The collection of data on these substances will establish baseline information and ultimately allow for the analysis of temporal trends—a key element of measuring the performance of risk management activities.

5.1.3.8 Substance-specific Risk Management Results

Canada has reduced its domestic sources of anthropogenic (human-induced) mercury releases by approximately 90% since the 1970s. However, transboundary mercury emissions are rising and now account for more than 95% of mercury deposition in Canada. Accelerated global efforts will be critical to meeting Canadian environmental and human health goals. Accordingly, the Government of Canada is committed to taking further actions at home and internationally to minimize and, where feasible, eliminate anthropogenic mercury releases.

The risk management strategy for mercury, published in 2010, reiterates the Government of Canada's active participation on the international committee for the preparation of a global, legally binding treaty on mercury, which was established by the Governing Council of the United Nations Environment Program in 2009. The treaty will drive all countries to reduce their mercury emissions and

minimize health and environmental impacts associated with these emissions. Since negotiations were launched in 2010, three sessions have taken place. Negotiations are to be completed by 2013. More information on the risk management strategy for mercury can be found at www.ec.gc.ca/doc/mercure-mercury/1241/index_e.htm, and information on the mercury negotiations can be found at www.unep.org/hazardoussubstances/Mercury/Negotiations/tabid/3320/Default.aspx.

A proposed risk management strategy for lead was published by Health Canada in July 2011. The strategy provides a comprehensive description of the government's progress to date in managing lead, and outlines current and anticipated management activities. The strategy was published for a 60-day public comment period that ended in September 2011. Health Canada and Environment Canada reviewed the comments submitted and have considered them in their review of the strategy. The final risk management strategy is planned to be published in 2012.

5.1.4 Consultations

In addition to public consultations on the various risk assessments and risk management measures outlined in sections 5.1.1 and 5.1.3 above, Environment Canada and Health Canada undertook various other CMP-related consultations in 2011–2012.

A number of draft documents were published by Environment Canada and Health Canada for consultation, including:

- The draft *State of the Science Report on Lead* (July 2011) (Health Canada only).
 - An update on the human health assessment of Long-Chain Chlorinated Alkanes (September 2011).
 - The human health state of the science report on decabromodiphenyl ether (decaBDE) (February 2012).
 - A proposed polymers approach (March 2012).
 - A preliminary assessment report for triclosan (March 2012).
- A Notice concerning the updated draft screening assessment of substances of low concern using the rapid screening approach.

Environment Canada published Risk Management Approaches for 60-day comment periods for:

- 2-Propanone, reaction products with diphenylamine (September 2011)
- Hexanedioic acid, bis(2-ethylhexyl) ester (September 2011)
- 1,4-Benzenediamine, N,N'-mixed Phenyl and tolyl derivatives (September 2011)
- Hexabromocyclododecane (November 2011)
- Quinoline (November 2011)

Also published for comment were a proposed Risk Management Strategy for Lead (July 2011) by Health Canada and a consultation document on the proposed risk management for phenol, 2,6-bis(1,1-dimethylethyl)-4-(1-methylpropyl) (December 2011) by Environment Canada.

The Departments also hosted stakeholder consultation activities on a variety of other topics, including:

- the draft Proposed Pollution Prevention Planning Notice for Halocarbon Refrigerants (October 17, 2011);
- the proposed Pollution Prevention Plan to manage Siloxane D4 in industrial effluents (October 26, 2011);
- an Environmental Performance Agreement respecting BPA in paper recycling mill effluents (October 2011 to March 2012);
- the Proposed Subgrouping of aromatic azo- and benzidine-based substances (March 2012);
- the development of Proposed Environmental Release Guidelines for MAPBAP Acetate (March 2012);
- the proposed approaches for VOC emission reductions in aerosol coatings in Canada (March 7, 2012). A consultation document will be published in May 2012; and

- possible development of control measures for establishing VOC concentration limits for cutback asphalt and emulsified asphalt. A consultation document will be published in fall 2012.

5.2 New Substances

Substances that are not on the Domestic Substances List (DSL) are considered to be new to Canada. New substances may not be manufactured in or imported into Canada unless Environment Canada has been notified with certain prescribed information and the period for assessing the information has expired. New substances include living organisms; reporting on living organisms is included in Part 6 of this report.

In 2011–2012, 509 new substance notifications were received pursuant to the *New Substances Notification Regulations (Chemicals and Polymers)* and the *New Substances Notification Regulations (Organisms)*. Of these, the Minister issued 23 Significant New Activity Notices (Table 8), 11 Ministerial Conditions (Table 9), and no prohibitions.

Some of the 509 new substances notifications related to nanomaterials and substances that have the potential to be manufactured in the nanoscale. The Minister issued four Significant New Activity Notices related to nanomaterials.

Of the 509 notifications, 63 notifications were related to chemical or polymer substances intended solely for use in products regulated under the *Food and Drugs Act*. In 2011–2012, 11 Ministerial Conditions were published for substances in products regulated under the *Food and Drugs Act*.

For new substances in products regulated under the *Food and Drugs Act* (F&DA), 61 notifications for chemical/polymer substances and 1 notification for living organisms intended solely for use in F&DA products were received and assessed in 2011–2012.

During this reporting period, there were three conditions issued for chemical/polymer substances associated with F&DA use products and none issued for living organisms associated with F&DA use products.

Table 8: Significant New Activity Notices for new substances from April 2011 to March 2012

Substance	Final Notice*
1-Alkanol, polyfluoro-, reaction products with phosphorus oxide (P2O5)	2011 Apr. 27
1,4-Benzenedicarboxylic acid, 1,4-dibutyl ester	2011 Apr. 27
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, 2-propenoic acid and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-propenoate, sodium salt	2011 Apr. 30
2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, α -(1-oxo-2-propen-1-yl)- ω -hydroxypoly (oxy-1,2-ethanediyl) and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-propenoate, sodium salt	2011 Apr. 30
Hexane, 1,6-diisocyanato-, homopolymer, polyhalosubstituted 1-alkanol-blocked	2011 May 11
2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester, telomer with 1-dodecanethiol and octadecyl 2-propenoate	2011 May 14
Oleic acid, compound with alkaneamine	2011 June 22
-Propenoic acid, 2-methyl-, polymer with 2-(substituted)alkyl 2-methyl-2-propenoate, 2-propenoic acid and polyfluoroalkyl 2-methyl-2-propenoate, acetate	2011 July 20
Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-, lithium salt	2011 July 20
Bismuth sulfide (Bi2S3)*	2011 July 23
Cyclohexane, 1,3-bis(isocyanatomethyl)-, polymer with 1,4-bis(isocyanatomethyl) cyclohexane	2011 Aug. 03
Cyclohexane, bis(isocyanatomethyl)-homopolymer	2011 Aug. 03
Alkyl dioic acid, polymer with carbonic dichloride and carbopolycyclic diol, substituted phenyl ester	2011 Oct. 12
Calcium magnesium hydroxide*	2011 Nov. 05
Oxirane, 2-ethyl-, polymer with Oxirane, mono-C11-15-sec-alkyl ethers	2011 Dec. 03
Oxirane, 2-ethyl-, polymer with Oxirane, mono-C12-14-sec-alkyl ethers	2011 Dec. 03

Table 8 (Concluded)

Substance	Final Notice*
5,5'-(Polyalkenylalkanediy)bis(3-substituted-4H-1,2,4-triazole)	2011 Dec. 07
Phosphonic acid, P-methyl-, diphenyl ester, polymer with 4,4'(1-methylethylidene)bis[phenol]	2011 Dec. 07
Tall oil acids, reaction products with dialkyleneamine and acid anhydride, compounds with polyalkylene glycol hydrogen maleate alkyl ethers	2011 Dec. 17
Cerium vanadium oxide*	2012 Jan. 21
Lithium cobalt manganese nickel oxide	2012 Jan. 21
Carbopolycyclic diol polymer with carbonic dichloride and substituted phenol ester	2012 Feb. 15
Quino[2,3-b]acridine-7, 14-dione, dichloro-5, 12-dihydro-, dihydro, dioxo (heteropolycyclic)methyl derivs.*	2012 Feb. 18

* The dates are those on which the final notices were published in the *Canada Gazette*, Part I.

