

Part 3: Environmental Protection

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AIR QUALITY

Introduction and Overview

On many occasions over the past four years, the government of Ontario identified reductions in air pollution, particularly the serious smog problems in Southern Ontario, as its leading environmental priority.¹ Many reports from independent and authoritative sources, including the Ontario Medical Association, Provincial Auditor, Environmental Commissioner, International Joint Commission and the North American Commission for Environmental Cooperation have highlighted the extent of the province's air pollution problems, and their impact on human health. However, actual progress on measures to reduce air pollution has been very limited. In fact, in many cases the government has adopted policies which are likely to make the problem worse.

The Ministry of the Environment proposed extensive changes to its air pollution control regulations as part of its regulatory 'reform' program, beginning in 1996. Although a number of the Ministry's proposals were eventually dropped, as it was pointed out that they were likely to lead to significant increases in air pollution, the Ministry has proceeded with regulations exempting a range of 'area' sources of air pollution from provincial approval requirements. The Ministry is also proposing to proceed with 'standardized' approval regulations for many other air pollution sources. Consistent with this direction, the Ministry of the Environment's April 1998 'Delivery Strategy' instructed Ministry staff not to act on complaints about air pollution from a range of 'area' and mobile sources.

The implementation of a vehicle inspection and maintenance program was deferred repeatedly, but eventually began in April 1999. However, it has been pointed out by the Environmental Commissioner and others that the program's benefits are likely to be overwhelmed by the impact of other policies adopted by the provincial government. The withdrawal of provincial funding for public transit services, and the adoption of land-use policies which promote and facilitate urban sprawl, have been highlighted as being particularly problematic in this regard, as they are likely to lead to increased automobile use.

The government's Smog Plan, released in January 1998, was widely criticized as being inadequate and unlikely to be effective. The Ministry of the Environment's proposals to revise its standards for hazardous air pollutants have moved forward very slowly. In some cases, the standards eventually adopted by the Ministry were significantly weaker what it had stated earlier was necessary to protect human health and the environment.

The implementation of Ontario Hydro's Nuclear Asset Optimization Plan (NAOP) has had a major negative impact on air quality in the province. The Plan relies heavily on fossil fuel powered generating stations to provide replacement power for Ontario Hydro's 'laid-up' nuclear facilities, resulting in major increases in emissions of carbon dioxide, sulphur

dioxide, nitrogen oxides, particulates and heavy metals. The government has also failed to articulate how it intends to ensure that the introduction of competition into the province's electricity market will not result in increases in air pollution.

The Ministry of the Environment has stated that "improvements in air quality have levelled off and in some areas particulate levels are rising again. Long-standing particulate problems persist in a number of urban centres." In addition, the Ministry has noted an ongoing increase in ground level ozone,² and a rise in median concentrations of some volatile organic compounds, such as benzene, toluene and xylene, since 1995.³

Over the 1995-1999 period, the Ontario government sought to block, weaken or delay a number of national initiatives on major air quality issues. These included acid rain, smog, the sulphur content of gasoline and climate change.

Regulatory 'Reform'

Incineration Ban Repeal.

In December 1995, a ban on the construction of new municipal waste incinerators established in 1992, was repealed by the provincial government. This action was specifically criticized as being likely to result in increases in the presence of priority pollutants in the Great Lakes Basin by the International Joint Commission in its 8th⁴ and 9th⁵ Biennial Reports on Great Lakes Water Quality. Municipal waste incinerators have been identified as major sources of a wide range of contaminants, including dioxins and furans, heavy metals including mercury, lead and cadmium, and sulphur dioxide and nitrogen oxides.⁶

Responsive Environmental Protection

In July 1996, the Ministry of the Environment released a discussion paper entitled *Responsive Environmental Protection*. The paper included extensive proposals for revisions to the Ministry's regulations related to air pollution. These included:

- the repeal of the "Sulphur Content of Fuels Regulation," intended to control sulphur dioxide emissions from the burning of fuel oil in Metro Toronto;
- the repeal of the "Hot Mix Asphalt Facilities Regulation," which controls emissions from hot mix asphalt facilities;
- the repeal of the "Lambton Industry Meteorological Alert Regulation," which requires reductions in sulphur dioxide emissions by industry in Lambton County during air pollution alerts;
- the weakening of regulatory controls on the incineration of hazardous wastes and liquid industrial wastes or their burning as "fuel;"
- permitting the widespread burning of municipal solid wastes as "waste-derived fuel;" and
- reducing reporting requirements under the "Countdown Acid Rain" program for the province's largest generators of sulphur dioxide emissions.

Better, Stronger Clearer Environmental Regulations for Ontario

In November 1997, the Ministry released *Better, Stronger, Clearer: Environmental Regulations for Ontario* a document outlining its intentions regarding the implementation of the regulatory 'reform' proposals presented in the July 1996 *Responsive Environmental Protection* discussion paper. The November 1997 document indicated that the government intended to back away from many of the proposals it had presented in July 1996 with respect to air pollution.

In October 1998, the Ministry of the Environment posted a proposal to transfer responsibility for the administration and operation of the Lambton Industry Meteorological Alert program to the Lambton Industrial Society. The LIS would monitor ambient SO₂ concentrations and weather conditions; notify the Ministry spills action centre when concentrations are such that a LIMA needs to be initiated or terminated; and notify the affected industries. The air monitoring station at Port Huron Ontario would be removed as part of the proposal.⁷

Bill 57 Amendments to the Environmental Protection Act

In the meantime, Bill 57, the *Environmental Approvals Improvements Act*, first introduced in June 1996, was enacted in June 1997. The Bill amended the *Environmental Protection Act* to permit the making of regulations that allow the exemption of specified types of proposals from the approval requirements of the Act. The amendments also permit requirements and conditions on any activity covered by the act, and approval exemptions under the act, to be specified by regulation.

'Standardized' Approvals and Approval Exemption Regulations

The primary purpose of the Bill 57 amendments to the *Environmental Protection Act* was to provide for the implementation of the Ministry of the Environment's proposals for 'Standardized Approval Regulations' (SARs) and 'Approval Exemption Regulations' (AERs). These were first posted on the Environmental Bill of Rights registry in February 1998. Under the SAR system, activities meeting certain criteria would be exempted from the normal approval requirements of the *Environmental Protection Act* or *Ontario Water Resources Act*. AERs would provide unconditional exemptions from approvals for certain activities.⁸ The Ministry's specific proposals related to air pollutants are outlined in Table 2.2 in the section "Standards Setting and Regulatory Processes".

Major questions have been raised about the Ministry's ability to effectively monitor and enforce approvals under the SAR system, and regarding the legal status and implications of SAR and AER approvals.⁹ The Ministry of the Environment's first proposals for air pollution AERs were implemented in September 1998¹⁰ and a second set of air pollution AERs was proposed in December 1998.¹¹ The Ministry's SAR proposals for air pollutants have yet to be implemented.

Ministry of the Environment Delivery Strategy and Air Pollution Regulation Enforcement

In February 1999, it was revealed that the Ministry of the Environment had developed a delivery strategy for its operational staff, directing them not to respond to public complaints about a wide range of environmental problems, or to direct such complaints to other agencies and municipalities. Specific examples included problems arising from: activities related to agriculture; construction and demolition; diesel generators; gravel pits and quarries; mobile sources; recycling and composting regulatory requirements; tire disposal sites with less than 5,000 tires; inquiries about pesticide use; and residential pesticide use.¹² Many of these potential sources had been proposed by the Ministry of the Environment as candidates for AER or SAR regulations.

A March 1999, analysis of the Ministry's law enforcement activities by the Sierra Legal Defence Fund indicated that in 1997 there were 1,224 violations of air pollution regulations, resulting in four charges. In 1998 there were 3,354 violations, resulting in two charges.¹³

Standards Revisions

The Ministry of the Environment announced a program to revise its standards for water, air and soil contaminants as a major project in October 1996.¹⁴ The updating of standards for toxic air pollutants was identified as a priority for this effort. The province's current standards in this area are widely recognized as being out of date and inadequate.¹⁵ This was point was highlighted by the Provincial Auditor in his October 1996 Annual Report.¹⁶

However, progress in this area has been very slow. In the first two years of the project, only two new air pollution standards were implemented. Strengthened summer gasoline volatility limits were adopted in February 1997 and a new "interim" Ambient Air Quality Criteria (AAQC) for PM10 was adopted in November 1997. However, the latter standard was only a guideline, and will only be incorporated into Certificates of Approval for new facilities.

Proposals for revised air standards for 10 hazardous air pollutants were posted on the EBR registry in March 1998.¹⁷ However, a number of the proposed standards were substantially weakened from January 1997 proposals put forward by Ministry indicating what was required in order to protect of human health and the environment.¹⁸ Proposals for new standards for four heavy metals (nickel, chromium IV, Cadmium and Arsenic), which included some of the most dramatic changes, were dropped altogether (See Table 2.2 "Standards Setting and Regulatory Processes" section). There have been indications that these changes were the result of very strong lobbying from industry, which had been given opportunities to 'preview' the proposed standards.¹⁹

The lack of progress on the standards revision process was highlighted by the Provincial Auditor in his 1998 Annual Report.²⁰ Revised standards for nine hazardous air

pollutants were adopted in December 1998.²¹ However, in most cases the improvements over existing standards were marginal. The Ministry invited public comments on proposals for the revision of its air pollution standards for 18 additional substances in January 1999.²²

Ontario Smog Management Plan

Smog conditions arise from the reaction of volatile organic compounds and nitrogen oxides in the presence of heat and sunlight to form ground level ozone. Smog also includes particulate matter, and can be worsened by humidity and acidic emissions. Most parts of southern Ontario experience high levels or exceedances of Environment Canada's ground level ozone standard on a regular basis in the summertime. The City of Toronto, for example, experiences about 37 days per year in which ground ozone levels exceed the standard.²³ The Canadian Council of Ministers of the Environment (CCME) has estimated that smog-induced health problems could impose costs of between \$10 billion and \$30 billion by the year 2020.²⁴

In May 1998 the Ontario Medical Association issued a position paper on the health effects of Ground-Level Ozone, Acid Aerosols & Particulate Matter. The paper included the following statement:

"At current levels of exposure, pollutants such as ground-level ozone, inhalable particles and total sulphur compounds are responsible for adverse health effects in Ontarians."²⁵

The report went on to make recommendations for the enactment of more stringent sulphur and nitrogen oxide emission standards for stationary sources, particularly the electricity sector, California level standards for light and heavy-duty vehicles, reductions from off-road engines, an expanded vehicle inspection and maintenance program, and tougher standards for the sulphur content of fuels.

Other reports from the Commission on Environmental Cooperation,²⁶ Environmental Commissioner for Ontario,²⁷ International Joint Commission,²⁸ the Acidifying Emissions Task Group of the National Air Issues Coordinating Committee,²⁹ the North East States for Coordinated Air Use Management,³⁰ and the University of Toronto³¹ have also stressed the province's air pollution problems and their impacts on human health.

The Ministry of the Environment has noted that: "Improvements in air quality have levelled off and in some areas particulate levels are rising again. Long-standing particulate problems persist in a number of urban centres."³² In addition, the Ministry has noted an ongoing increase in ground level ozone,³³ and an increase in median concentrations of some volatile organic compounds, such as benzene, toluene and xylene, since 1995.³⁴

Towards a Smog Plan for Ontario

In June 1996, the Ministry of Environment and Energy released *Towards a smog plan for Ontario : A Discussion Paper*. The paper stated that the province was committed

to the goals of a 45% reduction in nitrogen oxides and volatile organic compounds (which combine to produce ground level ozone - one of the most hazardous compounds of smog). These goals arise from the CCME Management Plan for Nitrogen Oxides / Volatile Organic Compounds. Key areas identified for action included: reducing transboundary pollution; reducing the Ontario government's own emissions; reducing transportation emissions; reducing industrial, commercial municipal emissions; environmentally-friendly products; and public education.³⁵

Gasoline Volatility and PM10 Standards Revisions; Waste Oil Burner Ban

The February 1997 revision of the Gasoline Volatility Regulation (Reg. 271/91) to lower summertime gasoline volatility requirements in Southern Ontario from 72 kiloPascals (kPa) to 62 kPa, and November 1997 adoption of an interim guideline for PM10 were intended to support the development of a provincial smog plan. In addition, an 'interim' ban on the approval of new waste oil burning space heaters was adopted in March 1998. The MoE estimates that about 10 million litres of oil per year are disposed of this way each year in the province.³⁶

The Ontario Smog Plan

The Ministry of the Environment announced its broader plan to reduce smog in January 1998. The Plan's key goals were to reduce nitrogen oxides (NOx) and volatile organic compounds (VOCs) by 45% by the target year of 2015. The government expected that this would reduce ozone exceedences by 75%.³⁷

The smog plan was widely criticized as being inadequate. In her April 1998 report to the Legislature, the Environmental Commissioner noted that the Plan only identified how half of the proposed emission reductions were to be achieved, lacked clear funding priorities, contained no plan to upgrade existing Certificates of Approval for point sources, and failed to provide a plan to improve public transit.³⁸

The Commissioner also noted that policies being pursued by the Ministries of Municipal Affairs and Housing, and Transportation seemed likely to increase urban sprawl and vehicle use, and thereby make the smog problem worse.³⁹ Environmental and public health organizations criticized the plan for its slow time line, reliance on voluntary action by industry, and lack of monitoring and reporting mechanisms.⁴⁰

The Environmental Commissioner concluded by stating that:

"In fact, MOE's own emissions projects, which factor in future economic growth, show that even if all existing and proposed pollution control activities are carried out over the next 18 years, Ontario's overall air quality is likely to be somewhat worse in 2015 than it is today."⁴¹

The 'Drive Clean' Vehicle Inspection and Maintenance Program

Vehicular traffic contributes significantly to ground level ozone, nitrogen oxides, particulates and the formation of smog. Concentrations of these pollutants could be reduced by ensuring that vehicles are properly maintained. Toward this end many jurisdictions in North America have made it a condition of vehicle licensing that a vehicle undergo an emissions test and that its pollution control equipment work or be replaced before its permit is renewed.

The province considered the establishment of a comprehensive vehicle inspection and maintenance program for several years. A pilot program was set up in Mississauga in April 1995 but was discontinued in October 1996. In August 1997 the Ministry of Environment and Energy announced its intention to proceed with the implementation of a vehicle emissions inspection and maintenance program. The program was to begin to be implemented in the summer of 1998. However, in April 1998, the Minister of the Environment announced that the government would not be proceeding with the program in 1998.⁴²

Passing a 'Drive Clean' inspection became a mandatory condition of vehicle licence renewals on April 1, 1999. However, the program will initially be limited to the Greater Toronto area and the Region of Hamilton-Wentworth and will not be phased in for heavy trucks and buses until the fall of 1999.

