Legislative Assembly of Ontario

Assemblée législative de l'Ontario

STANDING COMMITTEE ON PUBLIC ACCOUNTS

HAZARDOUS WASTE MANAGEMENT

(Section 3.08, 2007 Annual Report of the Auditor General of Ontario)

1st Session, 39th Parliament
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Legislative Assembly of Ontario

Assemblée législative de l'Ontario

The Honourable Steve Peters, MPP
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

Norman W. Sterling, MPP
Chair

Queen's Park
March 2009

STANDING COMMITTEE ON PUBLIC ACCOUNTS

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1st Session, 39th Parliament

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PREAMBLE

The Standing Committee on Public Accounts held hearings on the Auditor General's 2007 audit of the Ministry of the Environment's Hazardous Waste Management on May 7, 2008. The audit findings were reported in s. 3.08 of the Auditor General's *2007 Annual Report*. The Committee has endorsed the Auditor's findings and recommendations.

This report constitutes the Committee's findings and recommendations. Background information on sections of the original audit report is followed by an overview of the hearings' main findings and, as appropriate, new recommendations. *Hansard*, the verbatim record of the hearings, should be consulted for the complete proceedings.

Acknowledgments

The Committee extends its appreciation to officials from the Ministry of the Environment (Ministry/MOE) for their attendance at the hearings. The Committee also acknowledges the assistance provided during the hearings and report writing deliberations by the Office of the Auditor General, the Clerk of the Committee, and staff at the Legislative Library's Research and Information Services.

1. AUDIT OBJECTIVES AND MAIN FINDINGS

The audit objectives were as follows:

- to assess whether the Ministry had adequate procedures in place to ensure compliance with legislation and regulations aimed at protecting the environment from the risks posed by hazardous waste; and
- to measure and report on its effectiveness in this regard.[1]

The ongoing problems with MOE's hazardous waste computer system were of primary concern in this audit report as the system problems compromised the effective monitoring of hazardous waste activity. The Auditor concluded that the Ministry did not yet have the monitoring and inspection procedures necessary to ensure compliance with legislation and regulations. Shortcomings included insufficient support for the electronic-manifest system, and a lack of the information required to identify potential problems on a timely basis. The Auditor's report addressed the following areas of concern:

- **untimely registration** of generators;
- **slow** processing **of Certificates of Approval** for carriers and receivers and inadequate follow-up with companies to ensure compliance;
- **risk of improper disposal** of hazardous wastes;
- lack of follow-up on **registered generators without manifest reporting**;

- **insufficient financial assurance funding** collected from carriers and receivers to fund potential cleanup costs;
- **insufficient hazardous waste generators' fees** to administer the Hazardous Waste Program, contrary to the Ministry's submission to the Management Board of Cabinet;
- inspections not based on risk (many of the largest generators have not been inspected and there is **no process to identify and inspect unregistered facilities**); and
- **repeat cases of non-compliance** over the last three years, but more severe penalties were imposed in only 20% of the cases tested (there were no unannounced inspections by District offices and inspections of trucks hauling hazardous waste simply verify that a manifest document is on board but do not verify the weight or contents of the vehicle).

2. COMMITTEE REQUEST FOR MINISTRY RESPONSE

The Committee requests that the Ministry provide the Committee Clerk with a written response within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified in a recommendation.

2.1 Committee Recommendations

1. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its initiatives to improve the process to ensure the timely registration of generators in the Ministry's Hazardous Waste Information Network (HWIN), noting how these initiatives will better enable the Ministry to identify unregistered generators and expedite follow-up in cases of non-compliance with the registration requirements.**

2. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on whether the Ontario Hospital Association has implemented measures to ensure that hazardous waste generated by hospitals is weighed accurately by the hospitals before it is shipped for disposal. If there continue to be weight inaccuracies in hazardous waste shipped by hospitals, the Ministry should indicate why this is the case, noting specifically whether the Ministry's planned focus on education and outreach for the hospitals has resulted in adequate training for relevant hospital personnel on how to accurately measure the waste.**

3. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on whether it will implement a pilot project with the larger hazardous waste carriers to examine the potential for carriers to submit electronic manifests to the Ministry.**

The Ministry should provide a timeline for the pilot project if it is to be implemented. The Ministry should also report to the Committee on:

- **whether a large portion of generators and carriers could ever realistically be expected to use the electronic manifest system;**
- **what measures will be introduced to promote efficiencies in the paper manifest system for those generators and carriers who are likely to continue submitting paper manifests; and**
- **what measures the Ministry is taking to promote and increase the use of the electronic manifest system.**

4. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its timelines for releasing any new air standards which will have an impact on air quality in connection with the incineration of hazardous waste.**

5. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on progress in cleaning up the Pottersburg Creek PCB storage site in southwestern Ontario, specifying whether the Ministry is on track to meet its December 2009 timeline for project completion.**

6. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on steps that the Ministry is taking to comply with its Management Board of Cabinet submission that the Ministry will fully recover the costs of administration of the Hazardous Waste Program through hazardous waste generators' fees.**

7. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its collaboration with other provinces and territories to develop a new set of Canada-wide effluent standards, noting efforts undertaken to expedite completion of the new standards. The Ministry should specifically address developments regarding new standards for the disposal of hazardous effluents in sanitary sewer systems.**

8. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on measures undertaken to ensure that the Ministry's inspections are conducted through a formalized risk-based inspection system designed to better protect the environment from the threats posed by hazardous waste.**

3. OVERVIEW

Hazardous wastes are the corrosive, radioactive, toxic, pathological, or flammable materials generated primarily by industrial and manufacturing processes, as well as commercial and institutional sectors, and households. The Ministry is responsible for the proper handling of these wastes, with due regard for the environment and public health. According to the Ministry, Ontario produces approximately 400,000 tonnes of hazardous waste annually, excluding household wastes. Ontario's treatment facilities and commercial landfill sites dispose of provincial hazardous waste and imported waste from the United States, and other provinces.

Hazardous waste is managed under the authority of the *Environmental Protection Act* and Regulation 347 (General Waste Management) which sets out the requirements with respect to its management (e.g., generator registration, waste generation and fees). Other requirements include the following: Ministry authorization for carriers and receivers for storage or processing; manifests that provide tracking documentation for the Ministry of the off-site movement of waste (carriers and receivers are required to have Ministry certificates of approval for their operations); and District office compliance staff and the Sector Compliance Branch perform inspections to ensure compliance with the legislation and Ministry policy.

The Ministry's operating expenditures for the Hazardous Waste Program were $14.6 million in the 2006/07 fiscal year. The province collects approximately $6 million annually in fees from hazardous waste generators.