Table 9: Notices of Ministerial Conditions for new substances from April 2011 to March 2012

Substance	Final Notice*
Oxirane, polymer with alkyl oxirane sulfate alkylethers, alkali salts	2011 Apr. 01
Alkyl oxirane, polymer with alkyl oxirane sulfate alkylethers, alkali salts	2011 Apr. 01
Benzene, 1,1'-(1,2-ethanediyl)bis(2,3,4,5,6-pentabromo)-	2011 May 14
Aliphatic amide, N-[(dialkylamino) alkyl], carboxylate	2011 June 11
-Octanamine, N,N'-(1,10-decanediyl-di-1(4H)-pyridinyl-4-ylidene)bis-, hydrochloride (1:2)	2011 July 30
Oxirane, methyl-, polymer with oxirane, mono[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl] ether	2011 Aug. 13
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, bis(2-ethyl-hexyl) ester	2011 Sept. 17
1-Octanamine, N,N'-(1,10-decanediyl-di-1(4H)-pyridinyl-4-ylidene)bis-, hydrochloride (1:2)	2011 Nov. 12
Substituted alkane, alkyl, reaction products with bisphenol A-epichlorohydrin polymer and diethylene triamine	2012 Jan. 14
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(phenylmethoxy)-, ester with 2-hydroxy-1,2,3-propanetricarboxylic acid (3:1)	2012 Jan. 21
Polyol polymer with (chloromethyl) oxirane, trimethyl amine quaternized	2012 Mar. 17

* The dates are those on which the final notices were published in the *Canada Gazette*, Part I.

5.3 Export of Substances

Under Schedule 3 to CEPA 1999, the Export Control List (ECL) includes substances whose export is controlled because their use in Canada is prohibited or restricted, or because Canada has agreed, through an international agreement that requires notification or consent of the country of destination before export, such as the Rotterdam Convention, to control their export. CEPA 1999 requires exporters to submit prior notice of export with respect to substances on the ECL.

In 2011–2012, 97 export notices were submitted to the Minister of the Environment.

On July 30, 2011, Environment Canada published a proposed Order amending the ECL to add, and move from one Part of the ECL to another, new

substances and groups of substances that have been added to the Rotterdam and Stockholm Conventions as well as substances recently banned or restricted in Canada.

On August 6, 2011, Environment Canada published the proposed *Export Substances on the Export Control List Regulations* in the *Canada Gazette*, Part I. The new regulations will merge and streamline the two existing regulations relating to exports under CEPA 1999 and Canada's obligations under the Rotterdam Convention, and include additional provisions to ensure Canada complies with the export obligations under the Stockholm Convention. These regulations will continue to control the export of substances on the ECL, Schedule 3 of CEPA 1999.

6 Animate Products of Biotechnology (Part 6)

CEPA 1999 establishes an assessment process for living organisms that are new animate products of biotechnology, which mirrors provisions in Part 5 of CEPA 1999 respecting new substances that are chemicals or polymers. Paragraph 74(b) requires that all living organisms on the DSL (about 68 “existing” micro-organisms) undergo a screening assessment to determine whether the living organism is toxic or capable of becoming toxic.

6.1 Existing Animate Products of Biotechnology

Environment Canada and Health Canada jointly developed the screening assessment process for micro-organisms listed on the DSL in 2008. In 2011–2012, the first draft screening assessment report (*Pseudomonas aeruginosa* – three strains on the DSL) was published on July 2, 2011, in the *Canada Gazette*, Part I for public comment. No comments were received. Final publication is scheduled to be in 2012. A Significant New Activity (SNAc) has been proposed for these three DSL substances (strains). Two additional draft screening assessment reports (*Bacillus cereus* and *Pseudomonas fluorescens*) were also prepared and are scheduled to be published in 2012. Work continues on the remaining screening assessments for several other DSL micro-organisms of high priority. In addition, a rapid screening approach has been developed for the lower priority DSL micro-organisms. Publication for public comment for eight of these is planned for 2012–2013.

The Technical Expert Group, composed of independent scientific experts from academia, industry, public advocacy groups and other federal government departments, continued providing advice on the process and validating the scientific basis of screening assessments and their conclusions.

6.2 New Animate Products of Biotechnology

During 2011–2012, 29 notifications were received pursuant to the *New Substances Notification Regulations (Organisms)* for new animate products of biotechnology. In addition, there were nine preliminary assessments of information for prospective regulatory clients. One of the living organisms assessed under the regulations in 2011–2012 was the subject of a Significant New Activity Notice.

Environment Canada and Health Canada biotechnology sections initiated assessment of DSL and In Commerce List (ICL) organisms.

Substances that had been previously classified for carcinogenicity, mutagenicity, reproductive toxicity or developmental toxicity by international agencies were identified as part of the ongoing exercise to identify priorities for risk assessment.

7 Controlling Pollution and Managing Waste (Part 7)

Part 7 of CEPA 1999 provides the Minister of the Environment with additional authorities to deal with various substances that have the potential to harm the environment or human health.

7.1 Vehicle, Engine and Equipment Emissions

Canada has developed and will continue to develop a series of regulations to reduce smog-forming air pollutant emissions and GHG emissions from vehicles and engines in alignment with the standards of the U.S. EPA.

Currently, there are regulations in place to reduce emissions from passenger cars and light-duty trucks, heavy-duty vehicles, motorcycles, marine engines, recreational vehicles as well as construction and agricultural equipment, and small engines such as lawnmowers and chainsaws.

Regulations Amending the Renewable Fuels Regulations

The *Regulations Amending the Renewable Fuels Regulations* were passed on June 30, 2011, and set a date of coming into force of July 1, 2011, for a requirement for 2% renewable fuel content in diesel fuel and heating distillate oil. This requirement provides further reductions in GHG emissions from the use of transportation fuels, in addition to the estimated reductions from the requirement in the Regulations for 5% renewable fuel in gasoline (in effect since December 15, 2010). The two regulatory requirements combined with provincial regulations will ensure a total volume of renewable fuel that will reduce annual GHG emissions by up to 4 megatonnes—about the equivalent of taking a million vehicles off the road.

Regulations Amending the Sulphur in Diesel Fuel Regulations

Proposed *Regulations Amending the Sulphur in Diesel Fuel Regulations* were published in the *Canada Gazette*, Part I on December 3, 2011. The proposed amendments would enable the production, import and sale of diesel fuel with a maximum sulphur

content of 1000 mg/kg for use in large vessels. The proposed amendments would enable the supply of lower sulphur fuel to ships operating in the joint Canada/U.S. Emission Control Area as adopted by the International Maritime Organization in 2010. The proposed amendments would also limit sulphur content in diesel fuel produced, imported into or sold in Canada for stationary compression-ignition engines. The requirements would come into force on June 1, 2014, and would align with U.S. EPA requirements already in place.

Greenhouse Gas Emissions Regulations

The *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations* were published in the *Canada Gazette*, Part II, on October 13, 2010. These regulations introduce GHG emission standards for new cars and light trucks beginning with the 2011 model year, in alignment with the U.S. national standards. The regulated standards become more stringent with each model year over the 2011 to 2016 model-year period and will generate progressively larger emission reductions. A Notice of Intent was published in the *Canada Gazette*, Part I, on October 16, 2010, stating the government's intention to continue working with the United States toward the development of tighter standards for light-duty vehicles of the 2017 and later model years. In May 2010, the governments of Canada and the United States each announced that they would regulate GHG emissions from on-road heavy-duty vehicles. The Minister of the Environment's announcement specified that Canada's regulations under CEPA 1999 would be aligned with those of the United States. Environment Canada released increasingly more detailed consultation documents on October 23, 2010, and August 8, 2011, to inform the development of these future regulations.