In her 1998 Annual Report to the Legislature, the Environmental Commissioner for Ontario raised concerns about the integrity of the program, in that vehicle testing and repairs could be done in the same shop, creating a potential conflict of interest; that the program was not following some of the key recommendations in the CCME Code of Practice for vehicle inspection and maintenance programs; and that certain key procedures in the operation of the program had not yet been finalized.⁴³ The Commissioner also noted that Ministry of the Environment may be overestimating the vehicle emission reductions that can be achieved by the program.⁴⁴ Finally, the Commissioner noted that drive clean will have "minimal positive effect"⁴⁵ if the number of vehicles on the roads continues to rise, and noted government's policy of withdrawing provincial funding for public transit was having the effect of increasing vehicle traffic.⁴⁶

Ontario Hydro Nuclear Asset Optimization Plan (NAOP)

In August 1997 Ontario Hydro announced a Nuclear Asset Optimization Plan (NAOP) to refurbish most of its nuclear generating facilities. The plan was developed in response to an external assessment that raised major concerns over the safety of the utility's nuclear operations.⁴⁷ The utility's plan relied heavily on coal-fired generation to replace the 'laid-up' nuclear generating capacity affected by the plan.

The implementation of the NAOP has resulted in major increases in the utility's acid

gas emissions (nitrogen oxides and sulphur dioxide). Ontario Hydro's acid gas emissions had fallen from 210,000 tonnes in 1992 to 120,000 tonnes in 1996. Its current limit under the Countdown Acid Rain Program is 215,000 tonnes. However, between 1996 and 1998 emissions of nitrogen oxides and sulphur dioxides from Ontario Hydro's coal-fired facilities rose 58% and 68% respectively, to a total of 199,000 tonnes, a level approaching the Countdown Acid Rain cap.⁴⁸

Furthermore, the utility's carbon dioxide emissions had been falling for a number of years (27 Mt in 1992; compared to 21 Mt in 1996)^{49 50} and its target was to stabilize its emissions at the 1990 level (26 Mt) by the year 2000.⁵¹ Preliminary estimates suggested that Ontario Hydro will violate this commitment by emitting at least 30 Mt of carbon dioxide per year over 1998, 1999 and 2000.⁵²

To combat some of the ramifications of these developments, Ontario Hydro purchased 10,000 (U.S.) tons of carbon dioxide reduction credits from the Southern California Edison electric utility. The utility did this despite the fact that a verifiable and workable greenhouse gas emission credit trading system has not been devised nationally or internationally. The purchase was viewed as lending support to the concept of an international emissions trading program, one of the options under discussion at the Kyoto Conference on Climate Change in December 1997.⁵³

Electricity Competition and Air Pollution

In October 1998, Bill 35, *The Energy Competition Act*, was enacted. The Bill is intended to introduce competition into the electricity market in Ontario and divided Ontario Hydro into a number of entities including: the Ontario Power Generation Corporation with generating assets; the Ontario Hydro Service Corporation to operate transmission and distribution infrastructure; and the Ontario Hydro Financial Corporation to hold Ontario Hydro's debt.

The Bill also created an Independent Market Operator (IMO) to operate the competitive market and provided the Ontario Energy Board with a regulatory function through requirements for licencing as a condition of market access. The Act makes provision for the requirement of electricity suppliers to be in compliance with environmental performance standards as a condition of market access, but makes no provision regarding the nature of these standards.

Major concerns have been raised that unless specific measures to control emissions from new sources of supply are adopted, the introduction of competition into the electricity sector will result in major increases in air pollution.⁵⁴ This is due to short-term cost advantages of coal-fired generation both inside and outside of Ontario. In fact, forecasts by Natural Resources Canada suggest that the province's electricity-related greenhouse gas emissions in 2020 will be 2.2 times greater than its 1990 levels⁵⁵ in a competitive market.

Maintaining the existing regulations will not be adequate to prevent increased air

pollution in a competitive electricity market. Ontario's existing caps on emissions of SO₂ and NO_x emissions under the Countdown Acid Rain program apply only to Ontario Hydro. Unless these regulations are extended and strengthened, new domestic and foreign entrants into the Ontario market will not be subject to the emission limits which they establish. No limits currently exist at all with respect to releases of air toxics (principally heavy metals) from the electricity sector, and Ontario Hydro's voluntary CO₂ reduction commitments could be exceeded in the years ahead as a result of the implementation of the NAOP.

The situation is further complicated by the conclusions of the Ontario Medical Association's May 1998 position paper on the health impacts of air pollution and the October 1997 report of National Air Issues Coordinating Committee's Acidifying Emissions Task Group.⁵⁶ Both reports indicated that a 75% reduction in permitted levels of sulphur dioxide emissions in Eastern Canada was necessary to protect human health and the environment.

The government has, to date, failed to indicate how it intends to deal with these problems with respect to the introduction of competition into the energy market. The application of Ontario standards to out-of-province generating sources supplying energy to the province may present particularly significant challenges, as it will require the close cooperation of other jurisdictions, and may also raise international trade issues.

Blocking National Initiatives on Acid Rain, Smog, Sulphur Content of Gasoline and Climate Change

Despite the Government of Ontario's repeated statements that reducing air pollution is its priority environmental issue, the province has taken steps to block a number of major intergovernmental initiatives on the subject.

Acid Rain

Ontario's representatives played a central role in undermining the consensus on the National Air Issues Coordinating Committee's Acidifying Emissions Task Group in favour of additional action to reduce emissions that cause acid rain.⁵⁷ The Task Group's October 1997 report indicated that a 75% reduction in permitted levels of acidifying emissions in Eastern Canada was required to halt the continuing damage to water bodies and human health.⁵⁸ A Canada-Wide Acid Rain Strategy was agreed to by the federal and provincial energy and environment ministers in October 1998.⁵⁹ However, it contained no specific targets or timetables for reducing acidifying emissions.

The National Smog Plan

The province has played a similar role in halting the development of a National Smog Management Plan. Efforts towards the development of such a plan were stalled in the summer of 1997 when Ontario and British Columbia indicated that they would be unable to prepare and consult on their Regional Smog Management Plans prior to the fall

1997 joint energy and environment ministers' meeting.⁶⁰

Sulphur Content of Gasoline

In November 1998 it was revealed that the Ontario Ministers of the Environment, Economic Development and Trade and Transportation had written to the federal Minister of the Environment, opposing a federal initiative to dramatically lower the sulphur content of gasoline sold in Canada.⁶¹ The October 1998 federal proposal would lower the average sulphur content of gasoline to 30 ppm from a national average of 350 ppm, by 2005.⁶² The government of Ontario had publicly stated its support for the federal initiative.⁶³ Gasoline sold in Ontario has one of the highest sulphur content levels in the world⁶⁴ and sulphur in gasoline is a major smog precursor. The federal initiative was consistent with an April 1998

recommendation of the International Joint Commission that the Canadian and U.S. governments to make a major reduction in the allowable sulphur content of gasoline.⁶⁵

Climate Change

The December 1997 Kyoto Protocol under the United National Framework Convention on Climate Change committed Canada to achieve an averaged 6% reduction in its greenhouse gas emissions, in the period 2008-2012, relative to 1990. In order to stabilize emissions at 1990 levels Canada needs to reduce its greenhouse gas emissions by 13%, meaning that a total reduction of 19% is required to meet the Kyoto commitment. Representatives of the government of Ontario have consistently sought to block progress on the development of any specific conclusions or recommendations in the issues tables established by the federal government to develop an implementation strategy for Canada's

To Commit or Not to Commit: is that the question?

Ontario has made commitments to reduce precursors of smog, lung irritants such as sulphur dioxide and greenhouse gases such as methane. Yet the MoE has continued to approve discharges to the atmosphere of these gases, when in many cases, control methods or technology exist. A few of the atmospheric discharge approvals and permitted increases over the second half of 1997 included:

Nov 21/97. MoE issues a certificate of approval to the Toronto Transit Commission to discharge methane gas (a potent global warmer) to the atmosphere at its Greenwood Yard Carhouse (EBR Decision: IA7E1540.D).

Dec 17/97. MoE approves an amendment to the existing permit for Imperial Oil, Products & Chemical Division in Nanticoke city. According to the amendment, incremental sulphur dioxide emissions will increase not more than 1 tonne per day at the maximum feed rates compared to the original mentioned on the existing certificate of approval. (EBR Decision: IA7E1670.D).

Proposal to discharge:

Aug 28/97. The Ministry of Environment and Energy approves WMI Waste Management of Canada Inc. proposal to vent landfill gas pressure in the soil adjacent to the site in the town of Witchurch-Stouffville. (EBR: Proposal IA7E1278.P)

An exception:

Oct 14/97. Ministry of the Environment and Energy approves upgrades to the City of Vaughan Landfill's gas collection system. Gas will be collected and transmitted to the Keele Valley Landfill site's capture and control system where methane is combusted to produce electricity and in the process its global warming potential vastly reduced. (EBR Decision: IA5E0732.D)

Figure 3.1 : Examples of Air Approvals in Ontario

obligations under the Protocol.⁶⁶ In addition, there are indications that the \$10 million for analysis of climate change issues announced in the May 1999 budget may be used as to develop a defence against actions the federal government might request that Ontario undertake as a consequence of Canada's Kyoto commitments.

WASTE MANAGEMENT

Introduction and Overview

Waste management has been a major focus of the government's regulatory 'reform' efforts over the past four years. There have been major changes to the waste management approvals process, particularly from the Bill 76 amendments to the *Environmental Assessment Act*. Major undertakings, including a major expansion of the province's only hazardous waste landfill in Sarnia, and the establishment of a large non-hazardous industrial waste landfill in Stoney Creek, have taken place without public hearings. The scope of the review of other significant undertakings, such as the Adams Mine landfill in Northern Ontario, has been reduced substantially related to what would have been required prior to the passage of Bill 76. In December 1997, the use of a scrap metal smelting furnace as a low-level PCB destruction facility was approved without review under the *Environmental Assessment Act*. A similar proposal was under consideration by the Environmental Assessment Board over the summer of 1999.

A ban on the establishment of new municipal waste incineration facilities was removed in December 1995. A Ministry of the Environment 'Delivery Strategy' revealed to the public in February 1999, directed Ministry staff not to respond to complaints about a wide range of potential violations of waste management-related laws and regulations.

In July 1996, November 1997, and June 1998, the Ministry of the Environment presented proposals to significantly weaken its regulatory controls on such activities as hazardous and municipal waste 'recycling' and the handling and storage of PCB's. Most of these proposals have yet to be implemented.

In March 1999, it was revealed that there was a 50% increase in the amounts of waste manifested for off-site disposal from Ontario sources between 1994 and 1997 from 1.4 million tonnes to 2.1 million tonnes. Imports of hazardous wastes into Ontario from the United States quadrupled between 1993 and 1997, rising from 52,439 tonnes to 246,000 tonnes per year. Waste exports during the same period remained stable.

With respect to municipal solid waste, major problems have been identified with the province's diversion programs by the Provincial Auditor. As of 1996, the province had only reached a diversion rate of 32% measured against a 1987 based year, well short of the goal of 50% diversion of municipal waste from disposal by the year 2000, a target set in 1989. Total municipal waste generation in 1996 was 9 million tonnes per year, a figure almost identical to the figure for 1997. Provincial funding for residential recycling and household hazardous waste programs was terminated in the fall of 1995. New funding arrangements for curbside recycling have yet to be established.

The past two years have witnessed a series of major incidents at waste management sites throughout the province. The most serious of these was the Plastimet PVC 'Recycling' site fire in Hamilton in July 1997. This prompted the Office of the Fire

Marshal to make recommendations for a significant strengthening of the regulation of 'recycling' and waste handling facilities in the province. The province has failed to act on these recommendations, and has repeatedly proposed to expand the exemptions from the normal waste management approvals requirements under which the facility was operating.

A major controversy emerged over the province's approval of the use of industrial by-products as 'dust suppressants,' including a material produced at Domtar Ltd.'s Trenton Ontario facility under the trade name 'Dombind.' Normapac (the successor company to Domtar) agreed to phase out the use of 'Dombind' in March 1999.

The province has undertaken a number of major actions regarding contaminated sites. These have included the granting of limited exemptions from liability for financial institutions, and significantly weakening the requirements for the remediation of contaminated lands. The Ministry of the Environment has also proposed to permit the use of contaminated soils as 'inert' fills.

The Dissolution of the Interim Waste Authority and Greater Toronto Area Waste Management

The Interim Waste Authority, established by the previous government to establish solid waste disposal sites for the Greater Toronto Area (GTA), was dissolved in July 1995. The government provided no indication of how the issue of the need for new municipal solid waste disposal capacity in the GTA is to be addressed, beyond stating that it will limit its role to the approval and regulation of whatever disposal option is pursued by municipalities within the region.

Dissolution of Ontario Waste Management Corporation

On August 31, 1995, the Minister of the Environment and Energy dissolved the Ontario Waste Management Corporation. Following the rejection of its proposed hazardous waste treatment and disposal facility in the spring of 1995, the OWMC had focused on the provision of technical advice to industry on hazardous waste reduction. At the time of the corporation's dissolution, the Minister of Environment and Energy stated that: "The main responsibility for managing these wastes rests not with the government, but with those in the private sector who generates them. It is the ministry's role to ensure that the private sector manages this waste according to prescribed standards and policies."⁶⁷ In effect, in combination with the termination of its environmental technology development programs, and province virtually abandoned any meaningful efforts to promote hazardous waste reduction.

Bill 57, *The Environmental Approvals Improvements Act*, passed in June 1997, repealed the *Ontario Waste Management Corporation Act* through which the corporation had been created.

Funding for Municipal Waste Diversion and Household Hazardous Waste Programs

The government announced the termination of funding for municipal curbside recycling ('Blue Box') and household hazardous waste collection programs in November 1995. Funding for municipal waste facility development and waste reduction research programs was also terminated. The termination of provincial funding for residential recycling program has lead some municipal governments to threaten to reduce or end their programs.

New Municipal Waste Incinerator Ban Repeal

In December 1995, a ban on the construction of new or expanded municipal waste incinerators established in 1992, was repealed by the provincial government. Emission guidelines for new municipal solid waste incinerators were introduced in January 1996.⁶⁸ The government's action was specifically criticized as being likely to result in increases in the presence of priority pollutants in the Great Lakes Basin by the International Joint Commission in its 8th⁶⁹ and 9th⁷⁰ Biennial Reports on Great Lakes Water Quality. Municipal waste incinerators have been identified as major sources of a wide range of contaminants, including dioxins and furans, heavy metals including mercury, lead and cadmium, and sulphur dioxide and nitrogen oxides.⁷¹

Regulatory 'Reform' and Waste Management

Waste management was a major focus of the Ministry of Environment and Energy document entitled *Responsive Environmental Protection* (REP) released in July 1996. This document proposed major changes to the framework of environmental regulations established under the *Environmental Protection Act*, *Ontario Water Resources Act*, and *Pesticides Act*. Some of the proposed amendments related to waste management included the following:⁷²

- the complete de-regulation of activities related to the handling of "recyclable materials," including hazardous wastes such as batteries, photochemical wastes, and metal bearing sludges;
- the removal of "liquid industrial wastes" from the province's definition of "subject" (i.e. hazardous) wastes;
- the weakening of Ministry oversight on the establishment and operation of on-site hazardous waste storage sites and hazardous waste transfer stations, the burning of hazardous wastes as "fuel," and the use of hazardous and liquid industrial wastes for dust suppression;
- seeking "input" on repeal of *Waste Packaging Audit and Reduction Workplan Regulations* and Refillable soft drink container regulations; and
- expanding reporting exemptions for "minor" spills.

