January 2002

Regulatory Framework for Hazardous Waste Management in Canada

Kanai Ken De

Follow this and additional works at: https://scholarlycommons.law.case.edu/cuslj

Part of the Transnational Law Commons

Recommended Citation
Available at: https://scholarlycommons.law.case.edu/cuslj/vol28/iss/21

This Speech is brought to you for free and open access by the Student Journals at Case Western Reserve University School of Law Scholarly Commons. It has been accepted for inclusion in Canada-United States Law Journal by an authorized administrator of Case Western Reserve University School of Law Scholarly Commons.
REGULATORY FRAMEWORK FOR HAZARDOUS WASTE MANAGEMENT IN CANADA

Kanai (Ken) De†

INTRODUCTION

Thank you, Jim, for a generous introduction. Before I go to my presentation, please allow me to thank Mr. Henry King for giving me an opportunity to make this presentation; I hope I will not disappoint you.

As you heard, I am not a lawyer; I am a professional engineer. I work at one of Environment Canada's regional offices. These regional offices are responsible for dealing with all of our many stakeholders, including the provincial Ministry of Environment and Energy (MOEE), for day-to-day projects, and the management and compliance of the federal acts and regulations on environment, air, water and waste management issues. The department in which I work is also responsible for publishing reports on the state of the environment and for the control of movement of hazardous waste across the Canada-U.S. border. I am only going to talk about the hazardous waste management because that is the area of my expertise.¹

The topic of my talk today is "Regulatory Framework for Hazardous Waste Management in Canada." I will be talking mostly about the Canadian Environmental Protection Act (CEPA) of 1999² and its associated regulations, emphasizing the differences between the legislation when it was originally enacted in 1988³ and its current form. I will also discuss key CEPA amendments that are designed to fill in some of the gaps in our regulatory structure to ensure that hazardous wastes are not being carelessly

---

† Project and Waste Management Engineer, Environmental Contaminants and Nuclear Program Division, Environment Canada, Downsview, Ontario. B.Tech, Indian Institute of Technology; M.A.Sc, University of Waterloo; M.B.A., McMaster University, Ontario, Canada. Additional biographical information available at page x.

¹ As a caveat, this overview is geared more toward the general public and their information consumption needs, and not necessarily for lawyers who are practicing in the environmental field.


115
dumped on either side of the border. These new regulations place more emphasis on pollution prevention and the transboundary movement of hazardous waste between the U.S. and Canada. In the future, we hope to have better visibility of the movement of hazardous waste so we can control its movement more effectively.

HAZARDOUS WASTE MANAGEMENT GOVERNANCE IN CANADA: AN OVERVIEW

As most of you know, hazardous waste management is a shared responsibility between all three levels of government. For example, in the U.S., you have the Environmental Protection Agency on the federal level, their state equivalents, and municipality- or county-level organizations; the structure of power sharing in Canada is nearly identical in this regard.

At the federal level, the federal hazardous waste regulations are operative for federal facilities, lands, undertakings, and institutions, as well as in Aboriginal lands. Environment Canada, Canada’s federal-level environmental ministry, is responsible for enforcing compliance to the CEPA and other Acts such as Fisheries Act. The transboundary movement of hazardous waste across the U.S.-Canada border is a very important issue and, as such, is regulated under the Export and Import of Hazardous Waste Regulations under the CEPA. These regulations are being amended to provide operational streamlining and allow for implementation of Environmentally Sound Management (ESM) criteria and the requirements for the waste-reduction plans. To that end, Environment Canada is working to harmonize U.S. and Canadian regulations by ensuring that Canada will not accept hazardous waste that could not be otherwise disposed in the U.S. Environment Canada is also responsible for implementing terms of certain international agreements, including the Basel Convention, aimed at monitoring the transboundary and international movements of hazardous waste and recyclable materials. Specific binational agreements between Canada and the U.S. include the U.S.-Canada Agreement on Transboundary Movements; and the U.S.-Canada Binational Toxics Strategy (BTS), which