The Ministry's hazardous waste program is based on the following five key pillars: a strong regulatory framework; a detailed monitoring and reporting system, including the Hazardous Waste Information Network (HWIN); effective regulatory oversight; education and outreach; and continuous improvement.[2]

4. AUDIT OBSERVATIONS AND RECOMMENDATIONS

4.1 Hazardous Waste Management Operations

Registration of Hazardous Waste Generators

Operators of waste generation facilities must register with the Ministry prior to transferring hazardous waste from the facility and must submit an annual registration by mid-February. In the Auditor's *2003 Annual Report* on Environet, the Auditor reported that the majority of hazardous waste generators had not registered as required. At that time the Auditor "recommended that the Ministry ensure that all active hazardous waste generators are registered, because failure to register could result in facilities not being considered for inspection, compromising the Ministry's efforts to protect the environment and the public."[3]

Notices were sent to approximately 30,000 generators in 2006 with reminders to renew their registrations by February 2007. A large number of generators failed

to register and there was no evidence that District offices had been contacted to follow up. Of concern was whether the 5,000 hazardous waste generators that registered in 2004 but not in 2005 were still in operation. The Auditor reported on the high incidence of non-compliance, resultant costs to the Ministry and the limited effectiveness of follow up actions.

The Auditor recommended that the Ministry should consider implementing deterrents to encourage generators to register by the legislated deadline and help reduce the significant volume of non-compliance. It should also inform district offices of all generators that do not register by the legislated deadline and follow up to ensure that they either register or no longer generate hazardous waste.
In its initial response the Ministry highlighted the positive impact of its Hazardous Waste Information Network system and said that it would monitor non-compliance and inform district offices for follow up action.

Committee Hearings

HWIN requires hazardous waste generators, carriers and receivers to register their activities with the Ministry. This is the first full-scale electronic registration hazardous waste tracking system in North America.[4] One recent improvement is that flags are generated whenever there is a discrepancy noted in the system.[5] The Ministry now follows up on every shipment of hazardous waste by an unregistered generator and inspects unregistered companies that repeatedly ship without registering.[6] If a generator has not registered or if a carrier is unauthorized to pick up a certain type of waste and picks it up, this is automatically flagged in the system and an exception report is produced.[7] The system produces, in a timely fashion, compliance information which is transferred to the operations part of the Ministry so that it can develop a compliance strategy.[8] The Ministry is confident in the framework in place which includes network improvements, flagging of discrepancies and, follow-up of all exceptions.[9]

There are still instances of some companies not registering on time and some companies shipping wastes prior to actually registering. Although this type of non-compliance does still occur, the trend is downward. The Ministry believes the system can still be improved and plans to continue reviewing for improvements.[10]

It is considering creating yearly flags for generator registration numbers. As noted earlier, generators must register annually. When generators register to obtain a generator number there is no yearly flag on the number. A carrier might pick up a load from a generator that has not re-registered but still has a generator registration number. If the registration number had a year flag, the carrier should automatically recognize that the generator has not re-registered and require the generator to re-register before the load can be picked up.[11]

Supplementary Information

The Ministry provided the following information regarding registration non-compliance:

> The Ministry does have enforcement powers under the *Environmental Protection Act* (EPA) related to non-registration and late registration by generators. The Ministry can and does investigate and prosecute for non-compliance with the requirements for registration.[12]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

1. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its initiatives to improve the process to ensure the timely registration of generators in the Ministry's Hazardous Waste Information Network (HWIN), noting how these initiatives will better enable the Ministry to identify unregistered generators and expedite follow-up in cases of non-compliance with the registration requirements.**

Certification of Hazardous Waste Carriers and Receivers

Carriers and receivers of hazardous waste require MOE certificates of approval to operate. Carriers collect, transport and store waste; receivers manage the treatment of hazardous waste and landfill sites. Certificates of approval set legal requirements with specific conditions to be met by operators of waste sites, including the preparation of records, equipment maintenance, and the processing of hazardous waste. Information in hazardous waste certificates and other certificates for waste, air and water programs are to be recorded in MOE's Integrated Divisional System (IDS).

The Auditor identified concerns with the certificate of approval process, as follows:

- **Backlog in Waste Certificate of Approval Applications** – in January 2007 approximately 600 waste certificate applications had not been processed. The majority had been in the assessment stage in excess of one, and some as many as three, years. The Ministry noted that there has been a significant increase in the number of applications and workload per application.
- **Processing Waste Certificate Applications** – over the last five years the Ministry has not met its target for processing 40% of the waste applications within 50 days. Ministry staff identified several contributing factors, such as staff shortages.
- **Incomplete Files** – Documentation in applications for waste disposal sites was satisfactory; however, more than half of the carrier applications reviewed were incomplete, lacking such information as proof of specialized driver training.
- **Illegal Operations** – MOE does not routinely check up on companies whose applications were refused or were operating without the legally required certificate of approval.

- **Certificate Management System Weaknesses** – the monitoring of certificates of approval is difficult due to system limitations. For example, reporting requirements in a certificate are not tracked by the management system; the system does not have all existing certificates; and it does not interface with the computer system tracking the movement of hazardous waste. It is necessary to enter certificate information independently in both systems.

The Auditor recommended that the Ministry implement procedures to

- ensure that all carriers and receivers of hazardous waste are holders of the legally required certificates of approval;
- ensure that all required documentation has been submitted and is on file before issuing a certificate;
- consider options for the submission of independent third-party evidence that application proposals comply with legislation and adequately protect the environment, as is done for other environmentally sensitive programs such as mines and forestry;
- enhance the functionality of the Integrated Divisional System to interface with other program systems and to distinguish hazardous waste certificates from other program certificates; and
- include all existing certificates and reporting requirements in its management information system.

In its initial response the Ministry said that as part of the inspection of carriers and receivers, it ensures that a valid certificate of approval has been obtained and that the holder of the certificate is in compliance. The Ministry also highlighted its improvements to application processing, its consideration of third-party evidence in the process, and the follow-up role for district offices. Updates for the Integrated Divisional System, including the ability to distinguish between hazardous and non-hazardous waste certificates, were due to be completed by November 2007.