The Ministry's document prompted a strong negative response from many non-industry stakeholders.⁷³ A second set of regulatory 'reform' proposals were presented by the Ministry of the Environment in November 1997, under the title *Better, Stronger, Clearer: Environmental Regulations for Ontario*. Although the Ministry dropped many of its original proposals related to air pollution and other subjects, the July 1996 proposals on waste management reform remained largely intact. The Ministry's specific proposals related to waste management included:

- revoking regulation 348, which permits eight waste disposal sites to receive Liquid Industrial Wastes. None of the sites currently receive such wastes;
- amending the regulation governing deep well disposal to bring oil field brine disposal under the *Environmental Protection Act*, eliminate the oil field brine exemption, and consolidate the requirements into a revised general waste regulation;
- amending the definition for agricultural wastes and waste-derived fuel, and clarifying the management requirements for biomedical waste and asbestos waste;
- simplifying approval and administrative requirements for "manufacturer controlled networks," to promote "product stewardship";
- introducing four classes of approvals: Class I: mandatory hearings under EPA and as required under EAA; Class II: Discretionary hearing under EPA; Class III: Standardized Approvals; and Class IV: exemptions from waste approval requirements.
- numerous changes related to hazardous waste management including:
 - reducing reporting requirements for small movements of hazardous wastes;
 - amending the definition of a "site" (presumably to include all facilities within a given municipality as proposed in July 1996);
 - removing generator registration requirements for registerable solid waste;
 - exempting battery and precious metal bearing waste recycling activities from regulatory requirements;
 - modifying the definition of PCB wastes and establish standardized approvals for PCB storage and transfer sites;
- numerous changes related to municipal solid waste management including:
 - amending Recycling and Composting Municipal Waste Regulations to allow two stream collection systems, amend, presumably to reduce, the 50 metre buffer requirement, and allow food composting at leaf and yard composting facilities;
 - revoking regulations related to the types of disposable containers than may be used to package milk;
 - retaining refillable and non-refillable soft drink container regulations;
 - amending of the Waste Audits and Waste Reduction Workplan Regulations and Packaging Audits and Packaging Reduction Workplan Regulations to "streamline" the regulations, "increase their flexibility" and "reduce the paper burden on the regulated community;"

Proposed changes related to spills included the elimination of reporting requirements for notification of "insignificant" spills under the *Environmental Protection Act*.

The waste management proposals were presented again, in the form of a draft

regulation in June 1998.⁷⁴ The Ministry's proposals were again strongly criticized by non-industry stakeholders, as significantly weakening the existing regulatory framework, and failing to respond to the recommendations of the Provincial Auditor,⁷⁵ the Office of the Fire Marshal⁷⁶ and others⁷⁷ regarding the need to strengthen the province's regulatory controls on waste management activities.⁷⁸

As of June 1999, the Ministry had not moved forward with its June 1998 proposals, with the exception of the repeal of Regulation 348. This regulation had permitted eight municipal waste disposal sites to accept liquid industrial wastes.⁷⁹

Regulation 347 Amendments

In the meantime, in October 1997 the Ministry posted a number of proposed amendments to Regulation 347 on the EBR registry. These included a redefinition of waste to include residuals from recycling operations. The proposed amendments would also have exempted 'chop line' residue (wire recycling residue) recycling, waste photochemical recycling, and the use of spent 'pickle liquor in sewage treatment plants, and wood waste recycling sites, from the requirements of the Regulation.⁸⁰

The proposals regarding the definition of waste and exemption of 'chop line' residue were related to a June 1997 Ontario Court decision that only "unusable leftovers" from processing or recycling operations should be considered 'waste.' The Court also concluded that 'chop line residue' did not meet this definition and was therefore exempt from the waste management requirements of the *Environmental Protection Act*.⁸¹ Ministry of Environment and Energy officials had argued before the court that 'chop line residue' should be considered a hazardous waste as it included heavy metals, including lead and cadmium.⁸² Concerns were also expressed, by a number of environmental organizations, over the proposed exemptions for photochemical processing waste recycling and the use of spent 'pickle liquor'.⁸³

The proposed amendments to regulation 347 were adopted in March 1998.⁸⁴ Records obtained by CIELAP through freedom of information requests indicated that the 'Red Tape Commission' was heavily involved in the development of the amendments to the Regulation.⁸⁵

'Standardized Approvals' and Waste Management

'Standardized' approvals and AERs, figure prominently in the Ministry of the Environment's regulatory 'reform' proposals related to waste management. Two waste related Standardized Approval Regulations (SARs) were posted on EBR registry in February 1998⁸⁶ as part of the Ministry's general SAR and AER proposal. The two SAR candidates were:

- municipal waste transfer/processing sites; and
- the utilization of sewage biosolids (i.e. sludge) on agricultural land.

As of June 1999, the Ministry had not implemented these proposals.

Ministry of the Environment 'Delivery Strategy'

In February 1999 it was revealed that the Ministry of the Environment had developed a delivery strategy for its operational staff, directing them not to respond to public complaints about a wide range of environmental problems, or to direct such complaints to other agencies and municipalities. Specific waste related examples included problems arising from: activities related to agriculture; construction and demolition; oil from vehicles; boating; inert fill; pop bottles; industrial, institutional and commercial waste source separation; recycling and composting regulatory requirements; tire disposal sites with less than 5,000 tires; litter; and abandoned vehicles.⁸⁷ Many of these subjects had been targets of the Ministry's *Responsive Environmental Protection and Better, Clearer, Stronger* regulatory 'reform' proposals.

Spills

Bill 57 amended Part X (Spills) of the *Environmental Protection Act* to terminate the Environmental Compensation Corporation (ECC) and remove the right of victims of spills to compensation through the ECC. Victims of spills are now required to initiate civil actions against the party responsible for a spill in order to receive compensation. There is now no provision for the compensation of victims of a spill where the responsible party is bankrupt or otherwise unable to provide compensation.

Proposals to remove reporting requirements for certain types of spills were posted on the EBR registry in April 1998.⁸⁸ These included approved discharges; spills of water from reservoirs and water mains; household fires; planned spills; fluids from motor vehicles; non-PCB spills of up to 100 litres from electrical equipment; petroleum sector spills of up to 100 litres in areas restricted from the public, or 25 litres in areas with public access; and refrigerants. As of June 1999, they proposals had yet to be implemented.

The proposal also stated that "where public safety is the only concern, MOE should not be involved before the agency that has a specific mandate under the circumstances for public safety." This would appear to suggest that Ministry would leave primary responses to spills to local fire departments. No additional resources were proposed for these agencies to deal with such additional responsibilities.

Waste Management Site Approvals

The impact of Bill 76 changes to the environmental assessment process have become increasingly apparent over the past two years. This has been especially evident in the area of waste management, although changes to the approvals process were evident even before the Bill's coming into force in January 1997.

In September 1997, for example, the Ministry of the Environment approved a 1.9 million cubic meter expansion of Laidlaw Environmental Services hazardous waste landfill in Sarnia with no public hearing under either the *Environmental Protection Act* or the *Environmental Assessment Act*. This was despite concerns raised by members of the public regarding the proposal.⁸⁹ The facility is the only hazardous waste landfill in the province. The expansion is expected to extend its life for another 15-20 years.

In a similar case, in July 1996, a 10 million tonne landfill for solid non-hazardous industrial wastes in the town of Stoney Creek, on the Niagara Escarpment, was approved without a public hearing before the Environmental Assessment Board. This was despite widespread calls for a public hearing. The landfill is operated by a subsidiary of Philip Environmental called Taro Aggregates Ltd.⁹⁰ There have been allegations that the facility has accepted hazardous wastes for disposal.⁹¹

In December 1997, the use of a scrap metal smelting furnace as the province's only permanent low-level PCB destruction facility was approved by the Ministry of the Environment. However, in its decision, the Environmental Assessment Board highlighted a number of concerns regarding the undertaking. In particular, the Board questioned why the project had not been designated for review under the *Environmental Assessment Act*, particularly in light of its implications for the use of non-incineration PCB destruction technologies. It also noted the inability of members of the public to participate effectively in the process due to the absence of intervenor funding and it expressed concern over the granting of an approval to a proponent with no previous experience in handling hazardous wastes.⁹²

In addition, the Assessment Board's decision suggested that the Ministry of the Environment failed to follow through on its own staff's concerns regarding the potential health impacts of the facility.⁹³ In her April 1998 report to the Legislature, the Environmental Commissioner highlighted the Ministry of the Environment's failure to post the proposed approval for the facility on the *Environmental Bill of Rights* (EBR) registry.⁹⁴ A second proposal for the use of a scrap metal smelting furnace as a PCB destruction facility is currently before the Environmental Assessment Board. Like the proposal approved in December 1997, it has not been designated for review under the *Environmental Assessment Act*.⁹⁵

The Ministry of the Environment has made use of the provisions of the Bill 76 amendments to the *Environmental Assessment Act* to limit the scope of the environmental assessments of individual undertakings. The most prominent example of this kind of action has been with respect to the environmental assessment of the proposed Adams Mine Landfill in Northeastern Ontario. Directions issued by the Minister of the Environment in December 1997 limited the Environmental Assessment Board to hearing evidence on two issues about the site: its hydrogeology and surface water characteristics and leakage containment.⁹⁶ Issues such as consideration of the need for the facility, and the availability of alternatives to it, which would have been required elements of the assessment under the pre-Bill 76 provisions of the *Environmental Assessment Act*, were excluded from the assessment of the proposal. Strict timelines were also imposed upon the Board for hearing evidence in the case.

The proposed landfill was approved by the Cabinet in August 1998 and a Certificate of Approval granted in April 1999. A coalition of environmental organizations and local residents sought a judicial review of the cabinet's environmental assessment approval of the undertaking. However, the appeal was dismissed in the Ontario Divisional Court in July 1999.⁹⁷

Municipal Waste Diversion

The Provincial Auditor highlighted major problems with the province's municipal waste management programs in his October 1997 report to the Legislature.⁹⁸ In particular, the report highlighted the Ministry's failure to adequately measure and report on progress towards the province's waste reduction targets, failure to incorporate the 50% waste diversion goal into the Ministry's business plan and failure to enforce waste management regulations, particularly with respect to the use of refillable beverage containers.

In February 1998, the Minister of the Environment stated publicly that the province was unlikely to meet the goal of 50% waste diversion from landfill or incineration by the year 2000. The goal had been first set in 1989. Figures released by the Ministry of the Environment indicate that the province is currently diverting 32% of its waste from disposal,⁹⁹ and that total waste generation remains approximately 9 million tonnes per year, the same as it was in 1987.¹⁰⁰

A report on options for the future funding of the province's municipal waste diversion programs was presented by the Recycling Council of Ontario to the Ministry at the end of April 1998.¹⁰¹ The Ministry of the Environment and Energy had terminated provincial funding support for residential recycling programs in the fall of 1995.¹⁰² In October 1998, the Minister of the Environment announced plans to form a new 'waste diversion organization' to provide funding for curbside recycling. The food, beverage, and consumer product industries, newspapers and the Liquor Control Board of Ontario were to contribute voluntarily to the organization. The organization was "to give municipalities the tools to reduce the cost of their recycling programs and to develop, implement and fund municipal initiatives to increase waste diversion. The organization would include representatives from affected industries, municipal and provincial governments, consumer groups, environmental groups and other organizations."¹⁰³ The government also indicated that it would use some of the revenues from the 10 cent per non-refillable liquor container tax to support municipal recycling programs.¹⁰⁴

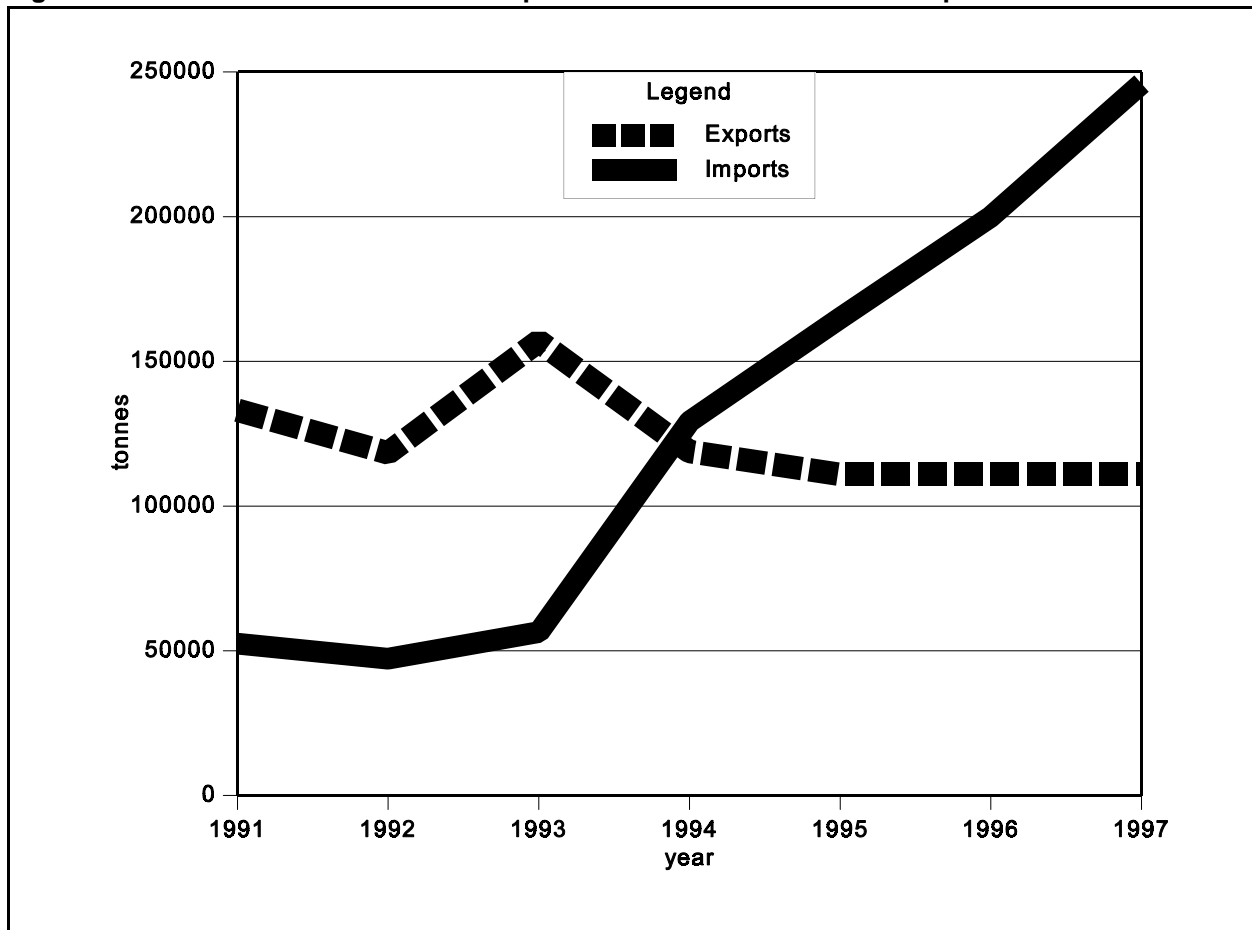
As of June 1999, the waste diversion organization had yet to be established. In the meantime, the province has adopted regulations to prevent municipalities from charging product manufacturers or importers for the costs of dealing with their products or packaging through municipal recycling programs,¹⁰⁵ or from requiring that the Liquor Control Board of Ontario put deposits on the containers which it sells.¹⁰⁶

Hazardous Waste Management

On April 20, 1998, the Ministry of the Environment rejected a request for review of the province's hazardous waste regulations filed by the Canadian Institute for Environmental Law and Policy. The Ministry stated that a review was "not in the public interest."¹⁰⁷ The Institute's request had been based on the findings of a comprehensive report on the management of hazardous wastes in the province presented in February.¹⁰⁸ The report had concluded that there were major gaps in both the available information and underlying regulatory framework for the protection of public safety, public health and the environment in the management of hazardous wastes in the province.