---

4 See CEPA 1999, s.207(1).
6 See id., s.185. See also id., Sch. 3, S.O.R./ 2000-117, 118.
De-Canadian Hazardous Waste Management aims to reduce emissions of all 12 ("dirty dozen") toxic chemicals, including PCBs, mercury, dioxins, furans and pesticides.\footnote{See id., Appendix I.} The Strategy, which was first introduced in 1997, will soon be ratified to carry us into the next five years. Furthermore, the Canadian Council of Ministers of Environment (CCME) publishes guidelines on PCB waste management,\footnote{See, e.g., \textsc{Canadian Council of Ministers of Environment, Summary of Existing Canadian Environmental Quality Guidelines} 7 (2001), \textit{available at} http://www.ccme.ca/assets/pdf/e1\_062.pdf.} and we enforce these guidelines as well.

While the federal government is responsible for the export and import of hazardous waste and PCB, the provincial governments are responsible for the movement of waste within their own jurisdictions. Outside of the federal waste facilities, the provincial governments regulate virtually all waste management, treatment and disposal from private facilities. For example, the Ontario Ministry of Environment and Energy (MOEE) is responsible for waste management at non-federal facilities and private companies within the province, with the exception of those that are located on Native lands.\footnote{See, e.g., Waste Management Regulations, R.R.O. 1990 (Can.), Reg. 347, \textit{Amendment to Waste Management Regulation 347}, R.R.O. 1990, Reg. 558 (Can.), \textit{available at} http://192.75.156.68/DBLaws/Regs/English/900347\_e.htm.} The MOEE also issues "certificates of approval" for any waste treatment facilities in Ontario.\footnote{See \textit{Environmental Protection Act}, R.S.O. 1990, c. E.19, s.27 (Can.), \textit{available at} http://192.75.156.68/DBLaws/Statutes/English/90e19\_e.htm [hereinafter EPA 1990].} Moreover, the MOEE is responsible for regulating those entities that generate hazardous waste; those that generate and store such waste above the threshold quantity are required to register with the government.\footnote{See Reg. 347, \textit{supra} note 12, s.18.} Furthermore, the Ministry is responsible for performing environmental assessments on the construction of non-federal facilities or expansion of the waste management facilities.\footnote{See, e.g., EPA 1990, ss.18, 168.3.1.}

Municipalities in Canada, as in the U.S., are responsible for the day-to-day control and monitoring of landfill operations, ensuring that these facilities comply with regional laws. They are also responsible for the management of household-generated hazardous waste, such as paint waste, used motor oil, antifreeze, old car batteries, leftover pesticides/herbicides, solvents and other household chemicals. The municipalities are also responsible for the promotion of the 4Rs (reduction of waste, reuse, recycling and recovery of waste to energy) and are responsible for such programs as "blue-box" recycling, composting of organic/yard wastes/grass, and pesticide- or chemical-free organic landscaping initiatives, using
whichever programs will best suit their own needs. For example, there are several municipalities, including Toronto, that have very good initiatives in place to recycle and reprocess municipal solid waste through composting and "blue-box" collections. In the past several years, recycling is up some 60 percent, and now about 30 percent of all recyclable wastes are now recovered.16

THE CANADIAN ENVIRONMENTAL PROTECTION ACT

Overview

The Canadian Environmental Protection Act (CEPA) was first enacted in 1988.17 The goal of the legislation is to protect the environment and public health, and to reduce toxic substance emissions.18 The CEPA was amended in 1999 with major changes in many areas, including those sections that cover pollution prevention.19 Part 4 of the CEPA 1999 provides the Canadian Minister of the Environment the authority to require the preparation and implementation of pollution prevention (P2) plans for CEPA toxic substances listed in CEPA Schedule 1. The P2 plan is just one of the many available control instruments, in addition to regulation, guidelines and codes of practice, that may be required under the CEPA. Pollution prevention may also be done on a voluntary or "beyond compliance" basis. The new legislation requires certain industry sectors to work with the National Office of Pollution Prevention (NOPP) to come up with a pollution prevention work plan;20 a number of them that have adopted such a plan.21

In 1992, the Government of Canada introduced the Export and Import of Hazardous Waste Regulations (EIHWRR22 under the authority of the former CEPA 1988.23 Now under the authority of the revised Act (CEPA 1999), the EIHWRR are intended to protect Canada's environment and the health of Canadians from the risks posed by unregulated traffic in hazardous wastes and hazardous recyclable materials, and to implement Canada's international

17 See CEPA 1988, supra note 5.
18 Id., at Preamble.
19 See CEPA 1999, ss.56-63.
20 See id.
23 CEPA 1988, supra note 3.
obligation to protect the environment of other countries from uncontrolled hazardous waste exports from Canada.