Committee Hearings

The Ministry undertook a blitz, using a project team, to address the backlog in the certificates of approval application process. The backlog has been cleared. Now the Ministry operates on a 90-day turnaround time for completed applications (its target was 50 days). Previously applications had been turned around in 120 days on average, although some had required years.[13] There are currently 86 active applications.[14]

New guidance materials are in place for industry specifying that substandard applications will not be accepted. Substandard applications will be returned and the file will be closed.[15] The Ministry is interested in considering the use of third parties to certify the quality of information in applications. It would be necessary to ensure that the Ministry had the legislative and regulatory authority to do so.[16]

The Ministry has improved its efforts to ensure that companies refused a certificate of approval are not operating illegally. This is being addressed through improvements to information systems. District offices are now notified when approval applications are refused or returned to applicants for further information. This enables staff to conduct appropriate follow-up with companies to ensure they are operating within the law.[17]

Monitoring Hazardous Waste Shipments

Regulation 347 requires that shipments be accompanied by a manifest, that generators be registered, and that receivers be certified. The Ministry had committed to develop a comprehensive and integrated program for monitoring hazardous waste at all stages. The Auditor reported that the Ministry did not ensure that only certified carriers transport hazardous waste from registered generators to certified receivers.

At issue is the risk of the improper disposal of hazardous waste. Several areas of concern were noted by the Auditor including hazardous waste shipped from unregistered generators, the transport and receipt of hazardous waste by unauthorized carriers and receivers, inadequate ministerial follow up, and significant variances in quantities of waste shipped versus received.

The Auditor recommended that the Ministry should

- follow up on all significant waste shipments that originate with unregistered generators;
- investigate all hazardous waste carriers and receivers that are not authorized by their certificates of approval to handle the hazardous waste manifested;
- review all registered generators with no manifest activity for extended periods of time to ensure that they are not involved in unauthorized waste shipments and disposal;
- investigate significant discrepancies between the amount of hazardous waste shipped and the amount received; and
- implement procedures to ensure that hazardous waste temporarily stored at a receiving facility is not double-counted in determining the total hazardous waste produced in Ontario each year.

In its initial response the Ministry highlighted steps it takes to address non-compliance, including inspections to ensure that valid certificates of approval have been obtained and are being complied with, and that carriers and receivers are authorized to handle the waste manifested. It also focused on non-compliance regarding registration, suspicious company reductions in waste manifesting, and significant variances in waste shipped versus waste received.

Committee Hearings

The Ministry has completed inspections of those facilities that most often had the greatest weight discrepancies in waste sent versus waste received and found that waste was being properly handled and managed, posing no risk to the public or the environment. There was no evidence to suggest that waste was being lost or improperly disposed. Discrepancies were most often the result of differences in estimation of waste amounts by generators as compared to measurements of waste amounts by receivers.[18]

Discrepancies in the Biomedical Sector

During follow-up, the Ministry learned that some of the largest discrepancies are in the biomedical sector, particularly in Ontario hospitals.[19] (The medical sector accounted for about 60% of the discrepancies noted by the Auditor.[20]) The Ministry is working with the Ontario Hospital Association regarding the issue of estimation of weight versus measurement of weight.[21] The Ministry is planning to focus on education and outreach for the hospitals.[22]

In the hospital sector, sharps – needles and other medical supplies – constitute the principal waste. The Ministry went into approximately 46 or 48 of the hospitals with noted discrepancies and opened shipping containers. Many were half empty. The receiver took accurate container weight measurements because the receiver is paid by weight. The discrepancy occurred because containers (which had standardized defined weights) that were weighed by the receiver were half empty.[23]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

2. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on whether the Ontario Hospital Association has implemented measures to ensure that hazardous waste generated by hospitals is weighed accurately by the hospitals before it is shipped for disposal. If there continue to be weight inaccuracies in hazardous waste shipped by hospitals, the Ministry should indicate why this is the case, noting specifically whether the Ministry's planned focus on education and outreach for the hospitals has resulted in adequate training for relevant hospital personnel on how to accurately measure the waste.**

Committee Hearings (Continued)

Discrepancies in Other Sectors

The Ministry investigated cases other than those in the medical sector. Of the one-quarter of a million shipments occurring, discrepancies were noted in about 10% or 26,000 shipments. The Ministry took a sampling of companies that had a greater than 20% discrepancy.

One university made transcription errors; in another case a packaging company shipping supplies and the receiver used different units of measurement. One pharmaceutical company used a "dip tube measurement" for waste. There were 49 separate examples where the company measured the volume of waste using a dipstick and then made errors when converting the waste volume to a weight. An automotive supplier measured the specific gravity of waste produced and made mistakes in converting specific gravities to weights. One water purification and lab company was putting decimal points in the wrong place. One generator wrote 10 ESL. The acronym stood for estimated litres but was interpreted by those reading the data as 1,065 litres – an order of magnitude hundreds of times different. In another case a handwritten volume figure of 6,919 was mistakenly entered in HWIN as 69,116. Finally, a plastics company made an error in converting cubic yards to kilograms.[24]

Discrepancies Noted Through Truck Inspections

The Ministry began investigating errors after they were flagged by the Auditor.[25] In addition to the types of cases noted above, the Ministry pulled over trucks and inspected 20 loads of waste at three different transfer stations – two in the Greater Toronto Area (GTA) and one in central Ontario. No waste was being lost in transit but discrepancies existed due to the same types of issues associated with estimating and weighing as discussed above.[26] The Ministry's Assistant Deputy of Operations said he believed that the Ministry needs to improve its outreach and education to address the issue of administrative transcription errors.[27]

Ministry Intelligence Unit

About one-and-a-half to two years ago, the Ministry also created an intelligence unit with its investigations and enforcement branch. This year the unit is engaged in hazardous waste sector work. It is examining such issues as whether people are abusing the system or whether there are people operating outside the system.[28]

Manual and Electronic Manifests

Very little manifest information is received electronically. Private sector companies such as FedEx and Purolator use electronic manifesting, which is a best practice model.[29] Electronic manifesting would provide real-time data.[30] The Ministry is holding discussions with industries, in particular the five largest carriers, to see if it is possible to institute a pilot to examine the potential for electronic manifesting. The discussions are preliminary and a pilot has not yet been agreed upon.[31]

The Ministry said that it is necessary to find "that sweet spot of the public interest." There are 25,000 generators, a few hundred carriers and a few hundred receivers for a very large industry. For smaller business entities the costs of shifting to electronic manifests may not be affordable or the businesses may require transition time.