A subsequent March 1999 report by the Institute found that imports of hazardous wastes into Ontario from the United States had quadrupled between 1993 and 1997, rising from 52,439 tonnes to 246,000 tonnes per year (see Figures 3.2 and 3.3). Waste exports during the same period remained stable.¹⁰⁹ The Institute's report also documented a 50% increase in the amounts of waste manifested for off-site disposal from Ontario sources between 1994 and 1997 from 1.4 million tonnes to 2.1 million tonnes.¹¹⁰ Federal National Pollutant Release Inventory (NPRI) data shows a 92% increase in transfers of NPRI reported substances in waste between 1994 and 1996 in Ontario.¹¹¹

Figure 3.2 Growth in hazardous waste imports to Ontario vs. hazardous exports from Ontario

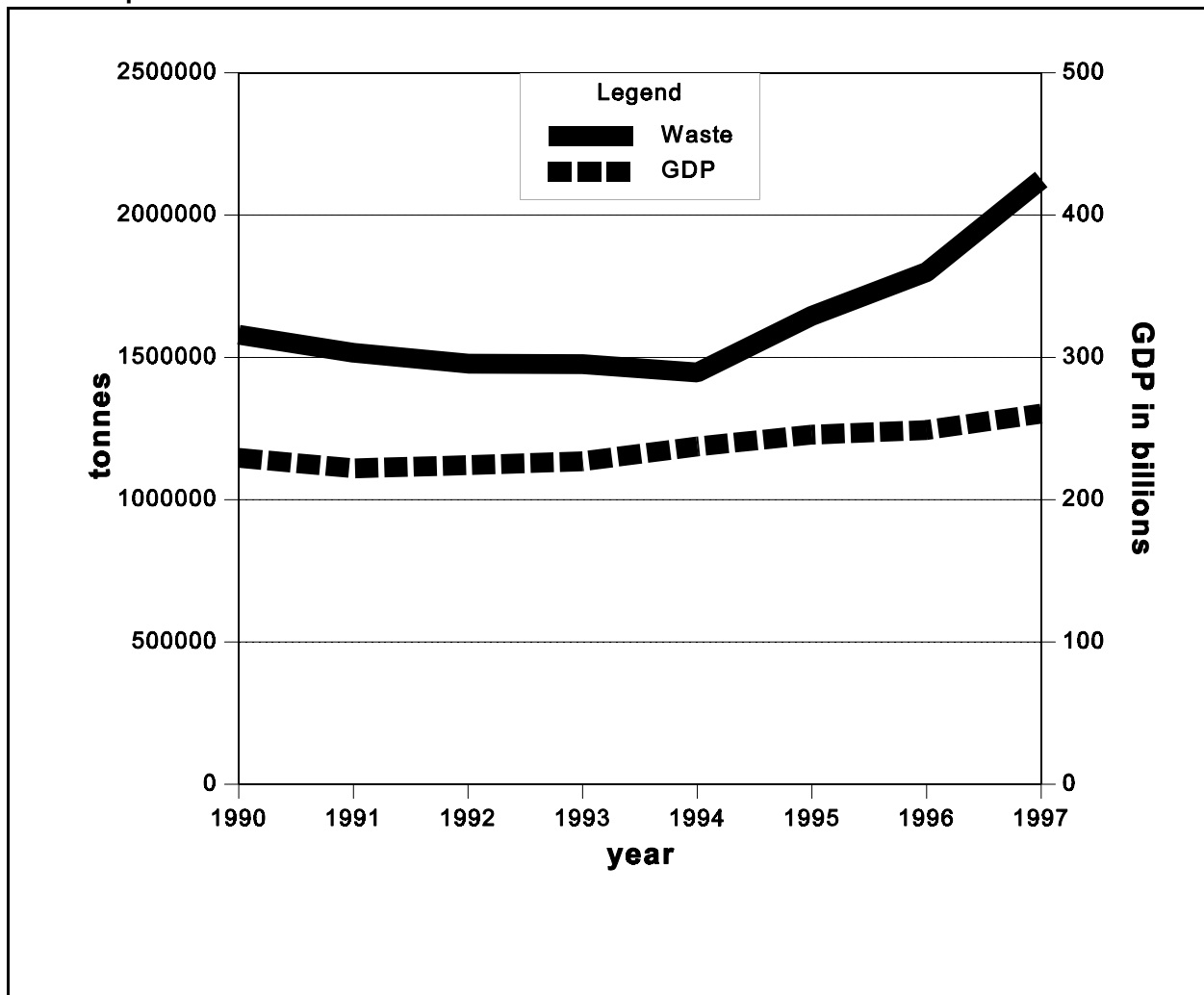


In response to the waste import figures, the Minister of the Environment stated that "We have a free trade agreement that limits us. You better speak to the federal government to stop it coming across the border."¹¹²

Incidents at Waste Management Sites

The period between 1997 and 1999 witnessed a series of major incidents at waste management sites throughout the province. The most serious of these was the Plastimet PVC 'Recycling' site fire in Hamilton in July 1997. The Plastimet fire burned for four days,

Figure 3.3 : Growth in hazardous and liquid industrial waste disposal in Ontario vs. growth in gross domestic product



and is believed to have produced large amounts of highly toxic combustion products, including dioxins.¹¹³ There have also been a number of smaller tire fires,¹¹⁴ and fires at

other 'recycling' facilities.¹¹⁵

In the aftermath of the Plastimet Fire, the Office of the Fire Marshal issued a report calling for the strengthening of the environmental and fire safety regulation of recycling and waste handling sites.¹¹⁶ In addition, in her April 1998 Annual Report, the Environmental Commissioner raised serious questions about whether the 'recycling' site exemption from normal waste management site approval requirements granted to Plastimet by the Ministry of the Environment had been justified.¹¹⁷

An implementation strategy for the Fire Marshal's recommendations, released in May 1998, failed to incorporate many of the key recommendations contained in the Fire Marshal's original report.¹¹⁸ In fact, many of the Fire Marshal's August 1997 recommendations were contradicted by the contents of the Ministry's June 1998 draft waste management regulation.

Dust Suppressants and 'Dombind'

The past two years have been marked by a controversy over the use of "black liquor" from Domtar Ltd's., pulp mill in Trenton, Ontario as a dust suppressant under the product name "Dombind." The Office of the Environmental Commissioner,¹¹⁹ the World Wildlife Fund Canada,¹²⁰ and a number of other environmental organizations have expressed serious concerns about the environmental impacts of this practice.¹²¹ In May 1998 it was revealed that dioxin levels rose sharply in samples taken from road beds, ditches and fields close to where Dombind had been applied.¹²²

The agreement between the Ministry of the Environment and Domtar, which purports to exempt the material from the requirements of Regulation 347 on the basis that it is a dust suppression 'product' expires in 1998 and is currently under review. In its February 1998 report on hazardous waste management in the province, CIELAP noted that there appeared to be no statutory basis for the agreement between Domtar and the Ministry of the Environment regarding the exemption of 'Dombind' from the province's waste management regulations.¹²³

In December 1998, the Ministry of the Environment stated that it was giving Normapac (formerly Domtar) 30 days to develop a plan to phase out the use of Dombind within two years.¹²⁴ An Order was issued by Norampac Inc. by the Ministry of the Environment to eliminate the use of Dombind as a dust suppressant, in May 1999.¹²⁵

However, leave to appeal the Order has been sought by the Federation of Ontario Naturalists, and a number of individuals, arguing that the Director lacks the necessary authority to issue an Order that explicitly or implicitly permits persons to use Dombind as a dust suppressant without issuing a Certificate of Approval, to either Norampac or the Applicator. The applicants also claim that the Order fails to ensure that: the use of Dombind will be phased out by the end of the year 2000; dioxin levels in Dombind will remain below 500 parts per quadrillion; that terms and conditions regarding the application of Dombind will be enforced; that adequate monitoring and reporting of the composition o

f Dombind and its impact on roads will be carried out; that the application rate of Dombind will be reasonably limited; and that applicators will be properly trained.¹²⁶

In the meantime, in June 1997 the Ministry of Transportation posted a decision on the EBR registry stating that it would no longer test, prior to approval, materials used to minimize dust during road construction and on unpaved rural roads. Instead, the Ministry would depend on the list of dust suppressants issued by the Ministry of Environment. In her Annual Report, the Environmental Commissioner noted that the MoE's list comes with the disclaimer: "The MoE does not endorse any of the following products nor does it guarantee that the products are environmentally benign."¹²⁷

Contaminated Sites

Lender Liability Exemption for Contaminated Sites

On December 18, 1995, the Ministry of Environment and Energy issued a new policy exempting lenders from liability for the clean-up of contaminated sites under the *Environmental Protection Act*. The policy gives creditors general permission to inspect properties and prepare sites for re-sale without the possibility of incurring liability under the Act.

The new policy appeared to ignore the possibility that creditors would abandon properties whose remediation costs may exceed their value. This may lead to properties being left unremediated, or in cases where action is needed to prevent further damage to the environment or human health, the taxpayer having to bear the costs of remediation. Furthermore, strong arguments have been made that the province should not deal with the issue of liability for the remediation of contaminated sites in a piecemeal fashion, granting exemptions to individual sectors, while failing to establish an overall policy framework on liability which ensures that the taxpayer is not left with the costs of site remediation.¹²⁸

Environmental Liability Exemption for Prospectors

Prospectors were granted immunity from environmental liability for pre-existing mine hazards under the *Environmental Protection Act* through a regulation announced on December 13, 1995 by the Ministry of Environment and Energy. This regulation seemed intended to permit and promote prospecting on unremediated abandoned mine sites.

Contaminated Site Remediation Guidelines Revisions

In May 1996 the Ministry of Environment and Energy released new Guidelines for the remediation of contaminated sites. The new guidelines departed from the approach embodied in the original 1989 *Guidelines for the Decommissioning and Clean-up of Sites in Ontario* of requiring the restoration of sites to "background" levels of contamination. The new guidelines permit remediation to background levels, to a generic standard, or on the basis of a "site specific risk assessment." Ministry "sign-off" on the acceptability of remediation efforts has been eliminated. Furthermore, a history of contamination only has

to be registered on the title of lands subject to "site-specific risk assessment" standards (i.e. left partially contaminated).¹²⁹

The government's approach to contaminated site remediation has been heavily criticized for dealing with issues of remediation standards, the liability of owners and occupiers of lands for site contamination, and the financing of the remediation of "orphan" sites for which no party responsible for the contamination can be identified, in a piecemeal fashion. The government, for example, has granted a series of exemptions from liability to specific sectors, such as financial institutions and prospectors, and is considering further such exemptions in the absence of any indication how the remediation of the resulting "orphan" sites is to be financed.¹³⁰

'Inert' Fill Guidelines.

In August 1998, the Ministry of the Environment proposed criteria for the management of excess soil.¹³¹ The Ministry proposed to classify this material as four categories of 'inert' fill depending on the level of contamination. Class I fill could be deposited anywhere, Class II anywhere but ecologically sensitive sites, Class III on agricultural, commercial or industrial sites, and Class IV within areas zoned for industrial or commercial uses. The Ministry's proposal was severely criticized for its failure to provide for any regulatory oversight or controls on the use of inert fill, lack of sampling and testing procedures to confirm the level of contamination of fill, inappropriate classification on contaminated soils as 'inert,' providing mechanisms for the redistribution of contaminated soils onto uncontaminated lands, and failure to consider possible future uses of industrial and commercial sites onto which Class IV 'inert' fill might be deposited.¹³²

WATER

Introduction and Overview

The 1995 to 1999 period saw wide-ranging changes to the water resources protection system in Ontario. Virtually every aspect of this system, including the protection of aquatic ecosystems, regulatory controls on discharges to water bodies, administration of sewer and water works infrastructure and the status of the principle that water is not an exportable commodity has been challenged or altered in fundamental ways.

Over the past four years, the Ontario government made significant changes to the *Lakes and Rivers Improvements Act* and the ways in which Conservation Authorities (CAs) are mandated and funded resulting, in weaker protection for lakes and rivers and weaker CAs. The period also witnessed the release of a number of reports highlighting continuing problems related to the integrity of the Great Lakes Basin ecosystem and the degree to which the province has failed to fulfil its commitments to the restoration of the Lakes.

It was revealed in 1997 that there had been large and unreported discharges of copper and zinc from Ontario Hydro facilities. At the same time, the province has repeatedly proposed to weaken the monitoring and reporting requirements for industrial facilities under the MISA program, and to eliminate the requirement that Pulp and Paper mills plan to eliminate organochlorines (AOX) from their effluent. The Ministry also increased the allowable discharge limits for a number of individual facilities.

With respect to sewer and water infrastructure, the responsibility for the regulation of most septic systems was passed from the Ministry of the Environment to municipalities, and from the *Environmental Protection Act* to the *Building Code Act*. Water and sewer infrastructure grants were eliminated and the Ontario Clean Water Agency was referred to the provincial privatization agency.

The difficult issue of the commoditization of water and bulk export of fresh water resources were raised by the Ontario government's approval, then retraction of approval, of such an undertaking in May 1998. As a result of the controversy that emerged over this approval of the export water from Lake Superior, restrictions on bulk transfers of surface water were adopted by the province in May 1999.

CHANGES TO THE BIO-PHYSICAL WATER PROTECTION REGIME

Bill 26 Amendments to the *Lakes and Rivers Improvements Act*

In January 1996, Bill 26, the *Government Savings and Restructuring Act* was enacted. This omnibus legislation made major amendments to the *Lakes and Rivers Improvements Act*, in addition to many other pieces of natural resources legislation. The

Bill amended the Act so that permits from the Ministry of Natural Resources would only be required for "improvements" (i.e. dams and diversions) prescribed by regulation. Previously, permits were required for all "improvements" (i.e. alterations) to lakes and rivers.