Amendments to these regulations are currently under consideration. The proposed amendments under consideration would address; decoupling of recycling and disposal; harmonization of definitions (with provinces); implementation of Environmentally Sound Management (ESM) criteria; waste reduction plans; operational streamlining (cooperation with U.S.); additional requirements (carriers, returns); Permit of Equivalent Level of Environmental Safety; and cost recovery at a later date.

PCB Regulations under the CEPA

There are four pieces of regulations for the transport and disposal of PCBs that are similar to those promulgated by the U.S. EPA. First, there are the Chlorobiphenyls Regulations (originally enacted in 1991 but currently being modified for reenactment\(^{24}\)), which ban the manufacture, sale and import of PCBs.\(^{25}\) Second, we have regulations that govern the storage of PCBs in Canada, including storage requirements, emergency procedures, record keeping, maintenance and inspections.\(^{26}\) This regulation is also under review, and is planned to be amended and re-released by the year 2003. Third, mobile federal PCB treatment facilities and those facilities that operate on federal lands under contract are governed by another set of regulations.\(^{27}\) Lastly, the PCB export regulations, which were enacted in 1996,\(^{28}\) replaces the 1990 regulations,\(^{29}\) which permitted the export of PCBs, so long as the PCB waste was headed to the U.S. for treatment and destruction and not for landfilling.\(^{30}\) Export is only allowed to the U.S., but the U.S. currently has an


\(^{30}\) See PCB 1996, s.3: “No person shall export PCB waste (a) to a country other than the United States; and (b) for any purpose other than for disposal.” “Disposal” is defined as any operation, other than landfilling with PCB waste, that will destroy PCB waste, whether by dechlorination, by incineration or other thermal treatment or by any other method of destruction, and includes any operation that will

(a) decontaminate PCB waste; and

(b) dispose of the residues from the decontamination of PCB waste.
import ban for PCBs above 2 ppm. This regulation is also being amended to regulate PCB imports.\textsuperscript{31}

Proposed Federal Amendments to the CEPA:

As I said earlier, we are in the process of introducing more stringent federal PCB standards.\textsuperscript{32} Included in the next generation of PCB regulations will be an attempt to phase out PCB use from sensitive areas such as hospitals or food processing plants.\textsuperscript{33} We will limit PCB concentrations to two parts per million (ppm) in pigments.\textsuperscript{34} Our goal is to phase out of all uses of PCBs by the end of 2007, and any remaining must be destroyed within two years (that is, by December 31, 2009).\textsuperscript{35} Previously, we relied on voluntary compliance initiatives, so these new regulations institute much tighter controls.

Provincial Regulation of PCBs

In Ontario, there are several pieces of regulation on PCBs that are similar to those at the federal level. They include regulations that mandate tracking how much PCB is being used, stored, or destroyed.\textsuperscript{36} A database keeps track of the data at both the provincial and federal levels. This information is disseminated at semiannual U.S./Canada BTS meetings, where we report on the status and progress in our efforts for PCB elimination such as in PCB storage, disposal and destruction.

\textsuperscript{31} See \textit{PCB Waste Export Regulations}, at \url{http://www.cbsc.org/english/search/display.cfm?code=2381&coll=FEDSBIS_E} (last visited July 6, 2002).

\textsuperscript{32} See \textit{Draft Regulations on Polychlorinated Biphenyls (Can.)}, at \url{http://www.ec.gc.ca/PCB/pdf/pcb_consult_e.pdf}.

\textsuperscript{33} \textit{Id.}, s.1.

\textsuperscript{34} \textit{Id.}, s.4(2)(a).

