

**The Transboundary Movement of Hazardous Wastes In North America:  
A Canadian Perspective**

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# **The Transboundary Movement of Hazardous Wastes In North America: A Canadian Perspective**

## **I.INTRODUCTION**

This paper has been developed by the Canadian Institute for Environmental Law and Policy (CIELAP) to provide background information for a workshop on the transboundary movement of hazardous wastes in North America hosted by CIELAP, the Environmental Law Institute and the Centro Mexicana para la Derecho Ambientale on November 7, 1997 in Toronto.

The paper provides an overview of the current Canadian regulatory regime governing transboundary movements of hazardous wastes at the federal level. It also includes a discussion of the applicable regime in the province of Ontario, to illustrate the relationship between the federal and provincial system. In addition, the paper reviews the available information regarding the sources, quantities and composition of hazardous wastes imported into, and exported from, Canada.

The paper concludes with a discussion of recent policy developments in this area at the federal and provincial level. These include initiatives to 'de-couple' the definitions of wastes and 'recyclable materials,' the reform of the *Canadian Environmental Protection Act*, proposed revisions to the National Pollutant Release Inventory, the issue of the ratification of the 'Basel Bans' on the export of hazardous wastes to non-OECD countries for disposal, recovery or recycling, and the recent report of the Auditor-General of Canada on effectiveness of the federal government's controls on the transboundary movement of hazardous wastes.

A brief discussion of recent proposals for revisions to the regulatory systems for hazardous waste management in the province is also provided.

## **II.HAZARDOUS WASTE MANAGEMENT IN CANADA**

### **1)Defining Hazardous Waste**

Hazardous wastes have generally been defined in terms of their physical and chemical characteristics. Using this approach, they have been broadly described to include those wastes which are toxic, reactive, explosive, ignitable, corrosive, infections, mutagenic, carcinogenic or teratogenic, bioaccumulative or radioactive.<sup>i</sup> Early attempts at legislative definitions in Canada followed the European model establishing broad categories of materials, such as "hauled liquid industrial waste"<sup>ii</sup> which required special handling and disposal practices.

More recently Canadian governments have attempted to follow the American model of developing schedules of specific substances which must be treated as

hazardous waste under their environmental protection legislation.<sup>iii</sup> The federal and Ontario government's current approaches to the definition of hazardous waste are combinations of both the "listing" and "criteria/hazard" models.

## 2)Quantities, Sources and Composition of Hazardous Wastes in Canada

Published estimates of the total amounts of hazardous waste produced by Canadian industry each year range from between 2.5<sup>iv</sup> and 8 million tonnes<sup>v</sup> per year. Ontario is by far Canada's largest generator of hazardous wastes, accounting, by some estimates, for nearly 60% of Canada's national total.<sup>vi</sup>

Hazardous wastes are generated by a wide range of industrial sectors in Canada. Estimates of the contribution of different sectors, and of the composition of the waste stream vary widely, depending upon the particular definitions, data sources and assumptions used in their development.

A preliminary estimate prepared for Environment Canada, Canada's federal Department of the Environment, in 1995 identified the leading industrial sources of hazardous waste in 1991, the most recent year for which comprehensive national data was available, as outlined in **Table 1**<sup>vii</sup>

**Table 1:Hazardous Waste Generation Selected Sectors: 1991**

Sector	Total Waste Generated (Tonnes)	Per cent of Total
Pulp and Paper	2,046,922 <sup>viii</sup>	36%
Petroleum Refining	1,204,096	21%
Used Oil	500,000	9%
Fabricated Metals	280,000 <sup>ix</sup>	5%
Primary Metals	234,000 <sup>x</sup>	4%
Transportation Equipment	234,000 <sup>xi</sup>	4%
Leather and Allied Products	187,000 <sup>xii</sup>	3%
Mining	155,286	3%
Chemicals	145,949	3%
Local Government Service Industries	141,000 <sup>xiii</sup>	3%

Lead-Acid Batteries	100,000	2%
Other	1,007,000 <sup>xiv</sup>	17%
<b>Total</b>	<b>5,685,253</b>	<b>100%</b>

Estimates of the composition of the Canadian hazardous waste stream also vary widely, depending on the data sources and assumptions used. One estimate developed for Environment Canada in 1995, based on 1991 data is presented in **Table 2.**<sup>xv</sup>

**Table 2: Canadian Hazardous Waste Stream Composition**

Waste Stream Element	Percentage of total
Heavy Metal Solutions and Residuals	36%
Sludges and Inorganic Residuals	8.0%
PCB Wastes (including in Storage)	6.0%
Solvents and Organic Solutions	6.0%
Organic and Oily Residues	5.0%
Misc Chemicals and Products	5.0%
Clean-up Residuals	5.0%
Other	29%

### 3) Transboundary Hazardous Waste Traffic

Environment Canada reports that, in 1995, the most recent year for which data is available, 383,134 tonnes of hazardous wastes were imported into Canada for recycling or final disposal.<sup>xvi</sup> In the same year, Canada exported 225,989 tonnes of hazardous wastes.<sup>xvii</sup> The overwhelming source and recipient of these imports and exports was the United States.<sup>xviii</sup> No imports of hazardous wastes from Mexico were reported. There was one notification of an intention to wastes import from Mexico.<sup>xix</sup> However, this import does not appear to have actually occurred.<sup>xx</sup>

Reported imports of hazardous wastes into Canada have grown significantly since 1990, mainly due to increases in imports of hazardous wastes for recycling. Exports, on the other hand have remained roughly stable, although there are significant variations reported from year to year.<sup>xxi</sup>

### III. The Regulatory Framework

#### 1) Federal

##### i) Transboundary Waste Movements

The principle federal role with respect to the management of hazardous waste is centred upon their interprovincial and international movement. The *Canadian Environmental Protection Act* (CEPA) provides Environment Canada the authority to set conditions governing the export and import of hazardous wastes for the purposes of disposal and recycling and to require that notice be given to Canadian authorities before hazardous wastes are exported from or imported into Canada. Hazardous wastes are defined for the purposes of CEPA as any dangerous goods, as defined under the *Transportation of Dangerous Goods Act* that are a waste, or any substance specified on the List of Hazardous Wastes requiring Export or Import Notification made under CEPA.<sup>xxii</sup> This list currently includes over 100 waste types.<sup>xxiii</sup>

The *Export and Import of Hazardous Wastes Regulations*, made under CEPA in 1992, require that a prior notification be submitted when someone intends to export or import a hazardous waste, and that the receiving jurisdiction (country or province) declare that it consents to the import of the shipment of hazardous wastes, that a waste manifest describing the waste accompany the shipment at all times, that the exporter/importer carry insurance to cover any damages to third parties for which the exporter or importer is responsible, and to cover environmental damage due to spills leaks or other incidents during export or import, and that Canadian exporters accept the return of wastes which are refused by the importer. In the case of imports, consent must be obtained by the Canadian importer, through Environment Canada, from the receiving province.