In November 1996, the Ministry of Natural Resources announced new regulations to implement the Bill 26 amendments to the *Public Lands Act* and the *Lakes and Rivers Improvement Act*. These removed permit requirements for a wide range of activities likely to affect shorelines and fish habitat, including mineral exploration, the construction of shoreline structures like docks and boathouses, dredging, and the removal of aquatic plants.¹³³

Conservation Authorities

Bill 26 also made significant amendments to the *Conservation Authorities Act*. Among the most important were those that would permit the dissolution of Authorities and facilitate the sale of their lands. At the same time, provincial operating grants to Conservation Authorities were reduced by 42%. The province provided no indication of how the functions of Conservation Authorities are to be carried out with such enormous budget reductions, or in the event that Authorities are dissolved. Private sources of revenue have been sought by some authorities to fill the gap. However, this has raised conflict of interest issues.¹³⁴ Further, there have been concerns that gifts of land to Authorities may be discouraged if there is a possibility that Authorities are open to dissolution or that their lands may be sold.¹³⁵

These potentially crippling developments for CAs will have major implications for water resources management in the province well into the future. Conservation Authorities were established for the specific purpose of managing water and other renewable resources on a watershed basis. CAs were often the local defenders of flood-plain management and aquatic habitat, having the resources and expertise to match those of other interests at tribunals and local council meetings. The impacts of these changes are outlined under *Land-Use Planning*

Bill 25, The Red Tape Reduction Act, 1998.

The role of Conservation Authorities was further weakened by Bill 25, the *Red Tape Reduction Act, 1998*. Schedule I of the Bill, enacted in December 1998, amended the *Conservation Authorities Act* to remove the requirement for Conservation Authority approval for changing, diverting or interfering with watercourses, wetlands, Great-Lakes St. Lawrence River shorelines, inland lakes, river and stream valleys, and hazardous lands for activities approved under the *Aggregate Resources Act* (i.e. aggregate extraction).

Great Lakes Commitments

The Great Lakes Basin Ecosystem, once the subject of major monitoring and restoration efforts, has suffered from the withdrawal of many provincial government functions. This is emerging as a significant threat to the progress made over the past thirty years to restore the health of the lakes.

In July 1997, Environment Canada and U.S.EPA released their "State of the Great Lakes 1997."¹³⁶ Among the report's conclusions: aquatic community health were mixed/improving; aquatic habitat and wetlands were in poor condition; the state of human health in the Great Lakes basin, as reflected by human exposure to persistent toxic substances was mixed/improving; and the situation with respect to toxic contaminants was mixed/improving.

In late 1997, the International Joint Commission (IJC) released a report on its potential future role in meeting the environmental challenges of the 21st century. In its report the IJC stated that significant air pollution problems in the Great Lakes basin will persist and could worsen in the next century. It also noted that new concerns have emerged about possible human and environmental health implications of exposure to many compounds legally released into the environment, and that staff and budget cuts to environmental agencies have already undermined basic environmental monitoring and research programs.¹³⁷

Environment Canada and the Ministry of the Environment presented a largely positive outlook for the Great Lakes when they released their most recent progress report, in late 1997, on the activities under the 1994 *Canada-Ontario Agreement on the Great Lakes Basin Ecosystem*. The agencies stated that zero discharge had been achieved for five toxic substances: aldrin/dieldrin, chlordane, DDT, toxaphene and mirex in terms of these products not being imported to, sold or used in the province, although residuals of these compounds could still be active in the environment. Other highlights of the report included: reduced discharge levels for some Tier 1 compounds; 50% of necessary actions to restore areas of concern stated to have been implemented; 5000 hectares of wetlands protected and rehabilitated; almost 30% of stored high level PCBs destroyed. However, the report also acknowledged that a number of other commitments made under the Agreement are not being fulfilled, due to budgetary reductions at both levels of government.¹³⁸

However, the International Joint Commission expressed serious concerns over the impact of budgetary reductions and other initiatives in Ontario related to Great Lakes programs, and their implications for Ontario's ability to fulfil its obligations under the 1994 *Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem* in its 8th¹³⁹ and 9th Biennial Reports under the *Great Lakes Water Quality Agreement (GLWQA)*.¹⁴⁰

A March 1999 report by the Canadian Institute for Environmental Law and Policy entitled *Troubled Waters? A Review of the Performance of Canada and Ontario under the 1994 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem* detailed the extent to which government budgetary reductions and program changes were affecting the ability of both the Ontario and federal governments to fulfil their commitments under the agreement. The report concluded that most of the Agreement's goals and objectives would not be met by the date of its expiry in March 2000. Some of the specific findings are

listed in Table 3.4.

Table 3.4 : State of Canada-Ontario Agreement Progress at March 1999

<p style="text-align: center;">Objective 1: Restore Degraded Areas</p> <ul style="list-style-type: none">• only 4 Areas of Concern reported to be close to meeting the year 2000 deadline (Peninsular Harbour; Spanish Harbour; Wheatly Harbour; and Niagara River;• work plans in many Remedial Action Plans (RAP) has been severely disrupted or stalled, including those of the St.Mary's River, Metro Toronto; Port Hope, Bay of Quinte and St.Lawrence River.• RAP work was heavily affected by loss of coordinators in many provincially lead RAPs, by the loss of key supporting programs from the MoE (Urban and Rural Beach Clean-up; Municipal Assistance Plan), and by the loss of MNR and MoE presence in the land-use planning process. <p style="text-align: center;">Objective 2 : Control and Prevent Pollution</p> <ul style="list-style-type: none">• major achievements, including clean-up of pulp and paper sector discharges, Canadian discharges into the Niagara River, flow from pre-1995 initiatives (1992 federal Pulp and Paper Regulations; 1995 provincial MISA regulations).• many provincial initiatives since 1995 have or are likely to increase loading of priority pollutants such as : the removal of the MSW incineration ban; the Ontario Hydro Nuclear Asset Optimization Plan; and proposals to: introduce electricity market competition without adequate environmental standards; and weaken MISA and hazardous waste regulations. <p style="text-align: center;">Objective 3 : Ecosystem Health</p> <ul style="list-style-type: none">• progress on Lakewide Management Plans (LaMPs) extremely slow. Goals undermined by many provincial initiatives;• 1996 amendments to land-use planning legislation and policies undermined ecosystem approach, removed protection of ecologically significant areas and biological diversity;• MNR withdrawal from enforcement of Federal <i>Fisheries Act</i> has major impact on habitat protection;• provincial <i>Farming and Food Production Protection Act</i> undermines key goals of reducing environmental impacts of agricultural operations;
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The report noted that the Ministry of Environment maintains a nominal commitment to COA in its Business Plan, but has withdrawn key resources and functions. The Ministry of Natural Resources, for its part, was found to have effectively abandoned its commits and functions related to the Agreement.

The province announced a one-time \$5 million investment in Great Lakes restoration in its May 1998 budget. The amount will be used to finance an endowment held within the Ontario Great Lakes Renewal Foundation. The province indicated that it intended to use the Foundation to attract private sector contributions for clean-up efforts.¹⁴¹ However, there are concerns that the Foundation may represent part of a wider approach of downloading responsibility for the financing and carrying out of RAP implementation to municipal governments and the private sector by the province and federal government. The International Joint Commission has stressed the problems associated with the downloading of RAP responsibilities with no associated increases in local capacity.¹⁴²

Water Impacts of Reductions to the MoEE Operating Budget

Between the period 1994/95 and 1998/99 the MoEE lost almost 45% of its operating budget and 30% of its staff. The Ontario Public Service Employees Union provided figures for staff reductions related to water as of December 31, 1996.¹⁴³ These figures are outlined in Table 3.1.

Table 3.1 : MoEE Water Related Staff Reductions (OPSEU AND AMAPCEO) Dec 1996

Issue	Original Staff	Surplussed (laid-off) Staff	%Surplussed
Water and Drinking Water	113	48	42%
Groundwater and Hydrogeology	28	15	53%
Watershed Management	12	3	25%
Wastewater	15	5	33%

Note: this table does not reflect the effect of further program and specialist position elimination that took place in the 1997-98 fiscal year.

DISCHARGE, ABATEMENT AND CONTROL ISSUES

The water pollution prevention and control regime in Ontario's has been re-moulded by way of a number of modifications and amendments over the course of the past four years. Proposals for further amendments were still in progress at the end of first term of the 'Common Sense Revolution.'

The MISA (Municipal Industrial Strategy for Abatement) Program

The Municipal Industrial Strategy for Abatement (MISA) program is the foundation of the province's system for controlling industrial discharges to surface waters. Regulations made under the program between 1993 and 1995 establish discharge limits and monitoring requirements for facilities in nine industrial sectors¹⁴⁴ releasing pollutants into the province's surface waters.

MISA Advisory Committee Dissolution

The MISA Advisory Committee (MAC) was dissolved in September 1995. The Advisory Committee was established in 1986 to provide the Minister of the Environment with independent advice on the development and implementation of the MISA program.

MISA Discharge Regulation Amendments

In the fall of 1996, a series of amendments were made to the regulations controlling industrial discharges to water under the (MISA) Program. Although the amendments were minor in nature for the most part, they raised serious concerns that the Ministry was returning to "back-door" dealing with individual facilities. Such an approach was seen to be contrary to the MISA model, which sought to establish limits on a sector-wide basis.¹⁴⁵

"Regulatory Reform"

The province's regulations related to water quality and water pollution prevention and control were a major focus of the MoEE's proposed regulatory reform package *Responsive Environmental Protection*, released in July 1996. The elements of the Ministry's July 1996 proposals related to water, are included in Figure 3.5.

Many of the MoEE's proposals for the "reform" of the MISA program regulations for industrial dischargers to the province's waterways were also re-stated by the Red Tape Review Commission in its January 1997 report.¹⁴⁶

Figure 3.5 : Ministry's Responsive Environmental Protection proposals for the Water Pollution Control Programs July 1996

- the replacement of the *Marinas Regulation* (requires all marinas to have pump-out facilities and solid waste disposal facilities) with voluntary code of practice;
- the removal of the requirement for planning for zero discharge of AOX (organochlorines) from the *Municipal Industrial Strategy for Abatement* (MISA) pulp and paper sector regulation;
- the weakening of monitoring and reporting requirements for other MISA sector regulations (e.g. chemicals, mining, iron and steel, petroleum refining) for "good" performers. Possibilities including going from daily to bi-weekly monitoring and the elimination of parameters (i.e. substances) from monitoring requirements if not used in particular plant. This is despite the possibility that the substance might still be present in wastewater.¹⁴⁷
- more positively, the Ministry proposed the development of discharge regulations on sewage treatment plants. This reflects the serious concerns regarding conventional (i.e. suspended solids and biological oxygen demand) and toxic discharges from sewage treatment plants highlighted by the Provincial Auditor¹⁴⁸ and others. However, the establishment and implementation of such standards is likely to be difficult with the cancellation of Clean Water Agency's *Municipal Assistance Program*.

"Better, Stronger Clearer: Environmental Regulations for Ontario"

The Ministry of the Environment dropped the proposal to repeal the *Marinas Regulation* in its November 1997 follow-up document to *Responsive Environmental Protection: Better, Stronger, Clearer: Environmental Regulations in Ontario*. However, the proposals regarding the MISA program were retained. These included the reduction of the monitoring and reporting requirements under the MISA regulations. The Ministry also proposed to effectively eliminate the requirement that pulp and paper mills plan for zero discharge of AOX (organochlorines). Proposals to implement these changes in the MISA regulations were posted on the EBR Registry on December 30, 1997.¹⁴⁹

Serious concerns were expressed regarding these proposals by a number of environmental organizations¹⁵⁰ and the Office of the Environmental Commissioner,¹⁵¹ particularly given the Ministry of the Environment's inability to provide estimates of the total loadings of Ontario water bodies of pollutants generated by facilities regulated under the MISA program. As of June 1999, these proposals had not be amended.

However, in January 1998, the Ministry amended the MISA Regulations for the organic and inorganic manufacturing sector to raise the permissible discharge limits for 'conventional' pollutants for a number of facilities.¹⁵² These changes were justified on the basis of increases in production levels at the facilities concerned.¹⁵³

MISA and Program Approvals

In her April 1999 Annual Report, the Environmental Commissioner noted a marked increase in the Ministry of the Environment's use of 'Program Approvals,' with only two such approvals being granted in the period 1994-1997, and nine being issued in 1998. 'Program Approvals' permit companies to operate and emit pollutants at levels higher than regulated limits, on the basis that the polluter is undertaking a program that will eventually result in the company's achieving compliance.¹⁵⁴

Each of the nine Program Approvals granted in 1998 were provided to companies that had failed to comply with pollution limits established by the MISA regulations. The Commissioner noted that the companies in question had negotiated generous phase-in periods to comply with the requirements of the MISA regulations, and that the use of 'Program Approvals' in this way may weaken the impact of the regulations, and signal a retreat by the Ministry from the enforcement of regulatory controls.¹⁵⁵

Ontario Hydro's Discharges to Water

Metal Discharges

In May of 1997 it was revealed that Ontario Hydro had been discharging large quantities of copper, zinc, and other metals, including small amounts of lead and arsenic from its Pickering Nuclear Generating Station over the past 25 years.¹⁵⁶ It was also reported that although the utility had been aware of these discharges, it had failed to report them under the province's MISA industrial water pollution control program.¹⁵⁷

The Minister of Environment and Energy responded to the revelations by stating that the discharges from the Pickering station were not harmful to humans, and disputing claims that copper and zinc were persistent and bioaccumulative substances.¹⁵⁸ A request for investigation of the Hydro discharges was filed by a coalition of environmental organizations with the Environmental Commissioner under the *Environmental Bill of Rights* on June 10, 1997. The Minister stated that the request would go through the proper channels in his Ministry.¹⁵⁹ The Ministry did conduct an investigation, but decided not to lay charges against Ontario Hydro.¹⁶⁰

An external review team on the discharges released its report in June 1997.¹⁶¹ In its report, the team concluded that over 1,800 tonnes of metals had been released as a result of the corrosion of brass condensers at six generating stations. The team also stated that: the Hydro management system was inadequate in the areas of environmental accountability and awareness; poor judgements had been exercised by Ontario Hydro staff; and that there did not appear to be a strong environmental ethic within the Nuclear business of Ontario Hydro.