In 2011–2012, Environment Canada began implementation of the data reporting system to enable auto manufacturers to submit regulatory information electronically.

Air Pollutant Emissions Regulations

The *Marine Spark-Ignition Engine, Vessel and Off-Road Recreational Vehicle Emission Regulations* were published in the *Canada Gazette*, Part II, on February 16, 2011. Under these standards, and for the first time in Canada, vehicles such as snowmobiles, personal watercraft, outboard motors and off-road motorcycles will be subject to regulations on smog-forming emissions. These emission standards will apply to most classes of vehicles and engines beginning with the 2012 model year.

On December 7, 2011, the *Regulations Amending the Off-Road Compression-Ignition Engine Emissions Regulations* were published in the *Canada Gazette*, Part II. These amendments will result in further reductions of smog-forming emissions from the off-road diesel engine sector, which includes engines typically found in construction, farming, forestry and some mining machinery.

On October 29, 2011, Environment Canada published in the *Canada Gazette*, Part I proposed amendments to the *On-Road Vehicle and Engine Emission Regulations*. The proposed amendments were mainly intended to maintain alignment of Canadian standards and test procedures for on-board diagnostic (OBD) systems for engines used or intended to be used in heavy-duty vehicles that have a gross vehicle weight rating of more than 6350 kg with those of the U.S. EPA. OBD systems are computer systems that monitor, through sensors, the malfunction of emission-related components to facilitate proper repair and maintain emission performance. The proposed amendments set requirements that will standardize and make it mandatory to monitor emission-related components for malfunction by the OBD system. The amendments also propose some administrative changes that will affect all vehicles covered by the current regulations.

Vehicle and Engine Compliance Program

The Department administers a program to verify compliance with regulations. To further realize the benefits of aligned emission standards, the Department works closely with the U.S. EPA.

Vehicles and engines subject to Canadian regulations must comply with emission standards to qualify for importation or interprovincial transport. Despite the best efforts of manufacturers, defects in the design,

construction or functioning of a vehicle/engine that affects or could affect compliance with a prescribed standard can occur, given the complexity of vehicle/engine designs, the variety of parts and different component suppliers. Where defects do occur, CEPA 1999 provides a non-judicial mechanism through the notice of defect provisions for companies to take corrective action by issuing a notice of defect.

In 2011–2012, 120 emission tests were performed on various types of vehicles and engines. The program also reviewed 115 submissions for products unique to the Canadian market for the 2011 and 2012 model years. During this period, 46 notices of defect and other notifications were processed, affecting approximately 310 000 vehicles and engines.

Suspected non-compliance cases were transferred to the Enforcement Branch. See Chapter 10 for information on compliance and enforcement activities.

7.2 Disposal at Sea

The disposal of waste at sea within Canadian jurisdiction and by Canadian ships in Canadian jurisdiction and international waters requires a permit issued by Environment Canada. A permit for disposal at sea will be approved only if it is the environmentally preferable and practical option. CEPA 1999 provides additional controls on disposal at sea, including:

- a prohibition on the export of a substance for disposal in an area of the sea under the jurisdiction of a foreign state or in its internal waters;
- a list of six substances for which a disposal at sea permit can be obtained (Schedule 5 of CEPA 1999);
- an assessment framework for reviewing permit applications based on the precautionary principle, which must be followed (Schedule 6 of CEPA 1999); and
- a statutory obligation to monitor selected sites.

For further information, consult www.ec.gc.ca/iem-das.

Through CEPA 1999 and the *Disposal at Sea Regulations* made under the Act, Canada implements its international obligations as a party to the 1996 Protocol to the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Protocol). In this regard, Canada and other Convention and Protocol parties have been supporting the continuation of a major project on the reduction of barriers to compliance with the treaty. Workshops, guidance and technical assistance are offered to countries to aid their acceding to the London Protocol or to coming into compliance with it. In 2011, Canada participated in a workshop for Baltic Sea countries aimed at promoting accession to the Protocol.

Canada has also been working actively with other Parties to develop options for creating a transparent, global regulatory mechanism for ocean fertilization and potentially for other forms of marine geo-engineering where there is potential to cause harm to the marine environment. Cooperation with other international bodies, including the Convention on Biological Diversity, that have also called for such global regulation is ongoing. For example, Canada hosted a working group meeting in June 2011 to further discuss these regulatory options.

Canada participates actively in the development of international guidances relevant to disposal at sea. Current projects include developing Action Levels (levels of concern) for fish waste; revising the dredged material assessment guidance; developing low-tech assessment guidance for dredged material; and revising guidance on assessment of CO₂ streams for sub-seabed geological storage.

7.2.1 Disposal at Sea Permits

In 2011–2012, 99 permits were issued in Canada for the disposal of 4.64 million tonnes of waste and other matter (tables 10 and 11), compared with 83 permits for the disposal of 3.78 million tonnes in 2010–2011. Most of the material permitted for disposal was dredged material that was removed from harbours and waterways to keep them safe for navigation. Also permitted was excavated native till (geological matter) that is disposed of at sea in the lower mainland of British Columbia, where on-land disposal options for clean fill are extremely limited. Fish-processing waste is also permitted in remote communities where there is no access to reuse-and-recycling opportunities.

Table 10: Disposal at sea quantities permitted (in tonnes) and permits issued in Canada from April 2011 to March 2012

Material	Quantity permitted	Permits issued
Dredged material	3 671 850*	52
Geological matter	910 000*	6
Fisheries waste	58 587	41
Vessels	–	–
Organic matter	–	–
Total	4 640 437	99

* Dredged material and geological matter were converted to tonnes using an assumed density of 1.3 tonnes per cubic metre.

Table 11: Disposal at sea quantities permitted (in tonnes) and permits issued by region from April 2011 to March 2012

Material	Atlantic		Quebec		Pacific and Yukon		Prairie and Northern	
	Quantity permitted	Permits issued	Quantity permitted	Permits issued	Quantity permitted	Permits issued	Quantity permitted	Permits issued
Dredged material*	1 125 150	10	249 600	22	2 141 100	19	156 000	1
Geological matter*	0	0	0	0	910 000	6	0	0
Fish waste	57 487	38	1100	3	0	0	0	0
Vessels	–	–	–	–	–	–	–	–
Organic matter	–	–	–	–	–	–	–	–
Total	1 182 637	48	250 700	25	3 051 100	25	156 000	1

* Dredged material and geological matter were converted to tonnes using an assumed density of 1.3 tonnes per cubic metre.

7.2.2 Disposal Site Monitoring Program

As required by CEPA 1999, representative disposal sites are monitored to verify that permit conditions were met, and that scientific assumptions made during the permit review and site selection process were correct and sufficient to protect the marine environment. By disposal site monitoring, Environment Canada is able to verify that the permitting of disposal is sustainable and that permit holders can have continued access to suitable sites. Where monitoring indicates a problem or where the site has reached its capacity over time, management action in the form of closing, moving or altering the site use can occur.

In 2011–2012, monitoring projects were completed on six disposal sites, involving fieldwork carried out in the summer of 2011 and follow-up analysis conducted on data collected in 2010. No management action was needed at the sites studied during the 2011–2012 period.

Atlantic Region conducted physical sediment analysis and benthic community structure studies at one disposal site. As well, analysis was completed on data collected in 2010. In Quebec Region, bathymetric surveys were conducted at two sites in the Magdalene Islands. At one of these sites, the suitability of the sediment for use in beach nourishment was assessed. Surveys were conducted at a new disposal site in Deception Bay to confirm the location of the disposed sediment, and monitoring was conducted at a fish waste disposal site to ensure that disposed material was not adversely impacting fish habitat.

In the Pacific and Yukon Region, monitoring work focused on characterizing a new disposal site proposed for a major project on the North Coast.

Further details can be found in the *Compendium of Monitoring Activities at Ocean Disposal Sites*, which is sent to permit holders and submitted to the International Maritime Organization annually (www.ec.gc.ca/iem-das/default.asp?lang=En&n=FC9BCF50-1).