CEPA also requires that when the Minister of the Environment receives a notice of a proposed export or import of a hazardous waste, he or she is required to publish a notice in the *Canada Gazette*, or in another appropriate manner, the name or specification of the toxic substance or hazardous waste, the name of the exporter or importer, and the country of destination or origin.<sup>xxiv</sup> This is accomplished through *Resilog*, a newsletter published by Environment Canada.

The CEPA regulations are intended to implement Canada's obligations under the three international agreements on hazardous waste movements to which Canada is a Party. The first of these is the 1986 *Canada-United States Agreement on the Transboundary Movement of Hazardous Waste*. The United States is Canada's largest partner for exports and imports of hazardous waste. The second is the *Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal*.

Canada signed the Basel Convention in 1989, and ratified it, through the adoption of the CEPA transboundary waste movement regulations, in August 1992. The

Convention establishes requirements for prior informed consent of the receiving party prior to the export of wastes for disposal or recycling. The Convention also includes a ban on exports of hazardous wastes to non-parties, or the import of wastes from non-parties, unless there is an agreement between the two countries. The 1986 Canada-U.S. Agreement permits transboundary waste movements between Canada and the U.S., which is not a party to the Basel Convention.<sup>xxv</sup>

At the March 1994 Conference of the Parties to the Basel Convention, it was agreed to amend the Convention to ban immediately exports of hazardous wastes from developed<sup>xxvi</sup> to developing countries for disposal. Furthermore, at the September 1995 Conference of the Parties, the Basel Convention was amended to ban the export of hazardous wastes for disposal, recycling or recovery from Organization for Economic Co-operation (OECD) to non-OECD countries as of January 1, 1998. Canada has yet to ratify either of these amendments.

Finally, in March 1992, Canada adopted, along with other members of the OECD, the OECD Decision of the Council Concerning the Control of Transfrontier Movements of Wastes Destined for Recycling Operations.<sup>xxvii</sup> This provides for the establishment of appropriate controls movements of recyclable wastes among OECD members.<sup>xxviii</sup> The decision creates a tiered system of controls based on risk criteria. Written consent from receiving authorities is required for movements of red-listed wastes; tacit consent from receiving authorities is assumed following notification if no objections are raised for "amber" listed wastes; and "commercial" controls for "green" listed waste that do not exhibit a hazard characteristic.<sup>xxix</sup>

The TDGA regulations and CEPA Waste Import/Export Regulations both define "recyclable material" to include materials which will only be partially recycled.<sup>xxx</sup>

## ii) PCB Storage, Export and Disposal

The manufacture, importation and most non-electrical uses of PCB's were banned in Canada in 1977 through regulations made under the *Environmental Contaminants Act*. These regulations were subsequently amended to prohibit the use of PCB's as a constituent of prescribed electrical equipment manufactured or imported into Canada after July 1, 1980. The sale of any type of equipment containing greater than 50 parts per million by weight of PCBs waste was banned in 1985.<sup>xxxi</sup>

In 1990, PCB waste export regulations were made under the *Canadian Environmental Protection Act* (CEPA) prohibiting the export on any PCB waste, except to the United States, where there is a requirement for the prior consent of the United States Environmental Protection Agency. Regulations governing the storage of PCB's were made under CEPA in 1992.<sup>xxxii</sup> Both regulations followed Interim Orders issued in after a

1988 fire at a PCB storage site in Quebec.<sup>xxxiii</sup>

In October 1995, the United States instituted an interim relaxation of its ban on the import of PCB's for destruction. This was followed by a permanent amendment in March 1996. In response, in November 1995 the federal Minister of the Environment made an Interim Order under the CEPA prohibiting PCB waste exports to the United States for disposal. This Interim Order was extended in February 1996,<sup>xxxiv</sup> but was then withdrawn, under intense pressure from Canadian firms with PCB's in storage and U.S. disposal companies<sup>xxxv</sup> in February 1997. This was despite concerns about the environmental safety of some of the U.S. destruction facilities that wished to import Canadian PCB's. The Interim Order was replaced with a regulation permitting exports for incineration or chemical destruction.<sup>xxxvi</sup>

However, in July 1997, a U.S. Court overturned the U.S. Environmental Protection Agency's decision to permit PCB imports for destruction.<sup>xxxvii</sup> As a result, the U.S. boarder remains closed to exports of PCB's from Canada for disposal.

### **iii)CFC's**

A series of regulations dealing with ozone depleting substances was adopted under CEPA between 1990 and 1993.<sup>xxxviii</sup> These ban food packaging material made of plastic foam in which CFC's have been used as a foaming agent, pressurized CFC containers of ten kilograms or less, and control the production and import of CFCs, halons, methyl chloroform and carbon tetrachloride. The regulations require producers to complete quarterly reports on their production, imports and exports of controlled substances.<sup>xxxix</sup>

### **iv)National Pollutant Release Inventory**

Waste generators are required to report their releases to the environment or transfers off-site of 178 designated substances to the federal government under the National Pollutant Release Inventory (NPRI) Program established under CEPA.<sup>xl</sup> The data is then made available to the public.

The reporting requirements apply to facilities that use, manufacture, process or "otherwise use" more than 10 tonnes of a substance in a given year, and who have more than 10 full-time employees. In 1993, the first reporting year, generators were also required to report shipments of NPRI substances off-site for recycling or reuse. However, this requirement was made voluntary for the 1994 and subsequent reporting years.