The Ministry wishes to avoid making the costs of participation in the system prohibitive, with the risk of people not paying and being driven "underground." The Ministry would then be required to put a lot more effort into inspection and enforcement. In its current review, the Ministry is examining ideas such as electronic manifesting, whether it could be required, and the associated operational or transitional issues.[32] The electronic transfer of information would not only be real-time, but would also reduce transcription errors that can occur, for example, from difficulties reading handwriting, when paper manifest data is entered in the electronic system.[33]

The Auditor noted that less than 1% of manifests were entered electronically at the time of his audit. The percentage of electronic entries had actually decreased since the last audit in 2003. The manifests produced by generators and carriers are almost universally manually submitted. There is no explicit built-in incentive for electronic entry. There may be an implicit incentive in that the Ministry may "hound" a business when it cannot read the manifests or follow up with inspections or investigations on the strength of improper submission of material.[34]

Approximately $1 million a year is spent on salaries for those staff members involved in entering paper-based data into the electronic system, but this includes funds for some supervision and helpdesk staff.[35]

The Committee suggested that perhaps the Ministry could charge a differential fee for carriers, depending on whether they are entering electronic manifests or paper manifests in order to create an incentive for electronic manifest submissions. The Ministry said this was a good idea and that it will consider it, if it has not already been discussed in the program review.[36]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

3. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on whether it will implement a pilot project with the larger hazardous waste carriers to examine the potential for carriers to submit electronic manifests to the Ministry. The Ministry should provide a timeline for the pilot project if it is to be implemented. The Ministry should also report to the Committee on:**

- **whether a large portion of generators and carriers could ever realistically be expected to use the electronic manifest system;**
- **what measures will be introduced to promote efficiencies in the paper manifest system for those generators and carriers who are likely to continue submitting paper manifests; and**
- **what measures the Ministry is taking to promote and increase the use of the electronic manifest system.**

Storage and Disposal of Hazardous Waste

The Ministry does not have accurate figures for the amount of hazardous waste produced, but the estimate is approximately 370,000 tonnes annually. Imported waste is disposed of at the Sarnia landfill site or transported to other facilities to be processed into less hazardous or non-hazardous wastes.

Pre-treatment requirements at landfill sites were introduced in the United States in the mid-1980s. Ontario Regulation 347 was amended in 2005 to prohibit the disposal of untreated hazardous waste in landfill sites, to require treatment standards. The phase-in of the new standards by 2009 should bring Ontario up to the stricter U.S. standards, and result in a reduction in the importation of hazardous waste.

Current provincial definitions of biomedical waste are outdated and provide insufficient guidance for the proper segregation of hazardous versus non-hazardous wastes. Furthermore, the definition of biomedical waste issued as a Ministry guideline in 1992 does not clearly identify special handling requirements or define comprehensive treatment requirements. The current regulation does not prohibit the disposal of pharmaceuticals and blood into municipal waste systems. The absence of clarity could result in costs incurred for treating non-hazardous waste as hazardous waste.

Hazardous waste (such as polychlorinated biphenyls (PCBs)) is housed at 479 storage sites throughout the province (in 2005 Ontario accounted for 90% of all PCBs' storage in Canada).

Significant progress has been made to reduce the amount of PCBs in storage. However, efforts to address this problem have been hampered due to potential costs and the limited options for destruction. Consequently, the Ministry has not pursued this matter because treatment is more expensive than storage. Over the past three years 500 PCB site inspections were conducted.

The Auditor made a recommendation to help reduce the substantial risk to the environment posed by the disposal and storage of hazardous waste. He proposed that the Ministry should develop a strategy to resolve concerns that have delayed regulatory amendments designed to reduce risks posed by medical waste and PCBs.

In its initial response the Ministry said that in November 2006, the federal government released its proposal on a draft PCB regulation for public consultation. The proposed regulatory change would be phased in by December 31, 2009, to eliminate all PCBs and PCB-containing equipment currently in storage, and limit the amount of time PCBs can be stored before being destroyed. The use of equipment containing PCBs at sensitive locations (for example, child-care facilities, schools, and hospitals) would also be prohibited starting December 31, 2009. Its use at all other locations would be prohibited as of December 31, 2014. Environment Canada is currently reviewing comments received and is in

the process of finalizing this regulation. Should their proposal proceed, PCBs in Ontario would fall under this framework.[37]

Committee Hearings

Hazardous Waste Amounts in Ontario

According to Ministry data about 340,000 tonnes of hazardous waste is generated annually in Ontario. Ontario imports about 155,000 tonnes of hazardous waste from other jurisdictions. It exports about 154,000 tonnes. Ontario's hazardous waste exports are therefore nearly equal to its imports.[38]

Toxics Reduction Strategy

The government has asked the Ministry to develop a toxics reduction strategy. The goal is for the strategy timeline to be in place by fall 2008; the strategy will be posted on the Environmental Bill of Rights registry for public comment.[39] A lot of what is classified as hazardous waste would also be called toxic under the toxics reduction strategy. The Ministry is evaluating experience in other jurisdictions.[40] It anticipates that the implementation of a toxics reduction strategy would reduce the amount of toxic material, and hence hazardous waste, generated because part of the toxics reduction strategy might focus on a shift to alternative, non-toxic substances.[41]

The Ministry is reviewing existing biomedical waste guidelines, following up on a commitment made in December 2007. It completed consultations with a number of key stakeholders in February and March 2008 and is now revising the guidelines to take into account comments received, helping to ensure that best practice is followed for managing biomedical waste. The Ministry planned to post a proposal notice on the Environmental Bill of Rights registry in the summer of 2008 for further consultation.[42]

Supplementary Information

The Ministry of the Environment provided the following information in relation to *Guideline C-4: The Management of Biomedical Waste in Ontario*: "The Ministry of the Environment has posted a draft revised Guideline on the Environmental Registry for a 60 day public consultation period."[43]

Hazardous Waste and Small and Medium-sized Businesses

Small and medium-sized businesses are covered by Regulation 347 and the hazardous waste regulatory system if they produce hazardous wastes. Requirements these businesses must fulfill include: generator registration, manifesting, and the need to send waste to sites that are appropriately licensed to receive the waste. Some exemptions in Regulation 347 deal with very small generators, related to very small amounts of waste (see Appendix 1). Dry cleaners are one example of small generators of hazardous wastes. Perchloroethylene, which is used in the dry cleaning industry, is identified as a hazardous waste and

is measured and tracked in terms of disposal. There are facilities in Ontario licensed to receive such materials and to recycle them into reusable products.[44]

Passages were cited from the Environmental Commissioner's report related to land disposal restriction (LDR) requirements, associated hazardous waste pre-treatment requirements and associated concerns over potential increased incineration and increased emissions of toxic contaminants and greenhouse gases. Passages cited also said that the Ministry included a "small quantity exemption" to reduce the impact on small generators.[45] (See Appendix 1.)

Hazardous Waste: Recycle, Landfill or Incinerate

Recycle

Hazardous waste may be dealt with in different ways. It may be processed and the by-products, recycled. This is good for business and the environment.[46]

Landfill

Hazardous waste may be land filled. The making of Regulation 347 is resulting in the implementation of new standards. The first, implemented in August 2007, relate to inorganic waste. The December 2009 second phase of implementation will relate to other hazardous waste (primarily organic waste). Once the regulation is fully in place the Ministry believes that Ontario's regulatory regime will be equivalent to that in the United States and the rest of Canada.