Tritium Discharges

Over the past four years, there have been a number of incidents involving spills of tritium, a radioactive substance, at Ontario Hydro nuclear facilities.¹⁶² Fish caught near some Ontario Hydro nuclear facilities have been found to be more radioactive than fish caught elsewhere.¹⁶³

Water Standards Revisions

As part of its overall program to revise the province's environmental standards, announced in October 1996, in March 1998, the Ministry of the Environment posted proposed revisions to provincial water standards for four substances on the EBR Registry as part of its standards revisions project. The proposed Provincial Water Quality Objectives for Cadmium, Carbaryl, Trivalent and Hexavalent Chromium and Arsenic were based on the Canadian Water Quality Guidelines. Scientific criteria documents for development of Interim Provincial Water Quality Objectives were also posted for Molybdenum, Vanadium, and NDMA.¹⁶⁴ An Interim Provincial Water Quality Objective for hexachlorocyclopentadiene was adopted in December 1997.¹⁶⁵

Model Sewer Use By-Law

In June 1998, the Ministry of the Environment posted a revised Model Sewer Use By-Law. The Model By-Law is intended to be used as a model by municipalities in drafting their own sewer use by-laws. The proposed new by-law included new standards for certain persistent organic pollutants, but removed standards for some metals, and prohibitions on the disposal of certain types of hazardous waste in sanitary and storm sewers.¹⁶⁶ As of June 1999 the new provincial model by-law had yet to be finalized.

In the meantime, the City of Toronto has been developing a new, unified sewer-use by-law. Like the province's draft model, the City's draft by-law includes standards for persistent organic pollutants. However, it also retains the standards for the metals and prohibitions on the discharge of certain hazardous wastes dropped from the draft provincial model by-law. The new city by-law also includes requirements that facilities discharging certain priority pollutants into the sewer system develop pollution prevention plans for these substances.¹⁶⁷

DEVELOPMENTS IN SEWER, WATER & INFRASTRUCTURE MANAGEMENT

The funding of water and sewer infrastructure and the oversight of its operation within Ontario has been altered significantly since June 1995. The Ministry of Environment has withdrawn from many of its functions in this area, and transferred these responsibilities to the Ministry of Municipal Affairs and Housing, municipalities and the private sector

Sewer and Water Infrastructure Impacts via Funding Reductions to the Ontario Clean Water Agency

Provincial support for the provision of sewer and water services was first reduced, in 1995, through reductions to the MoEE's capital spending. Most of the MoEE's capital spending was achieved through allocations to the Ontario Clean Water Agency (OCWA). The budgetary reductions to OCWA totalled \$142.5 million between 1995/96 and 1997/98. This significantly affected the provision of assistance to municipalities for sewer and water infrastructure through the Municipal Assistance Program.

Bill 107 - the Water and Sewage Services Improvement Act

Following the enormous cuts to the MoEE and OCWA budgets for water-related activities, a major restructuring of responsibilities between the province and municipal governments took place in the 1996/97 year. Bill 107, *The Water and Sewage Services Improvement Act*, was introduced in January 1997 as part of the government's "mega-week" announcements of its re-ordering of the provincial-municipal relationship. The termination of provincial funding for municipal sewer and water infrastructure was announced at the same time.

The province's approach was based partially on the contents of a November 1996 report of the province's "Who Does What" Commission. The Commission had recommended that the province transfer its ownership of sewer and water facilities to appropriate municipalities, and terminate its sewer and water grant and loan programs, while continuing to set and enforce environmental standards.¹⁶⁸

Bill 107, which was enacted in May 1997, had two major components. The first provided for the transfer of ownership of provincially owned water and sewage treatment plants to municipalities. This constitutes approximately 25% of the existing plants in the province, mostly in rural areas.

The Bill's provisions regarding the transfer of provincially owned sewage treatment plants require that any capital expenditures made by the province in relation to the works after April 1, 1978 be returned to the province if the municipality, in turn transfers (i.e. sells) the facility to another person, other than another municipality. In his statement to the legislature accompanying the introduction of the Bill, the Minister of Environment and Energy stated that this was intended to discourage the privatization of transferred sewer and water plants.¹⁶⁹

Notwithstanding this provision, the Bill prompted widespread concern that it would result in the privatization of sewer and water services in the province, as municipalities find themselves unable to deal with the capital and operating costs of the newly transferred facilities. The inability of many municipalities to finance adequate sewer and water infrastructure had been a major factor in the province's involvement in the establishment of sewer and water facilities since the 1950's.¹⁷⁰ The possibility of privatization has been of particular concern, given the impacts of the privatization of sewer and water infrastructure in England, where it prompted water shortages, the termination of water services to low-income families, and serious public health problems.¹⁷¹

It was pointed out that while the requirement that municipalities internalize the costs of new sewer and water infrastructure could have the effect of discouraging new urban development, there was also the possibility that municipalities, anxious to obtain additional tax revenues from new developments, may be tempted to use their new authority to approve septic systems to facilitate such developments. This could add to the already serious environmental and public health problems which have been identified with respect to the use of septic systems by the Commission on Planning and Development Reform in Ontario¹⁷² and others.¹⁷³

So far, the *operation* of sewer and water services by the Ontario Clean Water Agency itself has been unaffected by the budgetary reductions.¹⁷⁴ However, in March 1998 the Minister with Responsibility for Privatization and the Minister of Environment announced the referral of the Ontario Clean Water Agency (OCWA) to the Office of Privatization to review the provincial government's role in operating municipally owned water and sewage treatment systems. OCWA operates and maintains 123 municipal water treatment facilities and 234 municipal waste treatment facilities.¹⁷⁵ In advance of this development, OCWA had been required to develop a detailed business plan, which outlined measures for it to be able to "remain self-sustaining as it faces more private sector competition in its operating activities, and lessens its dependence on profits from its financing activities."¹⁷⁶

The Province : Maybe In, Maybe Out?

The government's May 1997 budget, announced a one-time transfer of \$200 million to municipalities for sewer and water infrastructure support. These funds established the Water Protection Fund, a budgetary item separate from the MoE's capital budget. The Fund was intended to ease the transfer of provincially-operated sewer and water facilities to municipalities through Bill 107.

Difficulties Continue

Despite the province re-entering the municipal water service funding arena, on a limited basis, some significant longterm difficulties have persisted. In March 1998, 44 water treatment plant operators in 23 communities in southwestern Ontario were warned by the MoE that their drinking water testing programs are inadequate.¹⁷⁷

The Provincial Auditor's Report

The Provincial Auditor's November 1997 Annual Report to the Legislature highlighted a number of problems with the province's programs related to sewer and water infrastructure. In particular, the Auditor stated that water or sewage expansion projects should not be funded by the province unless municipalities have maximized their water conservation opportunities.¹⁷⁸

Municipal Restructuring/Downloading

Drinking Water Testing

The first manifestation of water services downloading to municipalities appeared early in the government's mandate. In September 1996 the Ministry of Environment and Energy and of Health terminated the provision of drinking water testing services to municipalities. Approximately 400,000 tests had been conducted by the Ministries each year. The service was eliminated with only eight weeks notice, and without an independent review of the availability or costs of private sector testing. This action by the province was heavily criticized by the Environmental Commissioner in her 1996 Annual Report.¹⁷⁹

Bill 86 - The Better Local Government Act.

Enacted in December 1996, this Bill among other things, amended the *Municipal Act* to limit the right of Ontario residents to undertake public or private nuisance lawsuits for property damage resulting from the escape of water or sewage from municipal water or sewer works.

Septic Systems

Some of the most dramatic shifts of responsibility within the Ontario government have been in the regulation of septic systems. These systems have been associated with serious environmental and human health problems in the province.¹⁸⁰

Bill 107, the *Water and Sewerage Services Improvements Act*, enacted in May 1997, transferred responsibility for the approval and regulation of most septic systems under the *Environmental Protection Act* from the Ministry of the Environment to municipalities, or the Ministry of Municipal Affairs and Housing in areas without municipal organization. Bill 152, the *Services Improvement Act*, enacted in December 1997, then transferred authority for regulating small, on-lot septic systems from Part VIII of the *Environmental Protection Act* to the *Building Code Act*. The Ministry of Municipal Affairs and Housing promulgated requirements regarding the approval of septic systems into the building code through a regulation made under the *Building Code Act* in April 1998.¹⁸¹

Serious questions were raised about the capacity of municipalities to administer the septic system provisions of the *Environmental Protection Act* in light of the enormous range of new responsibilities being downloaded onto them by the province, and the accompanying reductions in provincial transfer payments for a wide range of activities. The ability of the Ministry of Municipal Affairs to regulate septic systems in unorganized

territories was also challenged. The Ministry has no experience or expertise in environmental or public health regulation of this type, and no resources were transferred from the Ministry of Environment and Energy to the Municipal Affairs Ministry carry out its new responsibilities.¹⁸²

In her 1997 Annual Report to the Legislature, the Environmental Commissioner expressed concern that these arrangements appeared to be more concerned with expediting the approval of septic systems, than ensuring the protection of human health and the environment. The Commissioner also questioned whether municipalities had adequate investigation and enforcement capabilities to deal with the cumulative and growing environmental and public health threats due to improperly functioning septic systems.¹⁸³

Dam Safety

In February 1998, the International Joint Commission released a report on the safety of dams along the Canada-U.S. border. The report concluded that some regulated facilities were not subject to comprehensive government safety inspections and that oversight by governments was unsatisfactory. The Commission was particularly concerned about the situation in Canada, where it concluded that "there does not appear to be any way of obtaining regular government safety inspections for regulated facilities."¹⁸⁴ The Commission recommended regular, periodic, complete and independent on-site inspections by qualified experts; timetables for the implementation of all inspection report recommendations; the establishment and testing of emergency action plans; and public access to all reports and documentation relating to safety issues.¹⁸⁵

WATER AS AN ECONOMIC RESOURCE?

Water Exports

In early May 1998, it was revealed that the Ministry of the Environment had granted a Certificate of Approval under the *Ontario Water Resources Act* to take up to 10 million litres of water per day from Lake Superior over a period of five years. The firm that obtained the approval indicated that it intended to export the water to drought-stricken areas of Asia.¹⁸⁶

The approval prompted the Great Lakes Commission, an interstate agency based in Michigan,¹⁸⁷ and a former Ontario Minister of the Environment and Energy¹⁸⁸ to suggest that the province had violated the 1909 *Boundary Waters Treaty* between Canada and the United States by granting the approval. Concerns were also raised regarding the implications of permitting water exports under the *North American Free Trade Agreement*.¹⁸⁹ In response, the Canadian federal government suggested to the United State government that the issue be referred to the International Joint Commission.¹⁹⁰

The Minister of the Environment indicated his intention to withdraw the Certificate of Approval for the water taking on May 14, 1998 and to develop a Ministry policy against the approval of bulk water takings for export in the future.¹⁹¹ The incident helped to highlight the fact that the federal government lacked any clear legislative authority to prohibit water exports. It also raised serious questions about the level of scrutiny being applied to proposals by the Ministry of the Environment in its environmental approvals process.

In May 1999, the provincial government had adopted a regulation under the *Ontario Water Resources Act* restricting inter-basin transfers of water.¹⁹² The regulation divided Ontario into three water basins: the Great Lakes-St Lawrence; Nelson River; and Hudson and James Bay, and prohibited the transfer of surface water out of these basins. Exceptions to the transfer prohibition were provided for water which is used to manufacture a product which is then transferred out of the basin and for potable water contained in consumer sized containers, not more than 20 litres in volume.

Water Takings and Taking Too Much Water

The Nova Corporation controversy was the most high profile water taking granted by the province over the past four years. However, many other large water takings were approved or renewed over the period, often under a minimum of terms and conditions (see Figure 3.6). The Environmental Commissioner of Ontario expressed concern over the situation in her 1997 annual report.¹⁹³ In her report, the Commissioner raised the following specific issues:

- Incomplete understanding by MOE of hydrogeology and potential impacts, including cumulative impacts, of water-taking prior to issuing permits.
- Lack of enforcement by MOE of terms and conditions of permits.
- No expiry dates on permits.
- Insufficient notice provided by MOE to members of the public regarding proposed water-takings.

The ECO also noted that concerns about the absence of a comprehensive groundwater management strategy were raised by the ECO as early as the 1994-95 annual report.¹⁹⁴ In the 1997 report it was recommended that the Ministry of the Environment make public its progress to date. No comprehensive groundwater management strategy has been announced by the province.

The Provincial Auditor also raised concern over the province's lack of a groundwater strategy in his 1996 Annual Report.¹⁹⁵ The Auditor highlighted the Ministry's failure to develop an overall ground water management strategy again in his 1998 Annual Report.¹⁹⁶

Taking Liberties with Water Takings?

Those who wish to draw large amounts of water from a water body in Ontario are required to obtain a permit to take water from the Ministry of the Environment. The permitting process is intended to avoid or reduce conflicts between water-takers and ensure that water is withdrawn only on a sustainable basis. The system needs to be closely monitored to ensure that such intents are met.

(Proposal date: Oct 31/97)

The water taking permitting process has become a subject of concern lately as the MoE has begun to authorize some large and unprecedented water takings and has been increasingly issuing permits with no expiry dates (perpetual permits). Such permits call into question the usefulness of the permit process to ensure sustainable use of a resource and to prevent future conflicts if a taking is permitted on a perpetual basis.

Nova Group : In early 1998, a permit to take water from Lake Superior was granted by Ontario Environment Ministry to Nova Group for export to Asia. The permit allowed a maximum taking of 600 million litres per year for the next five years. This permit possibly violates the International Boundary Waters Treaty with the U.S. government as well as a long-standing policy against water exports from the Great Lakes Basin.

Permits Issued to Ducks Unlimited : The wildlife organization Ducks Unlimited alters natural environments to promote conditions favourable to waterfowl. In so doing the organization frequently restructures aquatic environments. Since June of 1997, at least 30 permits to take water or renewal of permits were granted to Ducks Unlimited. Many of the renewals have been made without a date of expiry. Examples include:

Bognor Creek. Renewal, without change, of Permit for operation of artificial wetland. Normal operations allow for outflow equals inflow. Max. taking: 5,580 L/min and 8,040,000 L/day.

Figure 3.6 : Examples of Water Approvals in Ontario in 1997

ENERGY

Introduction and Overview

The most significant event over the course of the 'Common Sense Revolution' in terms of energy policy was the restructuring of Ontario Hydro and the province's \$10 billion/yr electricity market. While framed primarily as an undertaking in market efficiency and competitiveness, this restructuring could have enormous consequences for Ontario's environmental quality, an aspect not immediately recognized by many Ontarians. Without new environmental requirements, the introduction of competition into the electricity sector has the potential to result in major increases in air pollution. At the same time, the restructuring of Ontario Hydro into a number of new successor entities has raised serious issues of accountability and oversight.

Major questions emerged over safety at Ontario Hydro's nuclear facilities, and in August 1997, the utility adopted a \$5 billion Nuclear Asset Optimization Plan (NAOP), to refurbish its nuclear generating facilities. The utility relied heavily on coal-fired generation to replace power from its 'laid-up' nuclear facilities. This resulted in major increases in air pollution.

In addition to the developments related to Ontario Hydro, the government terminated its funding and research programs on energy efficiency and proposed to reduce energy efficiency requirements in Ontario's Building Code.

By the middle of 1999, there were indications that Ontarians were consuming more fossil fuels, and generating more greenhouse gas emissions, than they were in 1995. This trend contradicts the Province's commitment to stabilize greenhouse gas emissions at their 1990 level by the year 2000. In addition, Ontario has failed to play constructive role in the efforts to meet Canada's commitments under the Kyoto Protocol, and there are indications that it will intensify this approach in the future.