The NPRI includes a number of other significant exemptions. Facilities involved in the distribution, storage or retail sale of fuels, research and testing of NPRI substances, educational activities, the sale of products containing NPRI substances, the growing



harvesting and management of renewable resources (fisheries, forestry and agriculture), mining, and the drilling and operation of oil and gas wells, are exempt for NPRI reporting requirements.<sup>xli</sup>

## **2)A Provincial Example: Ontario**

All Canadian provinces have adopted regulations to facilitate the implementation of the CEPA hazardous waste import/export regulations. Ontario has the oldest and most comprehensive regulatory system for the management of hazardous wastes. A overview of its regime is provided here to illustrate the extent of the provincial role in dealing with such wastes.

The 1985 amendments to what is now Regulation 347 imposed a requirement that all generators of liquid industrial and hazardous wastes register with the Ministry of the Environment, and expanded the manifest system to track all movements of liquid industrial and hazardous waste from the generator to a disposal facility.<sup>xlii</sup> These wastes are classified as "subject waste" for the purposes of the generator registration and manifesting requirements. Generators of registerable solid wastes, defined as wastes which generated leachate between 10 and 100 times concentrations set out in the Regulation were also required to register.

Section 18 of regulation 347 requires that generators of subject waste submit an initial generator registration report to the Ministry. A generator is then issued a generator registration number and a waste number for each waste registered. This is to be updated if there are changes in the information about the generator, any additional waste types and any "significant change in the description or physical or chemical characteristics" of a previously registered waste.<sup>xliii</sup> A generator is forbidden to ship any subject waste off-site for disposal or recycling without being registered.<sup>xliiv</sup> Subject waste may only be stored on site by a generator for three months without being reported to the Ministry.<sup>xliv</sup>

Where waste is shipped off the site of its generation of disposal or recycling, sections 19-27 of Regulation 347 require the completion of a waste manifest for each waste shipment. Waste carriers are issued books of six-part manifest forms that contain parts to be filled out by the carrier, the generator, and the receiver. The carrier is required to fill out section B of the form and then give it to the generator, who fills in section A. The generator then retains two copies, filing one with the Ministry and keeping one for two years. The carrier takes the remaining four copies with the shipment and, upon reaching the destination, gives them to the receiver. The receiver must then complete section C of the form, keep three copies and return one to the carrier. Of those three copies, one is filed with the Ministry, which can then verify it against the copy originally filed by the generator, one is returned to the generator, which is responsible for ensuring that the waste went where it was supposed to, and one is retained by the receiver for two years.<sup>xlvi</sup>

There are variations to accommodate transport waste into, out of, and through

Ontario, but the basic tracking system is the same.<sup>xlvii</sup> In the case of transboundary movement of waste, the provisions of CEPA and the federal *Transportation of Dangerous Goods Act*<sup>xlviii</sup> apply. With respect to manifesting, the Ontario and federal regimes have been designed to harmonize.<sup>xlix</sup> However, the two systems do not overlap entirely in terms of the range of substances for which manifesting is required. The Ontario system requires, for example, manifesting of "liquid industrial wastes" and "registerable solid wastes" which are not covered under the federal regulations. The federal regulations, on the other hand require manifesting for "corrosive solid wastes," which are not covered by Ontario Regulation 347.

The relationship between federal and provincial regulations is particularly complex regarding the definition of "recyclable materials." An exemption from the requirements of Part V of the Ontario *Environmental Protection Act* and waste generator registration and manifesting for the handling of "recyclable material" was introduced in 1985.<sup>l</sup> Such material was defined as:

"waste transferred by a generator and destined for a site,  
 (a) where it will be wholly utilized, in an ongoing agricultural, commercial, manufacturing, or industrial process or operation used principally for functions other than waste management and that does not involve combustion or land application of the waste,  
 (b) where it will be promptly packaged for retail sale, or  
 (c) where it will be offered for retail sale to meet a realistic market demand, but does not include,  
 (d) hazardous waste or liquid industrial waste unless the transportation from generator to site is direct, and  
 (e) used or shredded or chipped tires."

This provision was amended in 1994<sup>li</sup> to exempt from Part V of the Act and Regulation 347:

"municipal waste, hazardous waste or liquid industrial wastes, other than used or shredded or chipped tires, transferred by a generator for direct transportation to a site:

- i. To be wholly used at the site in an ongoing agricultural, commercial, manufacturing or industrial process or operation used principally for functions other than waste management if the process or operation does not involve combustion or land application of the waste;
- ii. to be promptly packaged for retail sale to meet a realistic market demand;  
or
- iii. to be offered for retail sale to meet a realistic market demand."

These provisions have been intended to facilitate the reuse or recycling of wastes.

At the same time it seeks to limit the extent of the exemption granted to materials sent for recycling. This reflects the long-standing experience in the province with the operation of illegal hazardous and liquid industrial waste disposal activities, causing significant environmental damage, under the guise of "recycling."<sup>lii</sup> However, the definition is widely regarded as ambiguous and subject to different interpretations.<sup>liii</sup> The Ministry of Environment and Energy has stated that it considers the pre-treatment or processing of potentially recyclable materials to be a waste management activity which requires a Certificate of Approval.<sup>liv</sup>

A recent court decision dealing with this issue concluded that only "unusable leftovers" for processing or recycling operations should be considered "waste" and therefore subject to the requirements of the *Environmental Protection Act*. If upheld, this ruling would exempt a very wide range of activities dealing with hazardous and liquid industrial wastes from the current regulatory requirements.<sup>lv</sup>

The implication of the Ontario exemption for recyclable materials is that imports or exports of such materials from Ontario may not need to be manifested under Ontario law. However, manifesting would still be required under federal regulations made under CEPA for materials to which those regulations apply.

The extent of the hazardous waste 'recycling' activities occurring in Ontario under the provincial exemption is uncertain. However, recent analysis of data from the Ontario Waste Manifest Database and NPRI completed by CIELAP suggests that it may be significant.<sup>lvi</sup>

#### IV. WASTE IMPORTS

Imports of hazardous wastes into Canada for recycling or disposal have risen significantly over the past seven years, rising from just over 100,000 tonnes in 1990 to 383,134 tonnes in 1995. Environment Canada reports that 98.8% of these imports were from the United States.<sup>lvii</sup>

One import from Mexico was reported in 1995. It consisted of leachable toxic wastes.<sup>lviii</sup>

Environment Canada reports that nearly 70% of the imported wastes were destined to be recycled, with the remaining 30% going to final disposal.<sup>lix</sup>

The composition of the imported wastes was as outlined in **Table 3**<sup>lx</sup>

**Table 3: Composition of Waste Imports into Canada**

Waste Class	Quantity (Tonnes)	Per Cent of Total
Leachable Toxic Wastes	117,239	30.6%
Corrosive liquids	109,193	28.5%
Battery wastes	76,627	20.0%
Environmentally hazardous substances	21,456	5.6%
Flammable liquids	21,072	5.5%
Metal and mineral wastes	13,793	3.6%
Other	approx: 23,000	6.2%
<b>Total</b>	<b>383,134</b>	<b>100%</b>

The U.S. Toxic Release Inventory (TRI), which covers a much wider range of substances than the Canadian NPRI, provides some additional information about the fate of waste TRI listed substances exported to Canada. This is outlined in **Table 4**.