There were concerns that Ontario may be the recipient of large volumes of waste from outside its boundaries.[47] Environment Canada is responsible for regulating the import and export of hazardous waste. Ontario, through its *Environmental Protection Act* and Regulation 347, maintains the regulatory framework that governs the management of hazardous waste in Ontario, including waste coming from other jurisdictions. Now that regulations are harmonized and standards are the same, whether waste comes in or goes across the border mainly comes down to location, economic decisions and cost. There is no longer any incentive to send waste into Ontario because of disparity in standards.[48] (See below for a discussion on the Sarnia landfill.)

Incinerate (Emissions and Air Standards)

Hazardous waste may also be incinerated. There are two sites where incineration occurs. One is for biomedical waste incineration at a site in the Peel area; the other is for more generic incineration of hazardous waste at a site in Sarnia in southwestern Ontario.[49] The Ministry is not specifically looking at new regulatory proposals with respect to incineration and hazardous waste. However, it has been working on new air standards. Over the past four years new air standards have been introduced under Regulation 419 under the *Environmental Protection Act*. As the regulations are passed and implemented they impact end-of-stack emissions for all stack emissions, including incineration of waste.[50]

The Ministry has no compliance issues with either incinerator site. The Ministry frequently inspects the bio-medical incinerator in Peel region and said that the

incinerator's performance is exceptional. At the Sarnia site, incinerator emissions for compounds in 2007 were well within Ministry standards. All were below 20% of the allowable limits. The majority was less than 1%.[51]

This year the Ministry sent its trace atmospheric gas analyzer (TAGA) unit to the Sarnia incinerator to monitor the air. There are real-time emissions monitoring controls at the facility. There is a full-time inspector on site who has access to and can check data against government standards. Periodically an independent third-party does stack testing, which involves taking samples out of the stack and measuring for a much wider range of compounds and substances. The results from continuous monitoring, stack testing and the TAGA indicate that the incinerator was in full compliance all the time with Ontario air standards and that there were non-detects for many of the parameters.[52]

The Sarnia site has a landfill as well as an incinerator. The site is approved to receive a number of different hazardous wastes, including hauled liquid industrial waste that cannot be further recycled. This is a facility of last resort for disposition after consideration of recycling and reusing.[53] The Ministry monitors extensively (inspections occur around the clock). The site is quite well run. There has been an issue with respect to the odour of naphthalene coming from the landfill, though it is within limits. The company has taken significant action to deal with the odour.[54]

Used Oil and Related Products (Safety-Kleen, Burning Used Oil, Filters)

The Safety-Kleen company is an oil re-refiner that does recycling and processing. The Sarnia site does not have such recycling facilities. The practice of burning used oil in space heaters is addressed in Regulation 347. The regulation was amended in June 2007, to ban this type of used oil burning. There is a phase-in period for the ban. Compliance begins in 2009. The ban does not apply to northern Ontario, in recognition of the fewer options to send used oil to the Safety-Kleen recycling facility and fewer options in that part of the province to recycle and then properly handle the material. In addition, it does not apply to agricultural operations that burn their own used oil from their own machinery. There are also certain large industrial operations that may be approved to burn a specific type of used oil and other very specific types of waste-derived fuels.[55]

The municipal hazardous and special waste program (MHSW) covers oil filters and containers, antifreeze and similar types of waste generated, for example, by small garages. A garage generating that type of waste could take advantage of the program to have the waste go into a collection system for recycling. The program was approved in February and was expected to be in operation by July 2008.[56]

PCBs

Ontario has about 90% of PCBs that are stored nationally. According to 2006 information, there are about 110,000 tonnes of PCBs in storage in Ontario. Most of the PCBs are located at two sites. The Pottersburg Creek site in southwestern Ontario contains 78,000 tonnes of PCBs. It is the largest site. There is another PCB storage site in northwestern Ontario, in Coyle Township, near Kenora.[57]

The Ministry has received funds to address PCB contamination at the Pottersburg Creek site. The goal is to have storage of PCBs there cleaned up by December 2009. The site contains PCB-contaminated soils removed from a series of industrial properties in the 1980s. The soil is stored in a containment facility comprising four specially constructed units. The site is safe and secure. It is about 11 acres in size, with clay and synthetic liners. The Ministry spends about $32,000 a year for site security and monitoring. It will have the soils tested to determine the amounts of PCBs. Disposition methods differ depending on the amounts.

The Ministry will soon issue a request for proposal regarding destruction of the material, including final disposition. The soil could be sent to a site in Alberta, Swan Hills, which is fully equipped to destroy PCBs. Alternatively the soil could be sent to Quebec or the United States.[58]

A number of years ago a transport truckload of PCB-laden material dripped onto asphalt. The Ministry of Transportation dug up the road and the asphalt was sealed in a plastic liner. The waste is very low-level contamination and the Ministry said it will probably not require further attention.

Some electricity facilities are storing old transformer containers with PCBs that were used as coolant materials. As opportunities arise the facilities deal with the containers. There are approximately 500 or 600 such cases across Ontario.[59]

Committee Recommendations

The Standing Committee on Public Accounts recommends that:

4. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its timelines for releasing any new air standards which will have an impact on air quality in connection with the incineration of hazardous waste.**

5. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on progress in cleaning up the Pottersburg Creek PCB storage site in southwestern Ontario, specifying whether the Ministry is on track to meet its December 2009 timeline for project completion.**

Household Hazardous Waste

Under the *Environmental Protection Act* and its regulations, household wastes are not defined as hazardous waste and may be deposited in municipal landfill sites. The Ministry has provided funding to municipalities to conduct special collection programs (one-day collection events or permanent depots) for such household waste, but it is difficult to gauge their impact because the total amount of hazardous waste produced by households is unknown. Although most major centres have permanent drop-off locations, public awareness and accessibility present a challenge. Toronto and Sudbury offer home pickup for some hazardous materials.

Depots are required to comply with Ministry requirements, for example, obtaining certificates of approval, specifying acceptable wastes, registering as generators, and submitting manifests for transporting waste.

Waste Diversion Ontario

Waste Diversion Ontario's (WDO) mandate is to develop and manage waste diversion programs for various materials, for example, recycling paper and electronic equipment. In 2006 the Minister of the Environment directed WDO to establish a diversion program for household hazardous waste. This initiative included the consideration of several factors: financial and other incentives to promote reuse or recycling, the expansion of the number of collection sites, and the need for educational and public awareness programs.

The Auditor recommended that the Ministry should work with WDO and municipalities on a province-wide strategy for reducing the impact of household hazardous waste on the environment.