\textsuperscript{35} See \textit{id.}, s.11 (prohibiting use of PCB products after 1 January 2007); \textit{id.}, s.24 (mandating disposal of all PCBs in storage at the time of the enactment of the regulation by 31 December 2009).

\textsuperscript{36} See, e.g., \textit{Waste Management-PCBs Regulation}, R.R.O. 1990, Reg. 362 (Can.).
OTHER ONGOING PROJECTS

The Canadian PCB Challenge

In the 1997 bilateral BTS agreement, both Canada and the United States made "challenges" to seek a 90 percent reduction of the high-level PCBs that were either in storage or currently in service.37 Twice a year, we meet with our U.S. counterparts and with the U.S. and Canadian stakeholders to update them on our PCB storage and disposal status and how we are progressing, discussing our values and how to achieve those values by modifying our methods. A new Challenge will be ratified in 2002 for another five years.

PCB Reduction in Ontario

In Ontario, we have achieved an 80 percent reduction in our high level PCBs. See Figures 1 and 2. You may have heard a recent announcement by Ontario’s environment minister that the amount of PCBs is still quite high.38 However, this reference was primarily with regard to soil (approximately 64,000 tonnes) contaminated with low-level PCBs; high-level PCBs only make up about seven percent of that total.39 I think we are doing fine.

Figure 1. High-Level PCBs and PCB Storage Sites in Ontario

Source: BTS

Figure 2. PCB Storage Sites in Ontario, 1989-2001

![Bar chart showing PCB storage sites in Ontario from 1989 to 2001.](image)

*Source: Ontario Ministry of Environment and Energy, Hazardous Waste Information System*

Of course, there is lot more room for improvement; that is why we are sending out commitment letters to the industry sector, particularly to the sectors that are mostly responsible for holding and using PCBs. We conducted a survey of all PCB owners and tried to find out how many intend to phase out PCBs. Amazingly, almost 70 percent of those who have responded to the survey have done so positively,\(^{40}\) so, at least this is a good indication that some owners (31% of the owners responded) intend to accelerate the decommissioning of PCB in use and destruction of PCB waste in storage within next 5 years. *See Figure 3.*

\(^{40}\) *See BTS Meeting, supra note 24.*
Figure 3. Survey Results from PCB Owners in Ontario and their PCB decommissioning plan

Transportation of Dangerous Goods Act (TDGA) and Regulations

An effective tracking system is an important component of measures needed for the comprehensive management of hazardous waste. Under the Transportation of Dangerous Goods Regulations, hazardous waste shipments must be tracked using a manifest system. This manifest system provides detailed tracking of exports and imports of hazardous waste from the time it leaves the gates of the shipper or generator to the time it arrives at the destination. It is designed to ensure that such shipments do not go astray, either at borders or after they have crossed them, and that their entire cargoes arrive intact.

The Canadian manifest form requires

- an identification of the various firms or individuals involved in the shipment;
- detailed information on the types and amounts of hazardous waste being shipped;
- any special handling precautions during movements should a spill occur; and
- information on the proper treatment, storage and/or disposal required for the shipment when it reaches its final destination.

Source: Fact Sheet: PCB In-use Inventory Survey (2000) (available from the Author).

---

42 See generally id., ss. 4.14-4.18.
FEDERAL HAZARDOUS WASTE REGULATIONS AND CONCLUSIONS

We are also developing new federal hazardous waste regulations that are targeted to be published in the Canada Gazette by the year 2003. The aim of these regulations is to practice what we preach by promoting the environmentally sound management at federal facilities, and to close the gap between federal and non-federal facilities (per part 9 of CEPA 1999).

Thank you for your attention.