**TABLE 4: Canadian Imports of TRI Substances (1994)**

Province	Transfers for Recycling	Transfers to Energy Recovery	Treatment/ Destruction	Disposal/ Containment	Total Transfers	% of Total
Alberta	50.02	0	0	0	50.02	0.002%
B.C.	128.63	2.34	1.41	0	132.37	0.005%
Manitoba	25.71	0	0	0	25.71	0.001%
Ontario	21,768.67	0.024	703.27	14.53	22,486.85	78%
Quebec	5,916.68	0	329.31	39.52	6,285.51	22%
<b>Canada</b>	<b>27,889.70</b>	<b>2.3590</b>	<b>1,034.08</b>	<b>54.31</b>	<b>28,980.45</b>	<b>100%</b>

Ontario and Quebec are the overwhelming recipients of exports of waste TRI substances from the U.S. The status of Ontario and Quebec as the leading recipients of hazardous wastes exported from the U.S. is also reflected in Environment Canada's 1994 data, which reports Quebec as receiving 205,587 tonnes, Ontario 129,118 tonnes, and the other provinces 7,460 tonnes.<sup>lxi</sup>

## V.WASTE EXPORTS

The quantities of hazardous wastes exported from Canada varies significantly from year to year. However, there is no evidence of either a trend of either increasing or decreasing traffic. Environment Canada reports that 225,989 tonnes of hazardous waste were exported from Canada in 1995.<sup>lxii</sup>

The United States was the sole receiver of Canadian exports in 1995. Approximately 56% of the waste was destined for recycling, with the remaining 44% going to final disposal.

The composition of Canadian hazardous waste exports to the United States in 1995 is as outlined in **Table 5**.<sup>lxiii</sup>

**Table 5:Composition of Canadian Hazardous Waste Exports to the U.S. (1995)**

Waste Class	Quantity (Tonnes)	Per Cent of Total
Metal and Mineral wastes	66,215	29.3%
Battery wastes	52,429	23.2%
Corrosive liquids	42,486	18.8%
Flammable liquids	23,955	10.6%
Leachable toxic wastes	12,881	5.7%
Environmentally hazardous waste	8,362	3.7%
Other	19,660	8.7%
<b>Total</b>	<b>225,989</b>	<b>100%</b>

The NPRI provides some information regarding the fate of NPRI substances exported to the U.S.<sup>lxiv</sup> This is outlines in **Table 6**.

**Table 6:Fate of NPRI Substances Exported to the U.S. (1994)**

Fate	Quantity (Tonnes)	Percent of Total
Recycling	35,613	94.8%
Energy Recovery	585	1.6%
Treatment/	358	1.0%

Destruction		
Disposal/ Containment	1,014	2.7%
<b>Total</b>	<b>37,570</b>	<b>100%</b>

As with imports, the overwhelming bulk of Canadian waste exports originate in Ontario and Quebec. Environment Canada reports that in 1994, Ontario exported 118,853 tonnes, Quebec 27,324 tonnes, and other provinces 22,057 tonnes.<sup>lxv</sup>

The hazardous waste export business in Canada is dominated by three firms, Laidlaw Environmental Services Inc, Philip Services Corporation, and Safety-Kleen Canada Ltd.<sup>lxvi</sup>

## VI. TRANSITS

Environment Canada reports 48,000 tonnes of hazardous wastes to have transited Canada in 1995. With one exception, these were transits to and from locations in the United States.<sup>lxvii</sup>

## VII. RECENT POLICY DEVELOPMENTS IN CANADA

### 1) CCME

The Canadian Council of Ministers of the Environment (CCME), consisting of the federal, territorial and provincial Ministers of the Environment, has undertaken a number of initiatives related to hazardous waste management. In particular, the Council's Hazardous Waste Task Group (HWTG) has been working on the "harmonization" of federal and provincial definitions of "hazardous waste." At the centre of this work has been proposals for the "de-coupling" of the definitions for waste and recyclable materials. Other issues being examined include the use of leachate tests to classify environmentally hazardous and leachate toxic wastes, and the need for a harmonized national listing/de-listing protocol.<sup>lxviii</sup>

The CCME proposals regarding the "de-coupling" of the definitions for waste and recyclable materials have been highly controversial. The rationale for this separation of definitions provided by some governments and industries has included the negative connotation with the general public associated with the terms "waste" and, in particular, "hazardous waste," which may be a barrier to realizing the full recycling potential for these materials.<sup>lxix</sup> It has also been argued that the change would promote and facilitate recycling activities.<sup>lxx</sup>

However, serious concerns were raised regarding proposed separation of the definition of recyclable material from that of hazardous waste by non-industry participants in a December 1996 workshop hosted by the CCME. It was pointed out that the proposal could result in handling of hazardous recyclables not being regulated, as they would no longer be defined as hazardous wastes. In addition, it was noted that, in some cases, the applicability of hazardous waste regulations is the only means of controlling recyclable hazardous wastes, or even knowing of their existence.<sup>lxxi</sup>

The Task Group has proposed to add an exemption from existing regulatory requirements for interprovincial and domestic shipments from hazardous recyclable materials transported directly to a site to be wholly used in an ongoing agricultural, commercial, manufacturing or industrial process, or operation used for functions other than waste management, provided that the process did not involve combustion or land application, no distinct components of the material are recovered as separate end-products, and any of the products or emissions for the process do not contain any hazardous constituents at levels higher than would result from the use of comparable raw materials.<sup>lxxii</sup>

## **2)Federal**

In addition to federal participation in the CCME HWTG process, there are a number of other federal initiatives under way regarding hazardous waste management.