In its initial response, the Ministry said that the WDO's industry-funded Municipal Hazardous and Special Waste Program (MHSW) was received and posted on the Environmental Registry for a 30-day public comment period in June 2007.[60]

Committee Hearings

The MHSW program is an industry-led strategy to reduce the effects of household hazardous waste on the environment by providing more convenient management options for common household products such as paints, solvents, batteries and oil filters.[61] Program details are being established. Municipalities will have depots; work is also under way to arrange for some retail store take-backs. A hardware store or gas station that sells oil, for example, may actually be a take-back depot in the recycling process.[62] The program is designed to foster investment in new technologies. There is also a focus on public education.[63]

There are specified targets in the MHSW program for people bringing back materials, expanding the number of access points, and recycling industry material. The target for industry is to double the current materials recycled by the end of three years.[64] The Ministry is preparing to request the inclusion of more substances under the MHSW program.[65] It is considering a recently received WDO proposed waste electronics program which covers some hazardous materials.[66]

The MHSW program is significant because it makes companies that manufacture and import a variety of products responsible for their proper management. It is the major step toward extended producer responsibility, a principle embraced by leading waste management jurisdictions, which should be a key feature of waste management in Ontario.[67]

The *Waste Diversion Act, 2002* requires the Ministry to review the Act within five years. Accordingly, the Ministry will be launching a review.[68]

4.2 Information and Reporting Systems

Hazardous Waste Information Systems

Hazardous waste has been tracked by two management information systems–initially the Hazardous Waste Information System (HWIS) and now the Hazardous Waste Information Network (HWIN). They operate as follows:

- HWIS–(implemented in early 1990s) information from paper documents is manually entered into the system (e.g., generator registration forms and manifests documenting waste movements); and
- HWIN–an electronic system developed in 2002 providing direct input into the system from generators, carriers, and receivers.

The Auditor had concerns about the transition from one system to the other which were addressed in the 2003 Environet audit. Most significantly, HWIN could not accept manually entered information from paper documents, which constituted 99% of manifest transactions. In 2007 the Auditor noted that the proportion of manifests submitted electronically had not increased at all and paper manifests still represented 99.9% of the manifests. Consequently, HWIN benefits have not been fully realized. In addition, Ministry enforcement staff lack necessary, timely information and, estimated annual costs of $250,000 have been incurred to operate two systems and to manually record manifest data.

In 2005 a Ministry consultant evaluated the systems and concluded that both systems underperformed and neither was able to support Ministry needs in a number of areas including enforcement, operations and policy. [69] The consultant endorsed the development of a new system to manage hazardous waste information, noting the cost could be in the range of $100 million.

The Auditor recommended that the Ministry should identify its key information needs; consider how other jurisdictions obtain similar information; and formulate a business case that outlines the cost and benefits of various alternatives to meeting its information requirements.

In its initial response the Ministry noted initiatives to modernize its information systems enabling, for example, systems such as the Integrated Divisional System to interface with others, such as HWIN. This is a multi-year modernization effort; the Ministry is examining experiences and approaches in other jurisdictions.[70]

Committee Hearings

The Ministry is continually improving its HWIN system. It is migrating from its historic system to HWIN and currently spends about $1.7 million a year on HWIN. Enhancements include investments to produce timely compliance information (violation or exception reports of companies that either have not registered or tried to ship waste without being registered); and to track revenue reconciliation so that the Ministry knows who owes the government money and by how many days. The Auditor helped clarify required current and future improvements.[71]

Measuring and Reporting Program Effectiveness

The proper management of hazardous waste can be enhanced through the promotion of waste reduction, recycling, and environmentally safe disposal. However, MOE has not developed formal measurable objectives for such a program. For example, a recycling target was not set. The Ministry had not established other measurable objectives for the program, with the exception of the percentage of hazardous waste to be recycled. Former performance measures such as reducing PCB storage were not properly reported or followed up in subsequent years with any results. Areas of operation requiring definition and measurement include an assessment of hazardous waste generated, a determination of which waste could potentially be diverted to recycling, and a measurement of 'estimated' increases in recycling rates.

The public does not receive program management reports with quantifiable assessment data. Other provinces report on such activities indicating management trends, risk reduction and the identification of areas requiring remedial efforts.

The Auditor recommended that the Ministry should:

- establish more comprehensive performance measures for hazardous waste management;
- review the performance measures for hazardous waste management used by other jurisdictions for applicability to Ontario; and
- publicly report on those measures.

In its response the Ministry said that it is committed to continuous improvements in its programs and will continue to review its performance measures and will examine the experiences of other jurisdictions.[72]

Committee Hearings

The Ministry is looking to establish better performance measures. There are very specific targets for municipal hazardous and special waste.[73] It is also focusing on public reporting, transparency and accountability. These are factors in all of its programs. The Ministry said that it now has some very good public reporting and transparency mechanisms. It issues annual reports in areas such as drinking water, has long-standing air quality indices and runs sport-fish monitoring programs, with the information publicly available. However, it said that a more concerted effort across all programs is required. The Ministry is examining how it might improve in its hazardous waste program as part of its current review.[74]

4.3 Financial Assurance and Revenue

Financial Assurance

Under the *Environmental Protection Act*, the Ministry may require financial assurance as a condition of a certificate of approval or action pursuant to a director's order or regulation. The objective is to provide financial security on hazardous waste management to protect the taxpayer from damages (e.g., leakage

of hazardous waste, decommissioning costs). As of April 2007, the Ministry held $150 million in financial assurance with the security held ranging from $270 to $8.9 million. The majority of financial assurance was provided for waste disposal sites. Letters of credit were the most common form of security held. The Auditor noted that of the certificates reviewed for waste management carriers and receivers, 60% of the carriers and receivers were required, at the Ministry's discretion, to provide financial assurance.

The Auditor expressed concerns with the financial assurance provided, noting the need for timely financial assurance collection (there was $3.4 million outstanding six months after it was due), a lack of process for regular reassessment of required financial assurance amounts, and that financial assurance collected may not be sufficient to fund potential clean up costs.

The Auditor recommended that the Ministry should

- consider whether all hazardous-waste-management carriers and receivers should be required to provide financial assurance;
- collect financial assurance prior to issuing a certificate of approval; and
- periodically review whether financial assurance on hand is sufficient to cover potential spills and future costs of cleanup, waste removal, and disposal.