ACKNOWLEDGEMENTS

The author would like to acknowledge very helpful assistance of Mr. Donovan Steltzner, Editor in Chief, Canada – United States Law Journal and Mr. Robert Krauel, Manager, ECND, Environment Canada, Ontario Region, for his guidance and contribution.
Hazardous waste in Canada is regulated by all 3 levels of government:

- Federal:
  - Hazardous waste in Federal facilities, land, undertakings and institutions
  - Canadian Environmental Protection Act (CEPA) and its Regulations
  - Trans-boundary Movement of Hazardous Wastes through US-Canada/Inter-provincial movement
  - International Commitments (Basel, OECD, US-Canada Agreement on Transboundary Movements etc.)
  - CCME Guidelines on PCB Waste Management, incineration and landfills etc.
Provincial:

Individual Provincial MOE is responsible for

- Waste Management in Non-federal (private) facilities (O. Reg 347/558)
- Monitoring and approval (C of A) for waste disposal & treatment/destruction, incineration, biological waste management etc.
- Movement of waste within the Province
- Waste generators registration, tracking/monitoring
- Environmental Assessment (EA) of proposed waste management facilities

Municipal:

Municipalities are responsible for waste management in local/regions/municipalities through their by-laws

- Landfill disposal/operations/control/monitoring
- Household hazardous wastes (HHWs)
- Pesticide Management
- 4R's (Blue Box: Reduction, Reuse, Recycling, Recovery)
- Composting
Canadian Environmental Protection Act (CEPA) - Background

- Originally introduced in 1988
- Goal is to protect environment, human health and prevent pollution of toxic substances
- Amended in 1999 and legislated in March 31, 2000 with a major focus on:
  - P2 (Pollution Prevention) – Part IV & VII
  - Virtual elimination of persistent toxic substances and hazardous wastes – Part V
  - Framework for cooperation between Federal, Provincial & Aboriginal governments – Part IX

CEPA, 1999 (Continued)

- Better public participation
- Control of movement of hazardous wastes and recyclable material and prescribed non-hazardous waste for final disposal (Division 8, under Part 7)
- Rigorous enforcement and inspections
- Getting Federal houses in order (Part 9)
Federal Regulations on PCBs

PCB — Manufacture, Sale, Storage, Import and Export of PCB

1) Chlorobiphenyl Regs (SOR/ 91-152)
   - Prohibits manufacture, sale and import of PCB
   - Being amended to be released in 2003 (target date)

2) Storage of PCB Material Regs (SOR/ 92-507)
   - Governs safe storage of PCB wastes in Canada including storage requirements, fire/emergency procedures, record keeping, maintenance and inspection etc.
   - Being amended to be released in 2003 (target date)

3) Federal Mobile PCB Treatment and Destruction Regulations (SOR/ 90-5)
   - Applies only if the Mobile PCB destruction/treatment system is operated under contract with Federal lands
   - Stipulates operating standards, emission criteria, design/performance requirements, test methods, etc.

4) PCB Waste Export Regulations (SOR/ 97-108)
   - Replaces the previous Regs (SOR/ 90-453) allowing export of PCB waste to the US for treatment and destruction only, and not for landfilling
   - Being amended to include PCB import for transboundary movement
Provincial (Ontario) PCB Regulations

- O. Reg. 362 Waste Management - PCBs
  - For non-federal PCB storage owners
  - Require Director’s Instruction (D.I) from MOE

- O. Reg. 558 (replacing O. Regs 347 Waste Management)
  - Requires PCB Waste owner to register with MOE with the waste generation number for storage, transportation and disposal of PCB

- O. Reg. 352 - Mobile PCB Destruction Facilities
  - Thermal & Thermal Chemical Facilities (Class 1)
  - Chemical (Class 2) Facilities

Proposed amendments address several aspects of PCB management

- Proposed amendments would strengthen the Regulations as follows:
  - PCB phase-out from sensitive sites
  - Limit in products to 2 ppm (pigments)
  - Phase-out of all uses by 2008
  - PCB storage time limit of 2 years
  - Prohibition against storage after 2010 for existing stored PCB material

- Public consultation done in 2000 and 2001
- Targeted for 2002/2003
- PCB Website: www.ec.gc.ca/PCB/
The Canadian PCB Challenge

Seek by 2000, a 90 percent reduction of high level PCBs (>1 percent PCB) that were once, or are currently, in service and accelerate destruction of stored high-level PCB wastes which have the potential to enter the Great Lakes Basin, consistent with the 1994 COA.