### **i)CEPA Review**

On December 10, 1996, the federal government introduced Bill C-74, the new *Canadian Environmental Protection Act*. The Bill is the government's response to the June 1995 report of the House of Commons Standing Committee on Environment and Sustainable Development reviewing CEPA.<sup>lxxiii</sup>

In its report, the Committee had recommended that CEPA and its regulations be amended to fulfil Canada's commitments under the Basel Convention to ban immediately exports of hazardous waste for disposal to developing, and to phase out exports for recycling/recovery to developing countries by the end of 1997.<sup>lxxiv</sup> In its December 1995 response to the Committee's report, the government proposed to clarify the authority to make regulations banning exports and imports of hazardous waste to and from any country when this is required under an international agreement to which Canada is a party, and to provide the authority to refuse the export or import of a hazardous waste if the waste in question is not to be managed in an environmentally sound manner according to international agreements to which Canada is a party.<sup>lxxv</sup>

In addition, the government proposed to amend CEPA to require Canadian exporters of hazardous wastes to have plans for reducing/phasing out the quantity of

hazardous wastes that is being exported for the sole purpose of final disposal.

Provisions for the implementation of these proposals were contained in Bill C-74. However, the Bill also contained a clause permitting the granting of import or export permits for an activity which "does not comply" with the provisions of the Act if the Minister is satisfied the activity will be conducted in a manner that will provide an "equivalent level of safety."<sup>lxxvi</sup> This provision appeared to mirror the "compliance plan" scheme contained in the government's proposed Bill C-62, the *Regulatory Efficiency Act*, which was widely criticized by public interest organizations and legal scholars.<sup>lxxvii</sup> The Bill also made provision for cost recovery by Environment Canada in the issuing of waste import/export permits.<sup>lxxviii</sup>

Bill C-74 died on the order paper when a federal election was called for June 1997. The future fate of the Bill is uncertain.

## ii)NPRI Revisions

Environment Canada has proposed to add a number of reporting requirements to the NPRI. Reporting of off-site 3Rs disposal of NPRI substances is to become mandatory for the 1998 reporting year. In addition, Environment Canada has proposing that reporting requirements be established regarding waste being treated or incinerated on-site<sup>lxxix</sup> although this proposal was withdrawn in December 1997.<sup>lxxx</sup>

## ii)Basel Convention Implementation

The implementation of the September 1995 amendments to the Basel Convention to ban exports of hazardous waste to developing countries for recycling has emerged as a major issue within the federal government. Canada consistently resisted the ban,<sup>lxxxi</sup> and at the September 1995 Conference of the Parties, Canada was the last Party to relinquish its opposition to the decision to ban exports for recycling.<sup>lxxxii</sup>

The Technical Working Group of the Basel Convention was mandated to clarify the definition of hazardous waste developed under the Basel Convention. This definition included both wastes destined for recycling and final disposal.

The development of Canada's position on the definition of waste has engendered deep conflict within the federal government. The Canadian metals and mining industries have strongly opposed the Basel ban, complaining that it will restrict metals recycling activities.<sup>lxxxiii</sup> In December 1995, the House of Commons Standing Committee on Natural Resources tabled an interim report on "streamlining" environmental regulation for mining in Canada. In its interim report, the Committee recommended that the federal government modify its definition of "wastes" to exclude metal recyclables. It also recommended that the federal government work to exempt materials containing metals used in recycling or other environmentally beneficial processes from the Basel Convention.<sup>lxxxiv</sup>



In its June 1996 response to the Committee's recommendation, the government stated that it would work to remove the negative connotation given to recyclable materials associated with the term "waste," through the CCME, continue to review the definitions of "waste" and "hazard" to develop and appropriate definition of waste for use domestically and in an international context, identify recyclable materials that require controls but need not be managed as waste, remove transboundary restrictions from recyclable metals that do not pose a risk to human health and the environment and are well managed in their industrial use. In addition, it stated that it would work with the provinces and its international counterparts to apply "appropriate" movement and management controls to materials in relation to their risk to human health and the environment.<sup>lxxxv</sup>

In November 1996, the federal government adopted a Minerals and Metals policy that states that the government will promote in both domestic and international fora common approaches to the definition of waste that underline the need to differentiate between recyclable materials destined for recovery operations, and wastes destined for final disposal.<sup>lxxxvi</sup> The Minerals and Metals Policy also effectively commits the federal government to seeking to block any future international environmental agreement that might interfere in international trade in metals or minerals.<sup>lxxxvii</sup> This again appears to be in response to the Basel ban.

#### **iv) Report of the Auditor-General of Canada**

Over the past few years, there have been recurring reports of Environment Canada lacking the staff and other resources necessary to implement and enforce the CEPA regulations on the transboundary movement of hazardous wastes.<sup>lxxxviii</sup> More recently, there have been reports of further staffing reductions at the department, partially as a result of Environment Canada's failure to implement a cost recovery system for its regulatory approvals, including those granted under the CEPA hazardous waste movement regulations.<sup>lxxxix</sup>

In October 1997, the Auditor-General of Canada tabled a report in Parliament which raised serious questions about the effectiveness of the federal government's controls on the transboundary movement of hazardous wastes.<sup>xc</sup> The report focused on imports and exports of wastes to and from Canada.

The report concluded that there was a limited chance of detecting illegal traffic in hazardous waste at the border. Inspection and effective testing of samples of potentially illegal imports and exports was found to be limited, as was the training of Customs Officers to recognize hazardous wastes. The Auditor-General also stated that there was an even lower chance of detecting illegal shipments of hazardous wastes at marine ports or rail yards.

In addition, the report noted that, due to low rates of compliance with reporting requirements, Environment Canada could not be sure that hazardous wastes exported from Canada have reached their final destination or been properly disposed of or recycled.<sup>xci</sup>

The Auditor-General concluded that as a result of these significant gaps in the areas of prevention, detection and enforcement, and the limited facilities to physically control exports of hazardous wastes at the border, Canada was not in a position to know the extent to which it is living up to its international obligations with regard to preventing illegal traffic at the border.

The Auditor-General made a number of recommendations to improve the situation with respect to regulation of transboundary hazardous waste movements. These included: making efforts to quantify the extent of illegal traffic; improved training for Customs Officers; better sharing of intelligence between agencies and improved coordination of their actions; and the development of a management strategy for obtaining and analyzing hazardous waste samples.