The energy sector in Ontario, in particular the electricity production segment, continues to evolve and develop in a pattern that is not environmentally sustainable. The system is heavily reliant on uranium which brings with it a host of environmental and health and safety problems in its mining, use and disposal and on coal, one of the most emission-intensive fossil fuels.

The potential adverse impacts of the introduction of competition could be greatly curtailed if the environmental regulatory processes, still ongoing in June of 1999, produce favourable results. On the nuclear side some uncertainty remains regarding the impact of the introduction of competition and the possibility of the privatization some of Ontario Hydro's assets. The nuclear capacity would appear to be the least likely candidate for privatization or expansion. However it will remain with Ontarians for quite some time, given the investments being made in it under the Nuclear Asset Optimization Program.

Competition and market restructuring may help to prevent the undertaking of major electrical generation projects without clear evaluations of their costs and benefits relative to other projects in the North American marketplace. Furthermore, the initiative could be a step in the direction of informing the marketplace of the real cost of electricity generation, although its actual impact in this regard remains unclear.

Ontario Hydro and Electricity Market Competition

The only pledge specific to the electricity market contained in the 1995 Progressive Conservative Party of Ontario Platform, the *Common Sense Revolution* was a commitment to a 5-year rate freeze for Ontario. The platform did, however, also refer to considering the privatization of some of Ontario's assets. Soon after taking office, a process was put in place to move beyond a rate freeze, and to introduce competition into the electricity market.

To start the process, the government formed the "Advisory Committee on Competition in Ontario's Electricity System" on November 28, 1995. The Committee was to explore the role and effects of competition in Ontario's electricity marketplace and was chaired by former federal cabinet minister Donald Macdonald.

Immediately before establishing the Advisory Committee, the Ontario government moved to replace the then chair of Ontario Hydro, Maurice Strong, with William Farlinger. The government also attempted to remove five labour, environmental and public interest representatives from the utility's Board of Directors on January 10, 1996. The government's action was overturned a week later on January 19, by the Ontario Divisional Court.

Later in 1996, on June 7, the Advisory Committee released its final report, *A Framework for Competition*, in which it recommended an end to Ontario Hydro's monopoly control over electricity generation and transmission. As well, the committee proposed that a power generation market should be created through an open provincial transmission system. Specifically, the report recommended the potential privatization of much of Ontario Hydro's thermal and hydro-electric generating capacity and the consolidation of municipal electric utilities. The Minister of Environment and Energy promised consumers and industry representatives a chance to review and comment on the report before deciding whether to adopt its recommendations stating that: "This is an issue that is critical to our province's well-being, and we are committed to an open and comprehensive review."¹⁹⁷

In November 1997, the Ontario government released the white paper *Direction for Change: Charting a Course for Competitive Electricity in Ontario* and announced that it was intending to open Ontario's electricity market to competition. The paper proposed to create a competitive market in the year 2000 for wholesale and retail customers and to separate monopoly operations from competitive businesses throughout the electricity sector.

The paper also spoke of : establishing an interim power market; redesigning the Ontario Energy Board with an expanded mandate and of providing for the introduction of new mechanisms to ensure environmental protection; encouraging the "reform" of existing municipal utilities; establishing a level playing field on taxes and regulations in the industry; and restructuring Ontario Hydro into new companies with clear business mandates.

Competition Committees

To investigate some of the consequences of opening up Ontario's electricity market, the Minister of Energy, Science and Technology established two committees in early 1998. The Market Design Committee, created in January 1998, advised the government on market rules, powers and responsibilities of the regulatory agency. In February, the minister announced the creation of an Electricity Transition Committee to advise minister on proposed changes to Ontario's electricity system. Specifically, the Committee solicited input from affected stakeholders with regards to how they were likely to be effected by impending changes.

Both committees operated within the framework of the Government's White Paper *Direction for Change: Charting a Course for Competitive Electricity in Ontario*. The Committees' consultations and reporting provided some detail in support of, but did not substantially alter the government's course or planned direction of the electricity market restructuring.

Interim Market Establishment

Consistent with the theme of creating competitive conditions, the province and Ontario Hydro announced the establishment of an interim market for replacement electricity in January 1998¹⁹⁸. This system permitted generators other than Ontario Hydro to provide replacement electricity to meet Ontario's electricity demands.

Bill 35, *The Energy Competition Act, 1998*

Bill 35, *The Energy Competition Act, 1998*, received Royal Assent on October 18, 1998. The Bill provided for the division of Ontario Hydro in a number of entities, including: the Ontario Power Generation Corporation with the generating assets; Ontario Services Corporation to operate the transmission and distribution infrastructure; and Ontario Hydro Financial Corporation to hold Ontario Hydro's debt; the Independent Market Operator, to operate the competitive electricity market; and an Electrical Safety Authority to assume Ontario Hydro's safety functions.

Under the legislation, the Service Corporation and Generation Corporation were to be incorporated under the *Business Corporations Act* held by her majesty in Right of Ontario. The financial corporation would continue as a corporation without share capital made up of its board of directors. The Independent Market Operator (IMO), was be a corporation, like the financial corporation, without share capital and made up of its board of directors, to operate the market. The Electrical Safety Authority was to be a delegated regulatory organization similar to the Technical Standards and Safety Authority. These five new entities came into being on April 1, 1999.

Bill 35 also provided the Ontario Energy Board was provided with an operator-specific regulatory function through requirements for licensing as a condition of market access. The Act made provision for the requirement of electricity suppliers to be in compliance with environmental performance standards as a condition of market access,

but made no provision regarding the nature of those standards.

Initially, it appeared as though the successor corporations to Ontario Hydro would no longer be subject to the *Freedom of Information and Protection of Privacy Act* and other accountability mechanisms for public bodies on the basis that they were no longer public entities. This arrangement was strongly criticized by the Province's Information and Privacy Commissioner in her June 1999 Annual Report.¹⁹⁹ Under Ontario Regulation 138/99, the Ontario government designated three the successor corporations subject to the FIPP Act: the Independent Market Operator; the financial corporation and the pension corporation. However, the entities with the greatest potential for environmental impact, the Services and Generating Corporations, were not made subject to the Act.

In addition, section 10 of the *Power Corporation Act*, which provided a mechanism through which the Cabinet could give policy direction to Ontario Hydro's Board of Directors, ceased to apply to the utility's successor corporations, as the Act was repealed through Bill 35.

In April 1999, the Ministry of the Environment confirmed that the operations of two of Ontario Hydro's successor companies, Ontario Power Generation Inc and Ontario Hydro Services Company Inc. would continue to be subject, where applicable, to the *Environmental Assessment Act*.²⁰⁰ Application of the Act to other new generating facilities, not operated by Ontario Hydro's successor corporations would occur on a case-by-case basis.²⁰¹

Electricity Market Competition and Air Pollution

Major concerns have been raised regarding the implications of the introduction of electricity market competition for air quality. The province's existing regulations regarding SO₂ and NO_x emissions related to electricity generation apply only to Ontario Hydro. As currently drafted they would not apply to new sources of supply entering the Ontario electricity market, either from within Ontario or elsewhere. No legally enforceable limits currently exist in Ontario with respect to emissions of CO₂, and Ontario Hydro's existing Certificates of Approval are silent on the issue of emissions of hazardous or toxic substances to the air.

This is of particular concern given that coal-fired power plants in the Ohio Valley will be able to offer the Ontario market very price-competitive rates for electricity. Coal-fired electricity imports from the Ohio Valley are especially harmful since the NO_x emission rates of many Ohio Valley stations are significantly higher than those for Ontario Hydro's facil-

ities.²⁰² This increased use of low-cost, coal-fired plants located in the U.S. and commensurate emissions increases would have serious air quality implications for Ontario, as the province is directly downwind of the Ohio Valley.

Furthermore, in a competitive environment, municipal utilities and investor-owned corporations are likely to build new electricity generating capacity in Ontario. When the emissions from these stations, are combined with Ontario Hydro's output, emission levels from electricity production in Ontario will increase. In fact, according to a recent Natural Resources Canada forecast, if new environmental policies are not enacted in Ontario, the province's electricity-related greenhouse gas emissions in 2020 will be 2.2 times greater than its 1990 levels.²⁰³

The situation is further complicated by the findings of the both the National Air Issues Coordinator Committee Acidifying Emissions Task Group,²⁰⁴ the Ontario Medical Association²⁰⁵ and others that a 75% reduction in the current emission limits for SO₂ in eastern Canada is necessary to halt the damage to human health and the environment resulting from these emissions.

In late 1998 and early 1999, the Ministry of Environment began consultation processes to begin to deal with the environmental ramifications of electricity market restructuring. Processes involved the following issues : the use of regulations to apply new emission caps to Ontario operators; the defining of emission performance standards for all generators wishing to sell electricity in the Ontario market; certification, or the definition of what constitutes 'green' power; establishing disclosure requirements of generators for informing consumers; and the application of the *Environmental Assessment Act* to the electrical generation undertakings. With the exception of the status of Ontario Hydro's successor corporations under the *Environmental Assessment Act*, none of these issues

Fuel Switching, Renewables Would Help

Ontario has, since 1970 become significantly reliant on two energy sources with unattractive properties. Uranium brings with it a host of environmental and health and safety problems in its mining, use and disposal. Coal, is the most emission-intensive of any fossil fuel in virtually every aspect: air toxics, carbon content and acid gases.

Regrettably, the debate over fuel sources for electricity has typically played the use of one fuel source into the hands of the other: the use of uranium reduces acid gases, smog and greenhouse gas emissions while the use of coal reduces the threat of nuclear radiation exposure. Little focus has been given to substantially replacing both coal and uranium with natural gas, co-generation, fuel conservation, wind and solar.

Purchasing from sources other than coal or nuclear generation was a mute point, as Ontarians have never had the luxury of choosing their source of electricity. Soon that luxury will be available to the market, and while consumer choice could help to drive the establishment of cleaner, renewable and lower impact forms of electricity generation, it may take a great deal of time and even then is likely to impact only a small portion of the market. In the future open market scenario, unless environmental regulations such as a carbon quota or renewable portfolio standard are instituted, coal-fired imports from the Ohio valley are likely to compete very successfully for new demand.

Without intervention, the semi-completed restructuring of Ontario electricity market is unlikely to shift the reliance on coal or nuclear appreciably in the short term, if at all. The exposure of the market to low cost coal-fired electricity from the Ohio Valley is likely to ensure that the introduction of cleaner, but marginally more costly forms of generation, is impeded. Alternatively, if the full environmental costs of nuclear and coal-fired power were factored into their prices, then many lower impact forms of generation would be highly competitive.

Figure 3.7 : Electricity market restructuring and the potential environmental impacts.

had been resolved as of June 1999.

Ontario Hydro Nuclear Problems

Metals and Tritium Spills and Discharges at Ontario Hydro Facilities

Metal Discharges

In May 1997, it was revealed that over the past 25 years, Ontario Hydro's Pickering Nuclear Generating Station had released more than 1,000 tonnes of copper and zinc (which are toxic and bioaccumulative) into Lake Ontario. The emissions arose from the scouring of brass (copper-zinc) condenser tubes in the plant's heat exchanger systems. Ontario Hydro staff had been aware of the copper erosion problem since at least 1981. However, the utility never reported the discharges of copper to the MoE.

The response of the Minister of Environment (and Energy) was that the discharges from the Pickering station were not harmful to humans, and disputed claims that copper and zinc were persistent and bioaccumulative substances.²⁰⁶ A request for investigation of the Hydro discharges was filled by a coalition of environmental organizations with the Environmental Commissioner under the *Environmental Bill of Rights* on June 10, 1997. The Minister stated that the request would go through the proper channels in his department.²⁰⁷ The Ministry did conduct an investigation, but decided not to lay charges against Ontario Hydro.²⁰⁸

A review team on the discharges released its report in June 1997.²⁰⁹ In its report, the team concluded that over 1,800 tonnes of metals had been released as a result of the corrosion of brass condensers at six generating stations. The team also stated that: the Hydro management system was inadequate in the areas of environmental accountability and awareness; poor judgements had been exercised by Ontario Hydro staff; and that there did not appear to be a strong environmental ethic within the Nuclear business of Ontario Hydro.

Tritium Discharges

Over the past four years, there have been a number of incidents involving spills of tritium, a radioactive substance, at Ontario Hydro nuclear facilities.²¹⁰ Fish caught near some Ontario Hydro nuclear facilities have been found to be more radioactive than fish caught elsewhere.²¹¹

Nuclear Safety and Restructuring

On August 13, 1997, Ontario Hydro publicly released "Report to Management IIPA/SSFI Evaluation Findings and Recommendations." The report was the product of an "Independent and Integrated Performance Assessment (IIPA)" of Ontario Hydro's nuclear

operations and found that three nuclear plants (Pickering, Bruce and Darlington) were operating at a "minimally acceptable level."²¹² The assessment included six Safety System Functional Inspections (SSFI) of plant systems. The report noted that long standing management, process and equipment problems in the nuclear plants are well known and that the plants' performances are well below levels at the best operated plants in the industry.

Key deficiencies in the nuclear plants that were identified included: inadequate definition of employee accountabilities; poorly defined lateral working relationships; inadequate managerial practices; nonconservative decision-making; inadequate quality assurance and inadequate work protection; and incomplete or flawed processes. The report concluded that "immediate action is required in many areas" but that the deficiencies identified have not yet "undermined the minimum safety envelopes at the sites."

The Nuclear Asset Optimization Plan (NAOP)

In response to the release of the IIPA report, the province's utility announced that it would undertake a massive overhaul of its nuclear generating capacity in the province called the Nuclear Asset Optimization Plan (NAOP). The plan (see Figure 3.8) proposed to refurbish the utility's nuclear generating facilities, and to rely heavily on fossil fuel generation to provide replacement power while the nuclear facilities were undergoing repair. The Premier of Ontario, as well as the Chairman of Ontario Hydro insisted that the estimated \$5-8 billion cost of the plan would not be passed onto electricity customers in the form of a rate increase.²¹³

Figure 3.8 : Ontario Hydro's Nuclear Asset Optimization Plan

Details about the nuclear reactor refurbishing include:

- 7 of Ontario Hydro's 20 reactors (4 units at Pickering and 3 units at Bruce) would be out of service for at least two years (restart decision to be made at a later date); upgrades would be made to Pickering B, Bruce B and Darlington reactors;
- Nanticoke and Lambton coal/oil fired stations would run at higher levels to make up the short fall in electricity;
- an oil-fired unit at the Lennox Generating Station near Kingston would be brought out of retirement;
- the plan was estimated to cost between \$5 and \$8 billion over four years;

Report of the Select Committee on Ontario Hydro Nuclear Affairs

In September 1997 the Ontario legislature formed a committee to review the restructuring plan. The mandate of the Select Committee on Ontario Hydro Nuclear Affairs included the review of Ontario Hydro's nuclear recovery plan and of the serious assertions made about Hydro in the recent IIPA report on nuclear safety at the utility.