7.3 Control of Movement of Hazardous Waste and Hazardous Recyclable Material and of Prescribed Non-hazardous Waste for Final Disposal

CEPA 1999 provides authority to make regulations governing the export, import and transit of waste (including both hazardous and non-hazardous waste) and hazardous recyclable materials. It also provides authority to establish criteria for refusing an export, import or transit permit, should the waste or hazardous recyclable material not be managed in a manner that will protect the environment and human health.

Canada implements its international obligations as a party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention) and the Canada–United States Agreement on the Transboundary Movement of Hazardous Waste through the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWHRMR) and the *PCB Waste Export Regulations, 1996*.

In 2011, more than 2300 notices were processed for proposed imports, exports and transits of hazardous wastes and hazardous recyclable materials under the EIHWHRMR. The notices received covered 19 760 individual waste streams, which exhibited a range of hazardous properties such as being explosive, flammable, acutely toxic, corrosive, dangerously reactive and environmentally hazardous. Approximately 37 000 individual transboundary shipments of hazardous waste and hazardous recyclable material were reported in movement documents received by Environment Canada.

More than 99% of imports and 97% of exports for both hazardous waste and hazardous recyclable materials occurred between Canada and the United States. Other regions involved in the movement of hazardous recyclable materials in notable quantities, for both imports and exports, included certain European countries, Mexico and the Republic of Korea. The United States is the only country that received shipments of hazardous waste destined for disposal.

The quantity of hazardous waste and hazardous recyclable material imported into Canada was 394 786 tonnes (t) in 2011. This represents an increase of 30 624 t or 8% over the total 2010 import quantity. Shipments destined for recycling totalled 243 491 t and represented about 62% of all imports in 2011. Used or spent batteries, used lubricating oils, metal-bearing waste, and used or spent liquors from metallurgical processes made up the majority of imports of hazardous recyclable material into Canada. Hazardous waste imports destined for disposal operations included solid wastes no longer suitable for metal recovery, industrial residues and environmentally hazardous substances.

The quantity of hazardous waste and hazardous recyclable materials exported was 460 707 t in 2011. This represents an increase of 32 340 t or 8% from the 2010 figure. Shipments exported for recycling totalled 374 207 t and represented about 81% of all exports in 2011. Corrosive liquids, wood and wood-preserving chemicals, batteries, and waste oil/water mixtures made up the majority of exports of hazardous recyclable material. Hazardous waste exports destined for disposal included corrosive liquids, wastes containing cyanides, fluorine compounds and waste oil/water mixtures.

Imports of hazardous recyclable materials in 2011 were shipped to six provinces. Quebec and Ontario continued to receive the vast majority of these materials, with a smaller number of shipments imported into British Columbia, Alberta, New Brunswick and Nova Scotia. For imports of hazardous waste for final disposal, most were destined to Quebec and Ontario. Smaller quantities were imported into British Columbia and Alberta. No imports of hazardous waste or hazardous recyclable material were received by Manitoba, Saskatchewan, Newfoundland and Labrador, Prince Edward Island, or any of the territories.

Exports of hazardous recyclable materials originated from eight provinces, with Ontario, New Brunswick and Quebec accounting for nearly 80% of all shipments of these materials out of Canada. For exports of hazardous waste for final disposal, most originated from Ontario, British Columbia and Quebec. The bulk of these hazardous wastes and hazardous recyclable materials were exported to authorized facilities located in the northeastern and central United States. No exports of hazardous waste or hazardous material were shipped from Prince Edward Island or any of the territories.

Tables 12 and 13 list the quantities imported and exported from 2002 to 2011.

Table 12: Hazardous waste and hazardous recyclable material, imports, 2002–2011 (tonnes)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Recyclables	193 318	189 110	200 097	174 983	164 903	237 141	262 337	221 778	217 663	243 491
Total imports	423 067	417 368	416 136	476 416	408 839	497 890	532 727	490 169	364 162	394 786

Table 13: Hazardous waste and hazardous recyclable material, exports, 2002–2011 (tonnes)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Recyclables	238 597	205 356	187 986	226 380	374 024	358 896	365 468	315 631	357 627	374 207
Total exports	340 261	321 294	308 357	327 746	474 538	460 497	482 680	420 865	428 367	460 707

Please note that data are revised periodically as new information becomes available. Therefore, information presented here may differ from what was previously published in other reports.

8 Environmental Emergencies (Part 8)

Part 8 of CEPA 1999 addresses the prevention of, preparedness for, response to and recovery from an uncontrolled, unplanned or accidental release of a substance into the environment that poses potential harm to the environment or to human health. Part 8 provides the authority for environmental emergency plans (E2 plans), regulations, guidelines and codes of practice. Part 8 also 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.

The *Environmental Emergency Regulations* (E2 Regulations), created under Part 8 of CEPA 1999, require any person responsible for substances listed in the regulations to prepare and implement an E2 plan for their facility, if the total quantity of the substance on site, and the maximum capacity of the container storing the substance, are equal to or greater than the regulated threshold quantity for the substance. On December 8, 2011, *Regulations Amending the Environmental Emergency Regulations* came into force. These amendments include:

- addition of 41 substances to Schedule 1 of the E2 Regulations, bringing the total number of regulated substances to 215;
- addition of Part 3 to Schedule 1 of the E2 Regulations to include substances that are toxic to aquatic organisms, or are carcinogenic, persistent or bioaccumulative;
- a new notice of closure or decommissioning of the facility or place is required;
- an enhancement of the current E2 plan requirement to inform members of the public who may be adversely affected by an environmental emergency of the measures the regulatee will take and what the public should do;

- exclusion of a substance that is subject to the *Transportation of Dangerous Goods Act, 1992* or the *Canada Shipping Act, 2001*, unless the substance is being loaded or unloaded at a facility; and
- exceptions from the requirements of the E2 Regulations for the mining, farming and propane sectors.

Environment Canada's Environmental Emergencies website (www.ec.gc.ca/ee-ue/default.asp?lang=En&n=8A6C8F31-1) includes implementation guidelines for E2 plans, a common issues section and online notice filing. The website also provides public access to a database containing basic information about registered facilities (e.g., company names and addresses).

As of March 31, 2012, approximately 4200 facilities had filed Notices Regarding the Identification of Substance and Place under the E2 Regulations. Of these facilities, approximately 2000 were required to prepare E2 plans. The seven most commonly used substances were propane, anhydrous ammonia, chlorine, gasoline, pentane, butane and hydrochloric acid.

In 2011–2012, regional activities associated with the implementation of the E2 Regulations included hosting substance-specific workshops and site visits for the regulated community covering prevention, preparedness and response aspects for propane, liquefied natural gas and ammonia. Other themed workshops addressed E2 plan content and exercise design.

9 Government Operations and Federal and Aboriginal Lands (Part 9)

Part 9 of CEPA 1999 provides the authority to make regulations, objectives, guidelines and codes of practice that apply to departments, boards and agencies of the Government of Canada; federal works and undertakings; federal land; Aboriginal land; persons on that land and other persons insofar as their activities involve that land; and Crown corporations.

In June 2010, the first major performance milestone for the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* came into force. These regulations, which seek to reduce the risk of contaminating soil and groundwater as a result of spills and leaks of petroleum products and allied petroleum products from storage tank systems, include a number of mandatory requirements that come into force through to 2012. Analysis of compliance data for the first major performance milestone, the identification requirements, has indicated a high compliance rate to date. This data will establish a comprehensive inventory of federal storage tank

systems and continue to be used to support performance analysis, compliance promotion efforts and enforcement activities to ensure continued compliance with the regulations, including the upcoming requirements for product transfer areas and removal of high-risk systems.