The federal government departments and agencies identified in the Audit were reported as having agreed to implement the Auditor-General's recommendations.

### **3)Ontario**

#### **i)Bill 57 -The Environmental Approvals Process Improvements Act, 1997.**

Bill 57, the *Environmental Approvals Process Improvements Act*, was introduced into the Legislature in June 1996, and enacted in June 1997. The Act dissolved the OWMC and the Environmental Compensation Corporation created through the 1979 'spills' Bill. In addition, the Act amended the *Environmental Protection Act* and the *Ontario Water Resources Act* to permit the cabinet to exempt any person or activity from the requirements of either statute or regulations made under them, and to make regulations dealing with any person or activity falling under the jurisdiction of the two Acts.<sup>xcii</sup>

#### **ii)Responsive Environmental Protection**

In July 1996, the Ministry of Environment and Energy released a series of proposal for the reform of environmental regulation in the province.<sup>xciii</sup> These proposals affected virtually every regulation administered by the Ministry of Environment and Energy.

#### *Regulation 347*

Hazardous and Liquid Industrial Waste management was the area most heavily

affected by the Ministry's proposals. The Ministry's proposals included the following measures:

- \*the removal from requirements for waste approvals under Part V of the *Environmental Protection Act*, and the generator registration and manifesting requirements of Regulation 347 of activities related to the handling of "recyclable materials." Specific reference was made to the exemption of activities related to the recycling of all types of batteries, thermostats, photoprocessing wastes, printed circuit boards, metal bearing sludges and waste oils sent for re-refining from waste requirements for transportation, handling and approvals.<sup>xciv</sup>
- \*the exemption from Regulation 347 manifesting requirements of industry operated "manufacturer controlled networks" collecting and recycling hazardous wastes;<sup>xcv</sup>
- \*the exemption from waste approval requirements of on-site processing other than combustion or land application;<sup>xcvi</sup>
- \*the removal of "liquid industrial wastes" from the province's definition of "subject" wastes.<sup>xcvii</sup> Among other things, this would remove the requirements to register and manifest movements of landfill leachate to sewage treatment plants;
- \*the removal of the requirement for generator registration of registerable solid waste (waste which generates leachate between 10 and 100 times the concentrations found in Schedule 4, Regulation 347).<sup>xcviii</sup>
- \*the replacement of the current manifesting requirements with annual, semi-annual or quarterly reports for movements of hazardous wastes in the range of 100 to 500 kg,<sup>xcix</sup>
- \*the elimination of manifesting requirements for movements of hazardous wastes between sites owned by the same proponent within a given municipal boundary;<sup>c</sup>
- \*the elimination of requirements for public hearings prior to the approval of:<sup>ci</sup>
  - \*waste-derived fuel sites burning liquid industrial waste generated off-site; and
  - \*on-site hazardous waste incinerators.
- \*the establishment of a "permit-by-rule" system similar to that established for pesticide container and used oil depots, and refrigerant collection, recycling and disposal facilities for:<sup>cii</sup>
  - \*the on-site storage of hazardous wastes, including PCB's;
  - \*the burning of hazardous wastes generated on-site as fuel;
  - \*dust suppression sites using subject waste;
  - \*"selected waste depots" for such materials as pharmaceuticals, sharps, pesticides, paints, and batteries from industrial generators;

\*household hazardous waste collection sites; and  
\*\*"small" hazardous waste transfer stations, including PCB transfer stations.

The Ministry also proposed to add the corrosive solid waste into the Ontario definition of hazardous waste in order to be consistent with the CEPA hazardous waste movement regulations.<sup>ciii</sup> However, serious concerns were raised regarding the implications of the overall direction of the Ministry's proposals for environmental protection and public health and safety, particularly with respect to the de-regulation of hazardous waste recycling activities.<sup>civ</sup> Despite these concerns, many of the Ministry's proposals were subsequently reiterated by the province's "Red Tape Review Commission" in its January 1997 report.<sup>cv</sup>

In November 1997 the Ministry of the Environment re-iterated its intention to proceed with these proposals.<sup>cvi</sup> In addition, there have been major reductions in the Ministry's resources and staff related to hazardous waste management.<sup>cvii</sup>

## VIII.CONCLUSIONS

The federal government has primary responsibility for the regulation of transboundary (international and interprovincial) movements of hazardous waste in Canada. Regulations, requiring prior informed consent for exports and imports of wastes for recycling or disposal have been established under the *Canadian Environmental Protection Act*. These regulations implement Canada's obligations under the three major international agreements regarding transboundary movements of hazardous wastes to which Canada is a Party: the *Canada-United States Agreement on the Transboundary Movement of Hazardous Wastes*; the *Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal*, and the *OECD Decision of the Council Concerning the Transfrontier Movements of Wastes Destined for Recycling Operations*.

The United States is the overwhelming source of imports of hazardous wastes into Canada, and destination of exports. Ontario and Quebec account for over 85% of Canada's reported exports of wastes, and are the destination for more than 95% of Canada's imports. There is virtually no transboundary waste traffic reported between Canada and Mexico.

Imports of hazardous waste into Canada for disposal or recycling have shown significant growth since 1990, while the level of exports has remained roughly stable. Imports are dominated by leachable toxic wastes, corrosive liquids and battery wastes, Metal and mineral wastes, battery wastes and corrosive liquids are the leading materials exported from Canada.

There are currently a number of major policy initiatives under way in Canada which may affect the regulation of the transboundary movement of hazardous wastes in the

future. These include a controversial initiative through the CCME to 'de-couple' the definitions of wastes and 'recyclable materials.' In addition, major amendments have been proposed to the *Canadian Environmental Protection Act* which would, for the most part, strengthen its provisions regarding transboundary movements of hazardous wastes. There are also proposals for revisions to the National Pollutant Release Inventory to strengthen the reporting requirements related to both the on-and off-site management of hazardous wastes.

Canada has failed, to date, to ratify the 'Basel ban' on the export of hazardous wastes to developing countries for disposal, recovery or recycling. In fact, the issue of the Basel ban on exports for recycling has promoted intense conflict within the federal government. The Canadian mining and metals industries have objected strongly to the ban, although they do not currently export any hazardous wastes to developing countries.