Quantitative progress on the Canadian Challenge

High Level PCBs and PCB Storage Sites in Ontario, Canada

Approximately 80% reduction in High Level PCBs Decrease in the number of Storage Sites since 1993

- 30000 - 25000 - 20000 - 15000 - 10000 - 5000 - 0

Tonnage

No. of Storage Sites

January '93 April '00 April '01

Date

Environment Canada

Environment Canada
De: Regulatory Framework for Hazardous Waste Management in Canada

PCB Storage Sites in Ontario, Canada 1989 to 2001

Plans for Complete Decommissioning

Survey Result 2000
Transportation of Hazardous and PCB Waste

- Transportation of Dangerous Goods Act (TDGA) 1985
  - Applies to transport of hazardous waste and dangerous goods by any mode to any destination in Canada
  - Exempts bulk transport of oil and gas in pipelines or in marine vessels
  - Intra-Provincial transport (within the province) is still a provincial responsibility

Transboundary Regulations

- Export and Import of Hazardous Wastes (EIHW) Regulations (SOR - 92/637, 1992)

- Purpose
  - sets out conditions for shipments of hazardous wastes across US - Canada borders

- Goals
  - promote environmental responsibility
  - allow governmental control over waste shipments
  - ensure accidents will be cleaned up
  - ensure exporters/importers/generators take full responsibility for waste from generation to disposal (cradle to grave)
INRODUCTION [TO] EIHW REGULATIONS

In signing international agreements, Canada made a commitment to develop national legislation to promote the environmentally sound management of hazardous wastes. This led to the development of the Export and Import of Hazardous Wastes Regulations (EIHW Regulations) under the Canadian Environmental Protection Act (CEPA). The EIHW Regulations came into force on November 26, 1992.

The EIHW Regulations were written to be compatible with the Basel Convention and the OECD Decision and work in conjunction with the Transportation of Dangerous Goods (TDG) Regulations.

PURPOSE

The main purpose of the EIHW Regulations is to set out the conditions for export and import of hazardous wastes shipped across the Canadian border, including transits through Canadian territory. These Regulations also ensure that Canadian hazardous waste exports have been consented to by the receiving country or province before shipment.

The EIHW Regulations set out all of the conditions that must be met before any international shipment of hazardous waste can occur.

GOALS

The goals of the EIHW Regulations include:

- promoting environmental responsibility among all of those involved before, during, and after the international movement of hazardous waste;
- allowing the governments of the countries of import and transit to control which wastes enter their respective countries;
- ensuring that any transportation accident involving an international movement of hazardous wastes will be cleaned up by requiring liability insurance coverage; and,
- Ensuring that generators take responsibility for the transportation and handling of their waste from the site of generation to the site of final disposal or recycling.
Waste Regulations Under CEPA 1999

- Two new regulations will be developed to implement the new authorities and conditions set out under CEPA 1999, by 2003
- Amendments will be made to two existing regulations, the PCB Waste Export Regulations and the Export and Import of Hazardous Waste Regulations
- A new regulation will be proposed to control interprovincial/territorial movements of hazardous wastes and hazardous recyclable materials, (being transferred from TDGA) and would:
  - Ensure the tracking via the manifest of interprovincial shipments to proper facilities

- Harmonize the domestic definition of hazardous wastes and hazardous recyclable materials across Canada
- Include a mechanism for issuing permits for the equivalent level of environmental safety

- A new regulation will be proposed to control the export and import of prescribed non-hazardous wastes destined for final disposal and would:
  - Permit Canada to meet its commitments under the Basel Convention and the Canada/US Agreement
  - Allow for the implementation of a prior notice and Environment Canada authorization & tracking procedure
- Include a mechanism for issuing permits for the equivalent level of environmental safety
- Introduce reduction plans for exports destined for final disposal
- Establish criteria for environmentally sound management

New Federal Hazardous Waste Regulation (FHWR)

- To close the gap between federal and non-federal facilities (Part 9, CEPA 1999)
- To get Federal houses in order
- To promote ESM (Environmentally Sound Management) in Federal Facilities
- Stakeholder consultations completed
- Comments under review
- Target date by 2003