To date, 1611 regulatees have identified storage tanks to Environment Canada through the Federal Identification Registry of Storage Tank Systems database for a total volume capacity of 2.3 billion litres. Regulatees include:

- 57 federal departments, boards, agencies and Crown corporations that have identified 5322 storage tanks;
- 304 federal works and undertakings, such as ports, airport and railways that have identified 1754 storage tanks; and
- 1250 owners of storage tank systems located on federal lands or Aboriginal lands that have identified 6751 storage tanks.

10 Compliance and Enforcement (Part 10)

CEPA 1999 provides enforcement officers with a wide range of powers to enforce the Act, including the powers of a peace officer. Enforcement officers can carry out inspections to verify compliance with the Act; conduct investigations of suspected violations; enter premises, open containers, examine contents and take samples; conduct tests and measurements; obtain access to information (including data stored on computers); stop and detain conveyances; search, seize and detain items related to the enforcement of the Act; secure inspection warrants to enter and inspect premises that are locked and/or abandoned or where entry has been refused; seek search warrants; and arrest offenders. CEPA 1999 analysts can enter premises when accompanied by an enforcement officer and can exercise certain inspection powers.

A wide range of enforcement measures are available to respond to alleged violations. Many are designed to achieve compliance without resorting to formal court action, including directions, tickets, prohibition orders, recall orders, detention orders for ships, and Environmental Protection Compliance Orders (EPCOs). Measures to compel a return to compliance through court action include injunctions to stop or prevent a violation and prosecutions. In addition, a return to compliance can be achieved through Environmental Protection Alternative Measures (EPAMs), a program for diverting offenders away from the formal court process.

10.1 Designations and Training

The number of active designated persons within Environment Canada with enforcement powers under CEPA 1999 is as follows:

- 199 CEPA enforcement officers;
- 36 emergency officers from the Environmental Emergencies Program designated as CEPA enforcement officers with limited powers; and
- 180 CEPA analysts.

In the fall of 2011, a Basic Enforcement Training (BET) course produced 16 newly designated officers with full enforcement powers and 3 emergency officers with limited enforcement powers.

In 2011–2012, the Limited Powers/Analyst Designation course was delivered in 4 different regions, resulting in 43 newly designated CEPA analysts. More sessions are to be delivered in 2012–2013.

In December 2010, the bulk of the *Environmental Enforcement Act* (EEA) came into force, amending Environment Canada administered legislation, including CEPA 1999 and introducing the new *Environmental Violations Administrative Monetary Penalties Act*. Since then, the Department has updated and is continuing to update internal and external policies and procedures to meet the EEA requirements and to update and develop training accordingly. In 2011–2012, the accomplishments include:

- the update of BET and Limited Powers/Analyst Designation courses;
- the update of the CEPA 1999 online training;
- the assessment of the requirements for the *Regulations Designating Regulatory Provisions for Purposes of Enforcement (Canadian Environmental Protection Act, 1999)* and aggravating factors. Development and delivery to occur in 2012–2013 to meet the coming into force timelines;
- the update of the EPCO 2002 training in respect to specific provisions under CEPA 1999; final development and delivery to occur in 2012–2013.

As a result, Environment Canada is well positioned to develop and implement the requisite enforcement tools to support full implementation of the EEA.

Other accomplishments related to training on CEPA 1999 regulations in 2011–2012 include:

- the delivery of a course to 36 officers on the *PCB Regulations*; more deliveries to be scheduled in 2012–2013 based on demands as it is a National Enforcement Plan priority;

- the completion of learning materials and the delivery of the updated training covering the 8 fuels regulations to 44 officers, including the following:
 - *Fuels Information Regulations, No. 1;*
 - *Gasoline Regulations;*
 - *Contaminated Fuel Regulations;*
 - *Benzene in Gasoline Regulations;*
 - *Sulphur in Gasoline Regulations;*
 - *Gasoline and Gasoline-Blend Dispensing Flow Rate Regulations;*
 - *Sulphur in Diesel Fuel Regulations;*
 - *Regulations Prescribing Circumstances for Granting Waivers Pursuant to Section 147 of the Act;*
- the development of an enhanced *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* course, based on officers' feedback, with delivery to occur in 2012–2013;
- the assessment of learning requirements and development of training on the *Renewable Fuels Regulations* (including recent amendments), with delivery to occur in 2012–2013;
- the continued delivery of online training on the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* available to all enforcement officers at all times;
- the continued delivery of online training on CEPA 1999 available to all enforcement officers at all times;
- the development of the *Regulations Amending the On-Road Vehicle and Engine Emission Regulations (On-Board Diagnostic Systems for Heavy-Duty Engines and Other Amendments), Marine Spark-Ignition Engine, Vessel and Off-Road Recreational Vehicle Emission Regulations, and Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations.*

10.2 Compliance Promotion

Compliance promotion relates to the planned activities that are undertaken to increase awareness and understanding of the law and its regulations. Through these activities, information is provided

on what is required to comply with the law, the benefits of compliance and the consequences of non-compliance.

In 2011–2012, Environment Canada delivered compliance promotion activities for new and existing control instruments under CEPA 1999. Multiple approaches were used to reach the regulated communities, including workshops and information sessions, email and phone call campaigns, information package and letter mail-outs. These activities were often carried out in collaboration with other federal departments, provinces and territories as well as non-governmental organizations (e.g., BC Marine Trades Association, Transport Canada, and Aboriginal Affairs and Northern Development Canada, and industry associations).

10.2.1 Collaboration with First Nations

Environment Canada continued to work closely with First Nations in 2011–2012. Workshops, presentations and compliance-promotion materials were delivered to First Nations groups and individuals throughout Canada on obligations to comply with regulations under CEPA 1999. Many of these activities were organized and presented in collaboration with Aboriginal Affairs and Northern Development Canada (AANDC).

Compliance promotion to First Nations in 2011–2012 included a multi-instrument information booth and presentation at the Kitikmeot Trade Show in Cambridge Bay, Nunavut. Compliance-promotion materials were made available for a number of regulatory instruments including *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations; Federal Halocarbon Regulations, 2003; PCB Regulations; Environmental Emergency Regulations; Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations;* and *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations (PFOS).* Presentations were made on the *Federal Halocarbon Regulations, 2003* and *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.* The Kitikmeot Trade Show was an opportunity to connect businesses, government departments, regulatory agencies and Inuit organizations from the Kitikmeot region and other communities across Nunavut.

Compliance-promotion activities were carried out in support of the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*. Several workshops on the requirements of the regulations were delivered to the regulated community among First Nations across Canada in collaboration with AANDC. Sessions covered the application, definitions, overview of requirements and regulatory deadlines.

Five sessions were held in the Atlantic region regarding the *Federal Halocarbon Regulations, 2003*, as it applies to First Nations and tenants on Aboriginal land. The information sessions were supported by mail-outs to over 200 potential regulatees and phone calls to 150 individuals. Additionally, 4 compliance promotion presentations took place in Saskatchewan, including a booth at the Little Pine First Nations Environmental Fair.

The Atlantic First Nation Housing and Infrastructure Network includes participation from Environment Canada, Aboriginal Affairs and Northern Development Canada, Health Canada, Canada Mortgage and Housing Commission, the Atlantic Policy Congress First Nation Chiefs, tribal councils, tribal political organizations, and their member communities, which now include all Atlantic First Nations: Mi'kmaq, Maliseet and Innu. The network's purpose is to facilitate interdepartmental and First Nation discussion and collaboration on a number of priority issues, including safe and secure drinking water for communities, water monitoring, improved wastewater management, all hazards emergency management, and environmental education. Environment Canada provides technical expertise on several working groups and provides leadership on priorities and directions through the Regional Director General's membership on the Senior Committee.

In 2011–2012, the network advanced the objectives of CEPA 1999 by promoting to all Atlantic First Nation communities compliance promotion activities related to the *Federal Halocarbon Regulations* and the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* and by attending the Regional Environmental Emergency Team's annual meeting. The Atlantic First Nation Housing and Infrastructure Network helps build capacity of members for environmental management on First Nation lands across Atlantic Canada.