A recent report of the Auditor-General of Canada has raised serious questions about the effectiveness of the federal government's controls on the transboundary movement of hazardous wastes. The report concluded that there was a limited chance of detecting illegal traffic in hazardous waste at the border. Furthermore, the Auditor-General concluded that as a result of significant gaps in the areas of prevention, detection and enforcement, and the limited facilities to physically control exports of hazardous wastes at the border, Canada was not in a position to know the extent to which it is living up to its international obligations with regard to preventing illegal traffic at the border. The federal government has agreed to implement the Auditor-General's recommendations in this regard.

The province of Ontario has also proposed major revisions to its regulatory framework for the management of hazardous wastes. These would significantly weaken the existing regulatory structure for such wastes. These proposals have yet to be implemented. In the meantime, there have been major reductions in the resources available to the Ministry to deal with the management of hazardous wastes.

**ENDNOTES**

i. Environmental Council of Alberta, Report and Recommendations: Public Hearings on Hazardous Waste Management in Alberta, (Edmonton: Environmental Council of Alberta, 1980), pp.43-44. Note that radioactive wastes are regulated separately from other types of hazardous wastes by the Atomic Energy Control Board of Canada, under the *Atomic Energy Control Act*.

ii. Ontario Regulation 824/1976.

iii. See, for example, Ontario Regulation 309 and the 1988 Alberta Hazardous Waste Regulation.

iv. Apogee Research, The Canadian Hazardous Waste Inventory (Ottawa: Office of Waste Management, March 1995).

v. Environment Canada, The State of Canada's Environment, pg.14-12. Hazardous Waste: A Materials Management Approach (Industry ad hoc Committee on Hazardous Waste, May 1993), pg.4, gives an estimate of 6.5 million tonnes/year.

vi. Environment Canada, The State of Canada's Environment, pg.14-12.

vii. Based on Exhibit 2 and Figure 2, Apogee Research, Canadian Hazardous Waste Inventory (Ottawa: Office of Waste Management, Environment Canada, March 1995).

viii. The bulk (1,987,362 tonnes) of this waste is black liquor.

ix. "Groundtruthed" estimate. Total may be higher.

x. Ibid.

xi. Ibid.

xii. Ibid.

xiii. Ibid.

xiv. Ibid.

xv. Apogee Research, Canadian Hazardous Waste Inventory (Ottawa: Office of Waste Management, Environment Canada, March 1995), figure 3.

xvi. Resilog December 1996, Volume 10, No.1.

xvii. Ibid.

xviii.Ibid.

xix.Ibid.

xx.Pers. comm. Charles Cormier, Transboundary Movements Division, Environment Canada, January 6, 1998.

xxi.Ibid., Figure 1.

xxii.CEPA, S.43.

xxiii.CEPA, Schedule II, Part III.

xxiv.CEPA, section 45.

xxv.Summary adapted from Environment Canada, Environmental Protection Regulatory Review: Discussion Document (Ottawa: November 1993), pp.78-79.

xxvi.Defined in Annex VII to the Convention.

xxvii.*OECD Council Decision C(92)39.*

xxviii.Environment Canada, Regulatory Review Discussion Document, pg.79.

xxix.Transboundary Movement Division, "Backgrounder on Basel Convention Definitional Work," (Ottawa: Environment Canada, June 1996), pg.3. Schedule II, Part III of CEPA is sub-divided into three sections for this purpose, indicating which of the substances listed are subject to the "red," "amber," or "green" controls.

xxx.D.Saxe, Ontario Environmental Protection Act: Annotated (Toronto: Canada Law Book, September 1994), pg.R-252.9.

xxxi.Environment Canada, Regulatory Review Discussion Document, pp.83-84.

xxxii.Ibid., pp.83-84.

xxxiii.CP and Staff, "Toxic fire forces 3,000 from homes," The Globe and Mail, August 25, 1988.

xxxiv."Ban on PCB waste exports extended," The Globe and Mail, February 28, 1996.

xxxv.B.McKenna, "Canada warned about PCB rules," the Globe and Mail, February 7, 1997.

xxxvi. COA Stream 2 Report (November 1996), pg.25, and CP, "PCB-export ban lifted," The Globe and Mail, February 7, 1997.

xxxvii. J. Gerstenzang, "U.S. Court retains ban on PCB imports" The Montreal Gazette, July 8, 1997.

xxxviii. Ozone depleting substances regulations No.1 (SOR/89-351, June 29, 1989; No.2 (SOR 90/583, August 28, 1990; No.3, SOR 90-584, August 28, 1990; No.4 (SOR/93-218, April 27, 1993).

xxxix. ODS Regulations Nos. 1,2, and 4.

xl. For a brief summary of the NPRI see Industrial Releases Within the Great Lakes Basin: An Evaluation of NPRI and TRI Data (Toronto: Environment Canada, November 1995), pp.3-5.

xli. S. Leonardelli, Industrial Releases Within the Great Lakes Basin: AN Evaluation of NPRI and TRI Data (Toronto: Environment Canada, Ontario Region, 1995), pg.5.

xlii. Regulation 347, ss.18-27.

xliii. For a detailed discussion of these requirements see J. Tidball, "Waste Management Regulation in Ontario" (Toronto: The Canadian Institute, 1996), pp.38-39.

xliv. Ibid, s. 15.

xlv. Regulation 347, ss.18(10).

xlvi. J. Tidball, "Waste Management" in J. Swaigen, ed., Environment on Trial: A Guide to Ontario Environmental Law and Policy (Toronto: Emond-Montgomery Publishers Ltd. and the Canadian Institute for Environmental Law and Policy, 1993, pg.779. For a more detailed discussion of these requirements see Tidball, "Waste Management in Ontario."

xlvii. Ibid, ss. 21, 22 and 23.

xlviii. *Transportation of Dangerous Goods Act*, RSC 1985, c. T-19.

xlix. Tidball, "Waste Management," pg.780.

l. Regulation 322/85, s.3.

li. Regulation 105/94.

lii. See, for example, the discussion of project HAUL, reported in Ministry of Environment and Energy, Offenses Against the Environment: Convictions in 1994 (Toronto: 1005).



liii. See D. Saxe, Ontario Environmental Protection Act Annotated (Toronto: 1996), pp.R252.8-R252.9.