The Select Committee did little to attempt to steer the utility away from its heavy reliance on nuclear generated electricity. In its December 1997 report,²¹⁴ the committee's recommendations focussed strengthening regulatory supervision, and improving the safety and integrity of nuclear operations, but did not question the overall environmental integrity

and sustainability of such infrastructure.

The Committee concluded that the "safe and efficient" operation of Ontario's Hydro's nuclear generating stations was "vitaly important" and that "proper management" was required to protect the \$24 billion invested in the nuclear program. In terms of environmental concerns, the report recommended that the Minister of the Environment should ensure that Ontario Hydro's implementation decisions comply with all environmental legislation, policies and standards.

The report also recommended that Ontario Hydro increase access to existing generation which creates less emissions and is financially competitive. In addition, the aggressive promotion of cost-effective energy conservation was recommended as a further means of reducing environmental emissions.

The Environmental Impacts of the NAOP

The implementation of the NAOP has lead to major increases in emissions from Ontario Hydro's five coal-fired generating facilities. Ontario Hydro's acid gas (combined Nitrogen and Sulphur dioxide) emissions had fallen from 210,000 tonnes in 1992 to 120,000 tonnes in 1996. Under the NAOP, Nitrogen oxide emissions grew from 34,500 in 1995 to 56,000 tonnes in 1998, and increase of 58%. Sulphur dioxide emissions increase from 84,900 tonnes in 1996 to 143,000 in 1998, a growth of 68%.²¹⁵ Hydro's total acid gas emissions for 1998 were 199,000 tonnes (see Figure 3.9). The utility's current limit under the Countdown Acid Rain Program is 215,000 tonnes. Although specific data is not available, it can be expected that emissions of heavy metals and particulates from Ontario Hydro's facilities have also undergone large increases under the NAOP.

Ontario Hydro's utility's carbon dioxide emissions had been falling, having dropped from 27 million tonnes in 1992 to 21 million in 1996.^{216 217} The utility's board had made a voluntary commitment to stabilize its emissions at the 1990 level (26 Mt) by the year 2000.²¹⁸ Under the NAOP, it is estimated that Ontario Hydro will emit at least 30 Mt of carbon dioxide per year over 1998, 1999 and 2000.²¹⁹

To combat some of the ramifications of these developments, Ontario Hydro

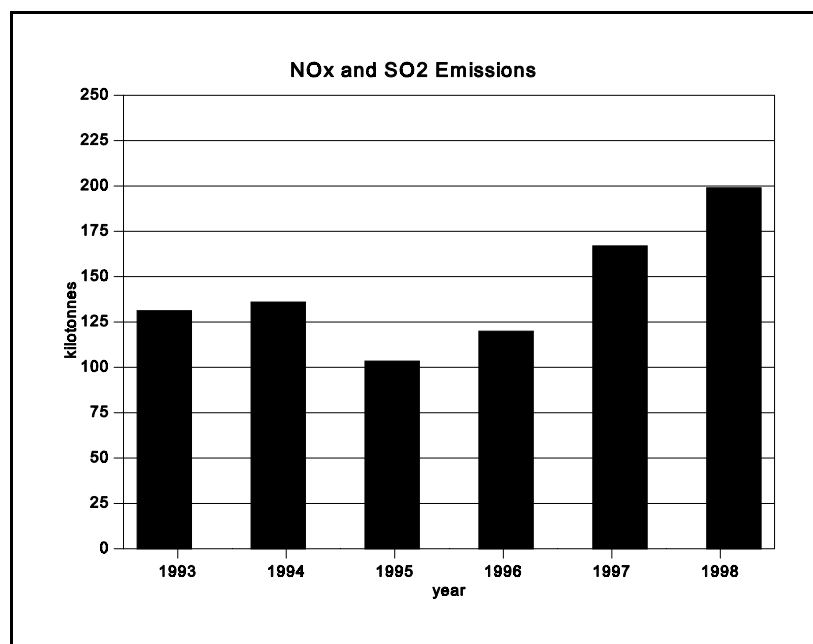


Figure 3.9 : Ontario Hydro Acid Gas Emissions

announced in December 1997 that it had purchased 10,000 (U.S.) tons of carbon dioxide reduction credits from the Southern California Edison electric utility.²²⁰

Amendments to Energy Efficiency Programs and the Building Code

Elimination of Energy Efficiency Programs and Requirements

Early in its mandate, the government eliminated funding for virtually all of the MoEE's energy research and efficiency programs. The termination of the Ministry's Green Communities and Home Green-up Programs eliminated provincial support to energy efficiency programs for the residential sector was announced at the same time. Support for some of these activities was subsequently arranged with the private sector.²²¹

Ontario Building Code Revisions

In January 1996, the Ministry of Municipal Affairs and Housing (MMAH) issued a discussion paper entitled *Back to Basics: A Consultation Paper on the Focus of the Ontario Building Code* which outlined 650 recommendations to streamline and simplify the Ontario Building Code (OBC). Among the recommendations were a number of proposals which would reduce the required level of insulation in new homes and buildings (to one-third of existing requirements), replace energy efficiency design standards with a labelling system, and a variety of other measures which would lead to the design of less energy efficient housing and buildings. Such measures were estimated to increase the carbon dioxide output from the heating of homes built to the revised code by 25%.²²² In the face of opposition from a wide range of sectors, the government diluted these proposals.²²³ The final outcome allowed for a slight reduction in wall insulation value (from R18.5 to R17)²²⁴

New Products / Energy Efficiency

As part of the Responsive Environmental Protection initiative, changes to *Energy Efficiency Act Regulation 82/95* broadened the number of products which are captured by the regulation and re-categorize some of the products and standards.²²⁵ These changes aligned Ontario's *Energy Efficiency Act* with the United States' *National Appliance Energy Conservation Act*. The amendment to 82/95 created minimum standards for gas-fired room heaters, wall furnaces and fire places and for fluorescent lamps that are primarily used in area lighting. The amendment also established new standards for three products: electrically heated storage water heaters, parking lot and area dusk-to-dawn lighting and cobra-head type roadway lighting. Products were to comply with the new standards by various dates in 1998 and 1999.²²⁶

Ontario and the Kyoto Protocol

Canada is a signatory to the December 1997 Kyoto protocol on climate change. The Protocol commits Canada to reduce its greenhouse gas emissions by an average 6% over

the years 2008 to 2012 relative to 1990 levels. The net effect of this commitment would be a 19% reduction over the commitment period (2008-2012) as Canada is currently projected to be 13% over the stabilization target (referenced to 1990).

By the middle of 1999, indications were that Ontarians were consuming more fossil fuels and generating more greenhouse gas emissions, than in 1995,²²⁷ making the achievement of these commitments unlikely. Furthermore, Ontario's representatives have sought to block progress on the development of any specific conclusions or recommendations in the issues tables established by the federal government to develop an implementation strategy for Canada's obligations under the Kyoto Protocol on Global Climate Change.²²⁸ There are also indications that the \$10 million for analysis of climate change issues announced in the May 1999 budget may be used as to develop a defence against actions the federal government might request that Ontario do as a consequence of Canada's Kyoto commitments.

PESTICIDES & AGRICULTURE

Overview and Summary

No action has been taken over the past four years to deal with the environment impacts of agricultural operations. In fact, the government's most significant action was the enactment of the *Farming and Food Production Protection Act* in May 1998. This legislation is particularly noteworthy as it remains one of the few pieces of legislation in Canada intended to *protect* activities which may damage the environment or human health.

Major revisions to the pesticide regulation system were implemented in August and September 1998. These reforms involved both amendments to ensure proper pesticide use and reduce regulatory requirements for other uses. The Ministry of Agriculture and Food eliminated the positions of inspectors who among other duties, arranged for the testing of foods for pesticide residues and terminated an agreement with the Ministry of Environment and Energy to test food samples for pesticide residues.

Given the business-as-usual approach to pesticide use, the steadfast support to the agricultural industry in the province, and the corresponding reduction in environmental monitoring capability in the province, agricultural operations are likely to continue to pose a significant threat to environmental quality in the years ahead. Major impacts to ground and surface water have been associated with pesticide and fertiliser applications, hog farm and manure operations and agricultural runoff. The identification of such impacts before adverse consequences are seen may be difficult given the extensive reductions in environmental monitoring capacity in the province.

Bill 146, *The Farming and Food Production Protection Act*

Bill 146, the *Farming and Food Production Protection Act*, was enacted in May 1998. The Act maintained the prohibition in the 1988 *Farm Practices Protection Act* barring neighbours of farms from undertaking civil law actions in relation to nuisances which arise from 'normal' farm practices. It also added a provision permitting farmers to appeal municipal by-laws that attempt to control such nuisances to the 'Normal' Farm Practices Protection Board, and provided the Board with the power to overturn such by-laws.²²⁹ The measure appeared to have been motivated by concerns on the part of industrial scale hog farmers that municipal councils were considering the adoption of such by-laws to control the environmental and health effects of their operations.²³⁰

Bill 146 is of particular concern given that a draft State of the Environment Report prepared by the Ministry of Environment and Energy released to the public in February 1997, indicated that runoff from agricultural operations the leading cause of declining surface water quality in Southern Ontario.²³¹ Furthermore, a February 1998 report by the Canadian Institute for Environmental Law and Policy, noted that there was virtually no information available regarding the management of waste pesticides from agricultural

operations in the province.²³²

The passage of Bill 146 further insulated farm operations from either public or private actions to control their impacts on human health and the environment. The Bill was particularly noteworthy as it remains one of the few pieces of legislation in Canada intended to *protect* an activity which may damage the environment or human health.²³³

Pesticides and Regulatory "Reform"

Round 1 : Amendments to the Pesticides Act

In October 1995, the MoEE released proposed changes to the *Pesticides Act*. Under the proposed amendments, operators of pest control businesses would no longer be required to write an examination to obtain an operator's licence. However, operators would be required to hold an exterminator's licence or employ a licensed exterminator to perform or supervise each extermination. In addition, the number of pesticide licences would be reduced from ten to five, and the range of products permitted to be used in the new licence categories be broadened.²³⁴

Round 2 : Responsive Environmental Protection

In July 1996, the Ministry of Environment and Energy presented major proposals for changes to the regulatory framework for pesticides in the province. These were contained in the document *Responsive Environmental Protection* and included:

- replacing the provincial pesticides classification system with a national system;
- decreasing the number of different pesticide licenses from 53 to 15;
- requiring licensed exterminators to recertify every five years;
- requiring at least \$1 million in third party liability for pest control businesses; and
- replacing underground disposal requirements for pesticide containers with new recycling requirements;
- remove pesticide application permit requirements for pesticide applications that "pose little environmental risk;"
- remove EBR registry public notice requirements for approval of pesticides with new active ingredients on the basis that an as yet to be established "national" system will provide equivalent public notice; and
- simplify (eliminate?) requirements for public notice (i.e. signs) where "integrated pest management" practices are in place.

Round 3 : " Better, Stronger, Clearer:" Environmental Regulations for Ontario

The *Responsive Environmental Protection* process culminated in the November 1997 release, by the Ministry of the Environment, of the document *Better, Stronger, Clearer: Environmental Regulations for Ontario*. It proposed a number of changes related to pesticides including:²³⁵

- the prohibition of the burial of empty pesticide containers and require recycling of agricultural and commercial containers made of plastic or metal;
- the elimination of the sections of Regulation 914 dealing with obsolete pesticides that are no longer available; and
- the consolidation and clarification of the sections of Regulation 914 on fumigants.
- the simplification of the licensing system and reduction of the number of types of licenses;
- the upgrading of training requirements for exterminators; and
- the elimination of exterminator license requirements for the use of some "low risk" pesticides.
- the introduction of Standardized Approvals for applications of "low risk" pesticides.

The amendments would strengthen the requirements for supervision of non-certified agriculturalists by certified agriculturalists, and place responsibility on the supervisor for the acts and omissions of non-certified agriculturalists and labourers.

The proposals also required non-certified agriculturalists who apply schedule 2 and 5 pesticides to attend a course on safe pesticide use and that only a certified agriculturalist can decide on the pesticide mix to be used, purchase the products and oversee proper storage. In addition, It would removed the requirement for certification for agriculturalists to use Schedule 3 pesticides on the basis that these pesticides are readily available to untrained homeowners. The latter proposal prompted an expression of concern by the Environmental Commissioner. She pointed out that agricultural applications of pesticides are on a much larger scale than domestic uses.²³⁶

In December 1997, proposed amendments to Regulation 914 to implement the changes contained in *Better, Stronger, Clearer: Environmental Regulations for Ontario* were posted on EBR Registry.²³⁷ These were adopted in August and September 1998.

Budgetary and Personnel Reductions

In June 1996, it was revealed that the Ministry of Agriculture and Food had eliminated the positions of inspectors who among other duties, arranged for the testing of foods for pesticide residues.²³⁸

In January 1997, it was revealed that the Ministry of Agriculture, Food and Rural Affairs had terminated an agreement with the Ministry of Environment and Energy to test food samples for pesticide residues. The situation left the MoEE with the potential for up to \$300,000 in unanticipated laboratory expenses, leading senior officials in the environment Ministry to direct staff to consider keeping pesticide residue testing to the "absolute minimum."²³⁹ In response to questions in the legislature, the Minister of Environment and Energy stated that the government would not "in any way lessen the number of tests" being done on pesticides.²⁴⁰

By June 1997, the Ministry of Environment and Energy had reduced its staff assigned to the regulation of pesticide use by 55%, down to 17 from 31 positions in

1994/95.²⁴¹

These reductions took place at a time when, over the course of four years, the budget of the Ministry of Agriculture, Food and Rural Affairs has not only remained in tact but has grown. For the 1999/2000 budget year, the operating budget is projected to reach \$365 million compared to \$263 million in 1995/1996. By comparison, in the same period, the Ministry of Environment's operating budget has fallen from \$226 million to a projected \$165 million.

Given the steadfast support to the agricultural industry in the province and the corresponding reduction in environmental monitoring capability in the province, agricultural operations could pose a significant threat to environmental quality in the years ahead. Major impacts to ground and surface water have been associated with pesticide and fertilizer application, hog farm and manure operations and agricultural runoff. These impacts may not be identified as a result monitoring reductions.

Biotechnology and the Commercialization of Genetically Engineered Crops in Ontario

Following the lead of other jurisdictions, Ontario become eager to see the introduction of genetically engineered crops in Ontario, particularly pest resistant corn, and herbicide resistant soya. Serious concerns have been raised about the environmental implications of the commercialization of these crops. Pest resistant corn, for example, uses genes from the bacteria *bacillus thuringiensis* (bt) to produce a substance which is toxic to insects. However, bt is widely used by organic farmers as a biological pesticide. There is a major concern that the widespread exposure of pest populations to bt toxin as a result of the commercialization of pest resistant crops using bt toxin gene will result in the emergence of pest populations that are resistant to bt toxin. This would render bt useless as a biological pesticide. Concerns have also been raised about the impact of pesticide producing plants on non-target organisms, particularly beneficial or ecologically significant insects.²⁴²

Endnotes

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