10.2.2 Multi-instrument Compliance Promotion

Environment Canada organizes a number of multi-instrument workshops and information booths each year to reach regulatees who must comply with more than one regulation.

For 2011–2012, multi-instrument compliance-promotion activities covered a broad range of environmental regulations under CEPA 1999, the *Fisheries Act*, and the *Canadian Environmental Assessment Act*. In total, 18 multi-instrument workshops and information booths were organized by Environment Canada's regional offices in various locations across Canada. The workshops covered a number of CEPA 1999 regulations, including *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*; *Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations*; *Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products Regulations*; *New Substances Notification Regulations*; *PCB Waste Export Regulations, 1996*; *Federal Halocarbon Regulations, 2003*; *Environmental Emergency Regulations*; *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations*.

These multi-instrument compliance-promotion activities provide a unique opportunity for regulatees to meet Environment Canada staff and gather key information regarding acts and regulations affecting their activities. Regulatees also benefit from the knowledge and experience of the on site staff, the distribution of printed materials on the legislation, and the provision of resources for further inquiries.

10.2.3 Activities on Individual CEPA Instruments

Compliance-promotion activities on individual CEPA 1999 control instruments in 2011–2012 included the following:

Renewable Fuels Regulations – Canadian fuel producers and importers were informed of this regulation through the delivery of over 500 mail-out packages, letters and emails. Two trade show booth sessions presenting compliance promotion materials, and an information session were held in the Prairie and Northern Region, reaching over 160 known and potential regulatees.

Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations – Compliance promotion officers delivered information about the regulations with a focus on paints used for traffic marking. Three information sessions, five trade show booths and mail-out campaigns reached over 2000 regulatees in the traffic marking community, including municipal governments, public work professionals and airport management representatives.

Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products Regulations – Compliance promotion for these regulations consisted of a publication of Q&As for the regulations, a presentation and a mail-out. The Q&As were posted on the Volatile Organic Compounds in Consumer and Commercial Products website. A presentation on the regulations was made to the Environmental Managers Association of British Columbia attended by approximately 70 participants. Compliance-promotion packages containing a cover letter, fact sheet and Q&As were mailed to some stakeholders who mentioned their interest in receiving it.

PCB Regulations and the PCB Waste Export Regulations, 1996 – Compliance promotion officers worked with Enforcement to verify and identify regulatees who are still required to report under these regulations. As a result, databases and contact information have been updated to better deliver compliance promotion. Over 9000 compliance promotion activities were delivered, including to First Nations, and regulatees were informed of these regulations and of the online reporting system available to them through Environment Canada's PCB web pages.

Environmental Emergency Regulations, including Regulations Amending the Environmental Emergency Regulations; Deposit Out of the Normal Course of Events Notification Regulations; Environmental Emergency Regulations; Release and Environmental Emergency Notification Regulations – Environment Canada provided information sessions and presentations in Whitehorse, Yukon, and Kamloops and Abbotsford, British Columbia, reaching several different associations and stakeholder groups to promote the regulations. Activities also included contacting over 5500 regulatees and First Nations groups throughout Canada.

Marine Spark-Ignition Engine Vessel and Off-Road Recreational Vehicle Emission Regulations – Activities for these regulations focused on providing compliance information to regulatees through webinars and trade show information booths, including participation at the 2012 Calgary Boat and Sportsman Show in Calgary, Alberta (attended by over 18 000 people). The Department held five information sessions in Quebec and British Columbia as well as webinars. Mail-outs were also sent to approximately 6500 regulatees nationwide to keep them apprised of regulatory requirements and amendments. An important declaration process and form was developed to assist regulatees in submitting compliance information for the regulations. Technical guidance documents were developed, and communication with regulatees also included ongoing responsive compliance promotion and guidance provided via telephone, email and regular mail.

Final Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Mercury Releases from Dental Amalgam Waste – Compliance promotion officers were present at an information booth for “des Journées dentaires internationales du Québec” and for a workshop at the B.C. trades association, informing dentists, hygienists, technicians, suppliers, importers and distributors of the regulations.

Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations – Compliance promotion officers performed over 30 site visits, presentations, training sessions, meetings and information sessions that were held across Canada, promoting the regulations to over 500 Canadians from different associations, other federal departments, First Nations, and provincial and municipal governments. A total of 1400 compliance promotion activities such as letters, phone calls, emails and faxes reached regulatees.

Phosphorus Concentration Regulations (i.e., Concentration of Phosphorus in Certain Cleaning Products Regulations) – Environment Canada used a publicity campaign to reach over 28 000 Canadians, providing information for publication in two magazines: *Le Détaillant* and the *Retailer*. Additionally, over 2000 compliance-promotion activities were undertaken throughout Canada.

Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations – Mail-outs and emails were sent to remind regulatees about upcoming deadlines for reporting under the regulations; in total, 95 reminders were sent out. Additional activities included site visits and answering inquiries regarding the regulations, resulting in over 400 compliance-promotion interactions with regulatees.

Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations – Mail-outs of annual report packages were sent to dry cleaners, sellers, importers and recyclers of tetrachloroethylene, reaching over 1800 Canadians.

Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations – Aqueous film-forming foams (AFFF) that contain perfluorooctane sulfonate are used in fighting light fuel fires. Compliance promotion has been focused on delivering information about the regulations to firefighting agencies, municipal government and public work professionals who may use AFFF. This information was provided through presentations, information booths and workshops reaching over 500 participants. A questionnaire was delivered to stakeholders in Quebec to identify the stocks of AFFF in this region, assess their awareness of the regulations and ascertain their preference for means by which to distribute future information. In Yukon and British Columbia, a fact sheet was mailed to potential stakeholders, such as municipalities and airports. Overall, these actions reached approximately 1450 potential stakeholders.

Federal Halocarbon Regulations, 2003 – Seventeen information sessions, training sessions and presentations were delivered by compliance promotion officers across Canada to various groups, including federal departments, boards, agencies and Crown corporations; refrigeration technicians; First Nations and Northern Canada stakeholders. Mail-out, email and phone campaigns reached over 1600 Canadians.

Fuels Bundle, including Sulphur in Diesel Fuel Regulations; Benzene in Gasoline Regulations; Fuels Information Regulations, No. 1; Gasoline Regulations; Contaminated Fuel Regulations; Regulations Prescribing Circumstances for Granting Waivers Pursuant to Section 147 of the Act – Environment

Canada distributed mail-outs and fact sheets to regulatees. Activities reached over 1600 known and potential fuel stakeholders.

New Substances Notification Regulations (Chemicals and Polymers) and the Masked Name Regulations – Environment Canada reached environmental professionals and small and medium-sized business employees through trade show booths, multi-instrument workshops and presentations, emails, and phone calls.

Gasoline and Gasoline Blend Dispensing Flow Rate Regulations – Compliance promotion for the regulations was completed through letters and emails sent to over 240 gasoline retailers in Canada.

Pollution Prevention Planning Notice for Polyurethane and other foam sector (except polystyrene) – Environment Canada conducted an information session where a presentation was made to all facilities that may be affected by the Notice, in order to promote its implementation. In addition, an information fact sheet is in the final stages of preparation.

Code of Practice for the Management of Tetrabutyltin in Canada – Compliance promotion activities included mail-outs to various stakeholders (industry and industry associations, environmental groups, Aboriginal groups, provincial and territorial governments) to inform them of the availability of the Code of Practice. In addition, Environment Canada conducted an information session where a presentation was made to all the facilities that may be affected by the Code of Practice, in order to promote its implementation.

10.3 Enforcement Priorities

Each year, a National Enforcement Plan describing the enforcement activities to be carried out in that fiscal year, including activities addressing non-compliance with CEPA 1999, is developed. To maximize the effectiveness of these activities, priority is given to specific regulations or instruments.

Factors that influence the identification of the priority regulations include the risk to the environment and human health represented by the regulated substance or activity, compliance issues, new and amended regulations, the nature of

regulatory provisions, operational complexity and capacity, and domestic and international commitments and obligations. In 2011–2012, the National Enforcement Plan priorities included the following CEPA 1999 instruments:

- *PCB Regulations*;
- *Federal Halocarbon Regulations, 2003*;
- *Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations*; and
- *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*.