liv. Ibid., pg.R252.9, citing a Ministry of Environment and Energy "Bulletin on Recyclable Materials."

lv. *Philip Enterprises Inc. and Ontario Ministry of Environment and Energy*, Ontario Court of Justice General Division (file no.: 13800/96), June 10 and 18, 1997.

lvi. MoEE waste manifest database data for 1995 70,000 tonnes of 'subject' wastes were shipped off-site for reclamation. The bulk of this was accounted for by waste oil. The 1994 NPRI reports over 90,000 tonnes of NPRI substances transferred off-site for recycling in Ontario. This included 36,000 tonnes of manganese, 10,000 tonnes of lead, 10,000 tonnes of copper, and 8,700 tonnes of sulphuric acid. Transfers off-site for recycling were only reported under the NPRI on a voluntary basis for that year. This implies that the actual amount of NPRI substances transferred to recycling is likely greater than 90,000 tonnes.

lvii. Resilog, December 1996, Vol. 10, NO.1.

lviii. bid.

lix. Ibid.

lx. Based on Ibid, Figure 2.

lxi. Environment Canada, International Hazardous Waste Shipments by Province, 1994.

lxii. Resilog, December 1996, Figure 1.

lxiii. Adapted from Resilog, December 1996, Figure 3.

lxiv. Adapted from Taking Stock: North American Pollutant Releases and Transfers (Montreal: North American Commission on Environmental Cooperation, July 1997), Table 7-5.

lxv. Environment Canada, International Hazardous Waste Shipments by Province, 1994.

lxvi. Resilog, December 1996.

lxvii. Ibid.

lxviii. See Hazardous Waste Definition and Criteria Workshop: Background Paper For Workshop Participants (Winnipeg: Canadian Council of Ministers of the Environment, December 1996).

lxix.CCME, Hazardous Waste Definition Workshop Background Paper, pg.6.

lxx.IER, Hazardous Waste Definition and Criteria Workshop: Workshop Report, pg. 2.

lxxi.IER Planning, Research and Management Services, Hazardous Waste Definition and Criteria Workshop: Workshop Report (Winnipeg: CCME, February 1997).

lxxii.Ibid., pp.6-7.

lxxiii.House of Commons Standing Committee on Environment and Sustainable Development, It's About Our Health! (Ottawa: House of Commons, June 1995).

lxxiv.Ibid., Recommendation 83.

lxxv.CEPA Review: The Government Response/Environmental Protection Legislation Designed for the Future - A Renewed CEPA/A Proposal (Ottawa: Government of Canada, December 1995), pp.58-60.

lxxvi.Bill C-74, s.190.

lxxvii.See Report on Bill C-62 (Ottawa: Secretariat, Standing Joint Committee of the House of Commons and Senate on Regulatory Affairs, February 1995).

lxxviii.Environment Canada issued a discussion paper on cost recovery options for transboundary hazardous waste movements in December 1996. See Transboundary Movement Division, Hazardous Waste Branch, Cost Recovery for the Export and Import of Hazardous Waste Regulations (Ottawa: Environment Canada, December 1996).

lxxix.Environment Canada, Tracking of Pollution Prevention through the National Pollutant Release Inventory (Quantitative) (Ottawa: July 1997).

lxxx.Environment Canada, "The National Pollutant Release Inventory (NPRI) 1998 Reporting Year Issues - Invitation to Comment of the Proposed Environment Canada Response to Stakeholders, December 18, 1997.

lxxx1.CP, "Canada supports waste ban," The Globe and Mail, March 26, 1994.

lxxxii.Find citation.

lxxxiii.B.McKenna, "Environmental pacts assailed," The Globe and Mail, June 16, 1995.

lxxxiv. Standing Committee on Natural Resources, Streamlining Environmental Regulation for Mining: Interim Report (Ottawa: House of Commons, December 1995), recommendation 13.

lxxxv. The Federal Government's Response to the Interim Report of the Standing Committee on Natural Resources: Streamlining Environmental Regulation for Mining (Ottawa: Natural Resources Canada, June 1996), pg.19. See also, The Federal Government's Response to the Final Report of the Standing Committee on Natural Resources: Streamlining Environmental Regulation for Mining (Ottawa: Natural Resources Canada, March 1997).

lxxxvi. The Minerals and Metals Policy of the Government of Canada: Partnerships for Sustainable Development (Ottawa: Minister of Public Works and Government Services Canada, November 1996), pg.13.

lxxxvii. Ibid., pg. 23.

lxxxviii. R. Matas, "Canadians violate toxic trash rules," The Globe and Mail, date missing.

lxxxix. See, for example, Anne McIlroy, "Ottawa's environmental joy ride," The Globe and Mail, October 4, 1997.

xc. Report of the Auditor-General of Canada to the House of Commons: Chapter 4 Control of the Transboundary Movement of Hazardous Waste (Ottawa: Minister of Public Works and Government Services Canada, 1997).

xc. Ibid., pg.4-16.

xcii. See M. Winfield, Comments Regarding Bill 57, The Environmental Approvals Process Improvement Act, 1997 (Toronto: CIELAP, October 1996).

xciii. Responsive Environmental Protection: A Consultation Paper (Toronto: Ministry of Environment and Energy, July 1996).

xciv. Responsive Environmental Protection: Technical Annex, pg.76.

xcv. Ibid., pg. 80.

xcvi. Ibid., pg. 88.

xcvii. Ibid., pg.81.

xcviii. Ibid.

xcix. Ibid., pg.82.

c.Ibid.

ci.Ibid., pg.88.

cii.Ibid., pg. 80.

ciii.Ibid., pg.81.

civ. See for example, M.Winfield and G.Jenish, Comments Regarding Responsive Environmental Protection (Toronto: Canadian Institute for Environmental Law and Policy, October 1997).

cv. Red Tape Review Commission, Cutting Red Tape Barriers to Jobs and Better Government: Final Report of the Red Tape Commission (Toronto: Cabinet Office, January 1997), pg.

cvi. Better, Stronger, Clearer Environmental Regulations for Ontario (Toronto: Ministry of Environment, November 1997).

cvii. See, for example, Nothing Left to Cut: A Field Report on the activities of the Ontario Ministry of Environment and Energy (Toronto: Ontario Public Service Employees Union, January 1997), Figure 9, reporting the elimination of 22 of a total of 68 positions related to waste management as of December 1996).