In its initial response the Ministry highlighted guidance documents for financial assurance, conditions for the annual re-evaluation of financial assurance amounts, and review and verification measures. It said the risk of cost to taxpayers for cleaning up contaminated sites will be reduced as a result of this work.[75]

Committee Hearings

The Ministry sees financial assurance as an important tool for reducing taxpayer cleanup cost risk.[76] It has reviewed and is now updating financial assurance requirements for all existing facilities. To ensure that financial assurance amounts are reassessed on a regular basis, all certificates of approval requiring financial assurance now include a standard condition for re-evaluating the amounts.[77]

A particular focus has been on waste receivers, including updating requirements when necessary. Carriers of hazardous waste have a financial obligation so the Ministry requires them to carry liability insurance. If an accident occurs involving a carrier in transit, the public is assured of carrier clean up resources, for example, for spills.[78]

The Ministry has new criteria for judging current financial assurance. There are nearly 400 certificates of approval that require financial assurance. There were also a number of applications under review for some time. Last summer and fall the Ministry brought the financial assurance review process up-to-date.[79] Issues examined included the amount that would be required if there were a problem at the facility in question; the nature of the waste handled at the facility; and how much it would cost "to get it fixed if somebody literally walked away."[80]

The Auditor noted that there were differing requirements. For example, some certificates of approval did not contain a requirement to annually update the financial assurance. In November 2007 the Ministry issued instructions to staff and industry that this information must be updated annually.[81] Factors, such as the cost of fuel, could significantly influence costs for the Crown or a company.[82] Staff members in the field now check financial assurance requirements as part of their inspection reports to ensure that the amount is sufficient.[83]

In the fall of 2007 the Ministry updated its guideline for the calculation of financial assurance, specifying details such as the types of engineering and labour components to be considered, the risk associated with the materials, and opportunities to fix problems that occur. It takes a significant amount of time to assess these issues properly. There are often extensive discussions, and sometimes disagreements, with proponents who file certificates of approval with the Ministry. Ultimately it's the Crown's decision but there is a right of appeal. If proponents feel, for example, that calculations were incorrect, they can appeal to the Environmental Review Tribunal.[84]

The Ministry referred to a case noted by the Auditor of a large industrial site in southwestern Ontario (not a hazardous waste site). The Ministry had $3.2 million or $3.4 million in financial assurance. One study indicated that if the corporation went "belly-up", total liability would be $60 million. The Ministry examined the case and determined that it would cost about $15 million to handle the Crown's liability, and issued an order to the corporation to increase financial assurance. The corporation has gone bankrupt.[85]

Hazardous Waste Fees

Pursuant to Regulation 347 hazardous waste generators are required to pay for registration, each manifest, and all disposal fees. The current fees, which were set in 2002, and as reported to the Management Board of Cabinet, were expected to recover all costs and to encourage the reduction of waste.

The registration fee is due upon registration, with certain payment options for manifest and tonnage fees. The general principle is payment prior to shipping, with outstanding balances settled before a generator re-registers for the next year.

The Auditor identified a number of issues related to the management of hazardous waste fees including the fact that fees generated significantly less revenue than anticipated, HWIN does not consistently identify generators that have not submitted fees, and HWIN does not reconcile fees received with registration, manifest and disposal data in the system. There are sometimes interface issues with the Ministry's systems. At year end 2005 the Ministry had outstanding receivables, but was unable to provide details on receivable balances by generator; as a result, it could not initiate the efficient collection of these funds.

The Auditor recommended that the Ministry should

- review the objectives of the fee structure to ensure that the original objective of fully recovering program costs is still realistic and, if so, assess the adequacy of fees in offsetting program costs;
- establish controls to ensure that HWIN reliably identifies unpaid registration fees;
- periodically assess the reasonableness of total fees collected as compared to expected fees based on the number of registrations and manifests and the tonnage of hazardous waste disposals;
- implement procedures to ensure that all generators certified for on-site disposal submit fees as required; and
- enhance HWIN so that it can calculate and identify outstanding debt by generator and track the amount of time debt has been outstanding, in order to focus collection efforts on generators with significant balances that have been outstanding for extended periods of time.

In its initial response the Ministry said that it has begun a review of the hazardous waste cost recovery program. To identify unpaid registration fees, the Ministry posts outstanding fee balances to each generator's account as paper manifests are entered in HWIN. The Ministry will enhance HWIN's ability to calculate outstanding debt and report on how long the debt has been outstanding, and will review fee collection options to recover outstanding fee balances.[86]

Committee Hearings

The hazardous waste program has a goal to fully recover the costs of administering the program, including the costs associated with policy development, monitoring, compliance, enforcement and information systems. A fee structure is accordingly in place that is intended to cover administrative costs.[87]

There are fees related to both generation and manifesting. As noted by the Auditor, the Ministry recoups only slightly less than one-half of program costs. Consequently, the Ministry is examining its fee structure and how better to move to cost recovery.[88]

The review will include discussion with the government and affected stakeholders. A draft of any proposed changes will be posted on the Environmental Registry for public consultation.[89]

The Ministry described an idea suggested by the Committee of having companies pay generator fees that are linked to the amount of product that they ship as excellent and one that it will examine.[90]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

6. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on steps that the Ministry is taking to comply with its Management Board of Cabinet submission that the Ministry will fully recover the costs of administration of the Hazardous Waste Program through hazardous waste generators' fees.**

4.4 Compliance

Selection of Facilities for Inspection

District Office and Sector Compliance Branch Inspections

MOE compliance staff members inspect hazardous waste generators, carriers, and receivers to help ensure compliance with legislation and policy. Violators may be subject to investigation and possibly prosecution.

District offices conduct ongoing program-specific inspections of facilities. Waste inspections include hazardous waste generators, carriers/processing sites, PCB storage sites, and disposal sites/facilities. The number of inspections has declined over the last three years.

The Sector Compliance Branch (SCB) complements District office inspections through province-wide inspections of selected industrial sectors. The SCB inspections are broad in scope covering all program areas such as air, water, sewage, and waste, and roadside inspections of waste carriers.

The Auditor reviewed the processes used by the Ministry to identify sites for inspection, noting that

- three times as many low-risk as high-risk facilities had been inspected by District offices;
- the SCB risk analysis to select industrial sectors was out of date (since 2000 only four of the 20 sectors producing the most hazardous waste have been inspected);
- there is no process to identify and inspect facilities not registered with the Ministry; and
- there was no documented evidence of coordination between the SCB and District offices to select facilities for inspection.

The Auditor recommended that the Ministry should ensure that its facility selection process is based on potential risk to the environment by

- using the formalized risk-based selection process already developed for District offices and selecting facilities for inspection based on documented risks;
- updating its risk analysis for the SCB;
- including all potential hazardous waste generators, carriers, and receivers in its risk assessment processes; and
- ensuring that District and Branch co-ordination efforts result in all high-risk facilities being inspected periodically.