The number of inspections carried out under the enforcement plan is supplemented by a large number of inspections resulting from responses to spills, complaints, intelligence or other information. In addition, a number of regulations are identified for regional enforcement focus.

The focus placed on regulations in each region is influenced by a number of factors, including geography, the prevalence of the regulated sectors, and provincial and territorial environmental sensitivities.

10.4 Enforcement Activities

10.4.1 Enforcement Statistics

Enforcement activities undertaken during 2011–2012 are summarized in four tables. Table 14 provides the number of on-site and off-site inspections for each regulation from April 1, 2011, to March 31, 2012. Table 15 provides the breakdown of investigations for each regulation on which at least one investigation occurred and/or closed from April 1, 2011, to March 31, 2012. Table 16 provides the total number of enforcement measures resulting from inspections and investigations from April 1, 2011, to March 31, 2012 for each regulation. Table 17 provides the number of prosecutions from April 1, 2011, to March 31, 2012 for each regulation.

Table 14: Summary of inspections, from April 1, 2011, to March 31, 2012

	Inspections		
	Total	Off-site	On-site
CEPA 1999 – Canadian Environment Protection Act, 1999	5808	2918	2890
<i>Benzene in Gasoline Regulations</i>	224	174	50
CEPA 1999 – Section(s)	79	25	54
CEPA Section 56 Notices – P2 Plans	4	1	3
CEPA Section 71 Notices – Toxics	4	2	2
<i>Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations</i>	83	25	58
<i>Concentration of Phosphorus in Certain Cleaning Products Regulations</i>	1	-	1
<i>Disposal at Sea Regulations</i>	77	49	28
<i>Environmental Emergency Regulations</i>	107	26	81
<i>Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations</i>	285	59	226
<i>Federal Halocarbon Regulations, 2003</i>	760	379	381
<i>Fuels Information Regulations, No. 1</i>	295	284	11
<i>Gasoline and Gasoline Blend Dispensing Flow Rate Regulations</i>	241	-	241
<i>Gasoline Regulations</i>	28	25	3
<i>Interprovincial Movement of Hazardous Waste Regulations</i>	41	8	33
National Pollutant Release Inventory	72	45	27
<i>New Substances Notification Regulations (Chemicals and Polymers)</i>	6	1	5

Table 14 (Concluded)

	Inspections		
	Total	Off-site	On-site
<i>New Substances Notification Regulations (Organisms)</i>	7	1	6
<i>Off-Road Compression-Ignition Engine Emission Regulations</i>	29	1	28
<i>Off-Road Small Spark-Ignition Engine Emission Regulations</i>	30	1	29
<i>On-Road Vehicle and Engine Emission Regulations</i>	14	2	12
<i>Ozone-depleting Substances Regulations, 1998</i>	40	4	36
<i>PCB Regulations</i>	588	167	421
<i>PCB Waste Export Regulations, 1996</i>	1	-	1
<i>Pulp and Paper Mill Defoamer and Wood Chip Regulations</i>	25	24	1
<i>Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations</i>	80	78	2
<i>Release and Environmental Emergency Notification Regulations</i>	1	1	-
<i>Renewable Fuels Regulations</i>	25	23	2
<i>Secondary Lead Smelter Release Regulations</i>	3	-	3
<i>Solvent Degreasing Regulations</i>	18	8	10
<i>Storage of PCB Material Regulations (inactive)</i>	1	1	-
<i>Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations</i>	561	27	534
<i>Sulphur in Diesel Fuel Regulations</i>	323	253	70
<i>Sulphur in Gasoline Regulations</i>	105	56	49
<i>Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations</i>	1640	1160	480
<i>Vinyl Chloride Release Regulations, 1992</i>	8	8	-
<i>Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations</i>	1	-	1
<i>Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products Regulations</i>	1	-	1

* Only those regulations under which action was undertaken during the time period are listed in this table.

- Inspections: Inspections relates to the number of regulatees inspected for compliance under each of the applicable instruments (file, subject, act, regulation) using the End Date for the reference period.

Table 15: Summary of the breakdown of investigations from April 1, 2011, to March 31, 2012

	Investigation breakdown			
	Started FY 2011–2012 and ended FY 2011–2012	Started FY 2011–2012 and still ongoing at the end of FY 2011–2012	Started before FY 2011–2012 but ended in FY 2011–2012	Started before FY 2011–2012 and still ongoing at the end of FY 2011–2012
CEPA 1999 – Canadian Environment Protection Act, 1999	6	26	33	21
CEPA 1999 – Section(s)	3	6	15	11
<i>Disposal at Sea Regulations</i>	-	2	2	1
<i>Environmental Emergency Regulations</i>	1	-	1	-
<i>Export and Import of Hazardous Waste (inactive)</i>	-	-	1	-

Table 15 (Concluded)

	Investigation breakdown			
	Started FY 2011–2012 and ended FY 2011–2012	Started FY 2011–2012 and still ongoing at the end of FY 2011–2012	Started before FY 2011–2012 but ended in FY 2011–2012	Started before FY 2011–2012 and still ongoing at the end of FY 2011–2012
<i>Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations</i>	1	2	4	3
<i>Federal Halocarbon Regulations, 2003</i>	-	2	4	1
<i>Fuels Information Regulations, No. 1</i>	-	1	-	-
<i>Gasoline Regulations</i>	-	1	-	-
<i>Interprovincial Movement of Hazardous Waste Regulations</i>	-	-	1	-
<i>New Substances Notification Regulations (Organisms)</i>	-	1	-	-
<i>Off-Road Compression-Ignition Engine Emission Regulations</i>	-	-	1	1
<i>Off-Road Small Spark-Ignition Engine Emission Regulations</i>	-	-	-	1
<i>On-Road Vehicle and Engine Emission Regulations</i>	-	-	1	1
<i>Ozone-depleting Substances Regulations, 1998</i>	-	-	3	2
<i>PCB Regulations</i>	-	4	2	4
<i>Solvent Degreasing Regulations</i>	-	-	-	1
<i>Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations</i>	2	4	-	-
<i>Sulphur in Diesel Fuel Regulations</i>	-	1	-	-
<i>Sulphur in Gasoline Regulations</i>	-	1	-	-
<i>Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations</i>	1	9	9	5

- Investigations: Investigations are tabulated by number of investigation files, based on the start and end dates of the investigations, as noted in the table. An investigation file may include activities relating also to other legislation and may include one or more regulations. Therefore, the total number of investigations shown by regulation may not add to the total at the legislative level.

Table 16: Summary of Enforcement Measures from April 1, 2011, to March 31, 2012

Enforcement measures – from inspections and investigations									
	Tickets	Written directives	Written warnings	Injunctions	Ministerial orders	# of subjects involved in EPCOs	EPCOs	# of subjects involved in EPAMs	EPAMs
CEPA 1999 – Canadian Environment Protection Act, 1999	-	3	4002	-	-	71	273	1	3
<i>Benzene in Gasoline Regulations</i>	-	-	1	-	-	-	-	-	-
CEPA 1999 – Section(s)	-	1	15	-	-	1	1	1	3
CEPA Section 71 Notices –Toxics	-	-	2	-	-	-	-	-	-
<i>Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations</i>	-	-	75	-	-	-	-	-	-
<i>Disposal at Sea Regulations</i>	-	-	14	-	-	-	-	-	-
<i>Environmental Emergency Regulations</i>	-	-	225	-	-	7	14	-	-
<i>Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations</i>	-	-	87	-	-	-	-	-	-
<i>Federal Halocarbon Regulations, 2003</i>	-	-	389	-	-	10	35	-	-
<i>Fuels Information Regulations, No. 1</i>	-	-	3	-	-	1	2	-	-
<i>Gasoline and Gasoline Blend Dispensing Flow Rate Regulations</i>	-	-	29	-	-	1	1	-	-
<i>Gasoline Regulations</i>	-	-	1	-	-	-	-	-	-
<i>Interprovincial Movement of Hazardous Waste Regulations</i>	-	-	1	-	-	-	-	-	-
<i>National Pollutant Release Inventory</i>	-	-	90	-	-	-	-	-	-
<i>Off-Road Compression-Ignition Engine Emission Regulations</i>	-	-	28	-	-	1	3	-	-
<i>Off-Road Small Spark-Ignition Engine Emission Regulations</i>	-	-	7	-	-	-	-	-	-
<i>On-Road Vehicle and Engine Emission Regulations</i>	-	-	16	-	-	2	20	-	-
<i>Ozone-depleting Substances Regulations, 1998</i>	-	-	8	-	-	-	-	-	-
<i>PCB Regulations</i>	-	-	496	-	-	8	31	-	-
<i>Renewable Fuels Regulations</i>	-	-	1	-	-	-	-	-	-
<i>Solvent Degreasing Regulations</i>	-	-	2	-	-	1	1	-	-
<i>Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations</i>	-	2	2017	-	-	14	78	-	-
<i>Sulphur in Diesel Fuel Regulations</i>	-	-	24	-	-	1	2	-	-
<i>Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations</i>	-	-	471	-	-	24	85	-	-

- Tickets, written warnings, written directions, injunctions, ministerial orders and Environmental Protection Compliance Orders (EPCOs) and Environmental Protection Alternative Measures (EPAMs) are tabulated at the section level of a regulation. For example, if the outcome of an inspection is the issuance of a written warning that relates to three sections of a given regulation, the number of written warnings is three.

- The number of subjects involved in EPCOs is represented by the number of regulatees involved in EPCOs, by the end date, regardless of the number of sections. For example, if one regulatee was involved in an EPCO for three sections of the PCB Regulations, the number of subjects involved is one. Therefore it is possible that the data at the regulation level may not add up to the total at the legislation level.
- The number of subjects involved in EPAMs is represented by the number of regulatees who signed EPAMs by negotiated date, regardless of the number of regulations involved, therefore it is possible that the data at the regulation level may not add up to the total at the legislation level.

Table 17: Summary of Prosecutions from April 1, 2011, to March 31, 2012

	Prosecutions			
	Started in FY 2011–2012		Concluded in FY 2011–2012	
	Prosecuted subjects	Counts	Convicted subjects	Guilty counts
CEPA 1999 – Canadian Environment Protection Act, 1999	17	556	9	76
CEPA 1999 – Section(s)	11	516	4	16
<i>Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations</i>	1	2	2	36
<i>Federal Halocarbon Regulations, 2003</i>	-	-	1	14
<i>On-Road Vehicle and Engine Emission Regulations</i>	3	27	-	-
<i>Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations</i>	3	11	2	10

- Prosecuted subjects (started in 2011–2012): The number of subjects prosecuted, where the charged date falls within the reporting period (i.e., this is the number of prosecutions launched, not the number of prosecutions concluded in the reporting year). This means if one case resulted in the prosecution of two different subjects, the number reported would be two. The number of prosecuted subjects does not necessarily correspond to the total at the legislative level, because one investigation might be related to more than one instrument.
- Counts (started in 2011–2012): The number of counts (excluding tickets) is tabulated at the section level of the regulation, by the offence date relating to the regulatee's charge. This is the number of counts with which prosecuted subjects (started in 2011–2012) were charged.
- Convicted subjects (concluded in 2011–2012): The number of subjects convicted, where the convicted date falls within the reporting period.
- Guilty counts (concluded in 2011–2012): The number of guilty counts (excluding tickets) is tabulated at the section level of the regulation, by the offence date relating to the regulatee's conviction. This is the number of counts for which convicted subjects were found guilty.

10.4.2 Environmental Protection Compliance Orders

EPCOs are an enforcement response that may be issued to put an immediate stop to a CEPA violation, prevent a violation from occurring, or require action to be taken to correct a violation, without the use of the court system.

In 2011–2012, 71 regulatees were involved in EPCOs: 24 dry cleaners for alleged violations of the *Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations*, 14 owners or operators subject to the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, and 33 regulatees for alleged violations of various other regulations.

10.4.3 Environmental Protection Alternative Measures

EPAMs are an alternative to court prosecution for a violation of CEPA 1999, which divert the accused away from the court process after a charge is laid. If an EPAM agreement is successfully negotiated, it is filed with the court to become a public document. The agreement must also appear in the CEPA Environmental Registry.

Further information on EPAMs is available at www.ec.gc.ca/CEPAREgistry/enforcement/EPAMs.cfm.

In June 2011, following an investigation conducted by Environment Canada, a Markham, Ontario, company negotiated an EPAM agreement, accepting responsibility for failing to take all reasonable care to ensure that the company exported hazardous waste in compliance with CEPA 1999. The agreement contains measures to be taken, including making a voluntary payment of \$5,000 to the Environmental Damages Fund.

The company exported a sea container to Hong Kong in 2008. Authorities in Hong Kong inspected the container upon arrival and found that it contained lead acid batteries and cathode ray tube monitors, two items not accepted by Hong Kong under the terms of the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and

their Disposal. The container was returned to Canada and referred to Environment Canada for inspection. An investigation was initiated by Environment Canada and led to charges under CEPA 1999.

10.5 International Enforcement Cooperation

Enforcement-related activities are carried out under various international and domestic agreements and organizations. Under the auspices of the Commission for Environmental Cooperation's Enforcement Working Group (EWG), Environment Canada's Enforcement Branch engages in cooperative activities with its counterparts at the U.S. EPA and Mexico's Profepa and Semarnat. In 2011–2012, the EWG implemented the first steps in the two-year plan aimed at enhancing operational cooperation between the three countries by developing a protocol for exchanging sensitive enforcement information between the three countries. This supports the goal of the three countries working together to develop and implement a regional approach to intelligence-led enforcement with a specific focus on preventing the illegal movements of electronic waste, non-compliant imports, ozone-depleting substances and hazardous waste. The expected outcome over the next five years will be enhanced and more effective environmental compliance and enforcement, both domestically and as a region.

Environment Canada also actively participates in INTERPOL's Environmental Crimes working groups focused on issues such as developing institutional forensic capacity and stopping the illegal movement of electronic waste. This year, Environment Canada led the development of an INTERPOL forensics manual designed to assist developing countries in obtaining and using basic evidence collection techniques to prepare prosecution briefing materials for use in court. As well, Enforcement Branch led sessions and gave presentations in international meetings with organizations such as INTERPOL and the International Network for Environmental Compliance and Enforcement.

Appendix A: Contacts

Further information on CEPA 1999 and related activities can be found online at:

CEPA Environmental Registry website
(www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=D44ED61E-1)

Environment Canada's website (www.ec.gc.ca)

Health Canada's website (www.hc-sc.gc.ca)

Environment Canada publications are available from the departmental library or the nearest regional library. Many departmental publications are also available online at www.ec.gc.ca/publications or through Environment Canada's Inquiry Centre:

Inquiry Centre

Environment Canada

10 Wellington Street, 23rd Floor

Gatineau QC K1A 0H3

Telephone: 819-997-2800 or 1-800-668-6767

Fax: 819-994-1412

TTY: 819-994-0736

(teletype for the hearing impaired)

Email: enviroinfo@ec.gc.ca

The following media relations contacts are also available to provide information:

Environment Canada

Media Relations

Toll-free within Canada: 1-888-908-8008

Outside Canada: 1-819-934-8008

Email: media@ec.gc.ca

Health Canada

Media Relations

Telephone: 613-957-2983

Fax: 613-952-7747

Email: info@hc-sc.gc.ca

Address Locator 0900C2

Ottawa ON K1A 0K9

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Telephone: 613-996-1268

Toll-free: 1-866-429-3885

TTY: 1-800-926-9105

Fax: 613-991-3540

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