In its initial response the Ministry outlined SCB and District inspection alignments and said in 2007/08 the Ministry plans to inspect high-risk facilities; follow-up on generators, receivers, and carriers that have exception reports in HWIN; and ensure that the facilities generating the most hazardous waste have had an inspection within the last two years.[91]

Committee Hearings

Monitoring (Effluent Standards)

The Ministry is proud of its environmental sciences and standards division and its monitoring activities. The Ministry has recently undertaken special work regarding waste entering sanitary sewer systems.[92] It is collaborating with the other provinces and territories to develop a new set of Canada-wide effluent standards covering the entire suite of effluents. The Ministry is also working with the Canadian Council of Ministers of the Environment (CCME) on new standards.[93] It believes the work on standards is close to conclusion.[94]

Sometimes when work is done nationally, standards reflect a compromise. The Ministry does not know of cases where Ontario has regulated beyond national standards but, the Ministry has a track record of undertaking necessary actions. It has a study underway to monitor out-products from municipal treatment plants (see Appendix 2).[95]

District inspectors work with municipalities and the operators of sewage treatment plants, in particular those that have sewer use agreements, so that industries can meet discharge limits. During inspections the Ministry checks with the municipality whether industrial discharges are within limits and will sometimes undertake an undercover exercise to examine industries in the area.[96]

Inspections and Enforcement

One of the Ministry's five key pillars for the hazardous waste program is effective regulatory oversight, including inspections and enforcement. The Ministry has a strong inspection regime based on risk and performance. If necessary, it prosecutes those who do not follow its rules.[97]

SCB inspections are now aligned with District inspections and the risk analysis framework for these inspections is updated. The branch and districts are coordinating inspection plans to ensure the high-risk facilities and underperforming facilities receive attention. The Ministry says it takes strong action to identify and follow up with generators, carriers and receivers who are out of compliance.[98] There is an active inspection program coupled with soft compliance (outreach and education) as well as hard compliance (investigations, enforcement and administering penalties).[99]

Landfill Inspection (Taro Site)

The Ministry has a number of ways of checking what goes into landfills. Many large landfills have dedicated landfill inspectors. Some large sites may have five or six full-time inspectors; other sites are managed through district and area offices. Site managers are consulted, trucks are examined, and if necessary, samples are taken which are sent to laboratories for analysis. Landfills are required to submit annual reports to the Ministry for assessment. If potential issues are identified, they are referred to inspectors. [100]

The district offices have environmental officers and technical support staff. The environmental officers check what is going into landfills. [101] Inspection blitzes are conducted. A few years ago the focus was on body shops and wrecking yards to ensure that antifreeze and oil were properly disposed.[102]

Regional inspectors are responsible for monitoring landfills in their area. Hamilton has both a regional office and a district office. A full-time dedicated inspector works at the Taro landfill site, where there have been allegations of inappropriate dumping of hazardous waste. The Ministry took samples at the site. The Ministry did not have the specific results at hand, but said that it concluded that appropriate materials were going into the landfill site.

When hazardous waste is inappropriately disposed in a landfill, it is removed at the expense of the person who owns the landfill or the person who put it there, if that person can be found. The Ministry would pursue all parties involved until the material is taken out of the landfill. It wishes to avoid liability.[103]

Border Patrols

The investigation and enforcement branch has conducted border patrols and has worked with the United States Environmental Protection Agency as well as Customs Canada. Trucks have been checked at the four border crossings for material both destined for and leaving Ontario to be able to ascertain that waste is correctly manifest and the location of final disposition.[104]

Tips Line

There is a Ministry tips line – 1-800-MOE-TIPS – administered through the Spills Action Centre. All tips are followed up, with resulting incident reports.[105] The Ministry believes it receives 30,000 or 40,000 pollution incident reports a year through the Centre (calls are from both urban and rural areas).[106]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

7. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on its collaboration with other provinces and territories to develop a new set of Canada-wide effluent standards, noting efforts undertaken to expedite completion of the new standards. The Ministry should specifically address developments regarding new standards for the disposal of hazardous effluents in sanitary sewer systems.**

Inspections of Hazardous Waste Facilities

While a significant number of inspections are performed annually, the number of annual inspections has declined in recent years and there has been a significant level of non-compliance across all industry sectors.

District offices and the Sector Compliance Branch (SCB) assess compliance rates differently, so the results are not directly comparable.[107] On the District level there is an approximately one-third non-compliance rate, which has been consistently reported over the last three years. The Auditor identified the following inspection concerns:

- Recommended enforcement had not been applied in approximately 20% of the Branch's inspections and 30% of the District office inspections;
- District offices used more lenient enforcement methods than the Branch.
- Inspectors were not verifying the weight or contents of each vehicle as recorded on the manifest.
- The Sector Compliance Branch consistently provided deadlines for facilities to take corrective action, which was not the case for District offices.
- The Ministry only required a letter from facilities, as opposed to a third-party confirmation that follow-up action had been taken on a timely basis and that the facilities were in compliance.

The Auditor recommended that the Ministry should:

- develop a consistent approach to rating the level of compliance found during its inspections;
- include surprise visits in its District office inspection process;
- apply enforcement methods consistent with the degree of non-compliance;
- periodically verify the contents and weight of a sample of vehicles that transport hazardous waste;
- implement a formal strategy for timely follow-up of non-compliant facilities; and
- review its processes to determine what other corrective actions to take to increase the level of compliance within the hazardous waste industry.

In its initial response the Ministry said that as part of its regular review and update of the compliance program, it would consider how to ensure that the program continues to address hazardous waste generators, transporters, and processes, and how to move toward full compliance with legislation and policy. In 2007/08, the Ministry planned to review the reporting methodology and differences in compliance assessment done by the SCB and District offices with a goal to achieve consistency in compliance assessment. The Ministry follows up on non-compliance and determines corrective actions on a case-specific basis.[108]

Committee Hearings

There are 22 district and area offices across Ontario with environmental officers. The officers live and work in those communities. They are looking for instances where there may be improper registration, weighing or shipping of hazardous waste. There are surprise inspections. In a project across districts, staff members are searching for people who are not in compliance, perhaps shipping illegally. There are 83 convictions registered under this program, fines totaling $2.3 million and about another 30 prosecutions under way.[109]

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

8. **The Ministry of the Environment shall report to the Standing Committee on Public Accounts on measures undertaken to ensure that the Ministry's inspections are conducted through a formalized risk-based inspection system designed to better protect the environment from the threats posed by hazardous waste.**

APPENDIX 1: SMALL QUANTITY EXEMPTIONS AND INCINERATION

The Ministry provided the following information related to small quantity exemptions for the reporting of hazardous waste and the impact of using incineration to meet land disposal restriction (LDR) requirements:

Hazardous wastes generated by small quantity generators (SQG) and the land disposal restriction (LDR) regulation

Ontario's LDR regulation requires that hazardous wastes must be treated before they are land disposed. Small quantity generators (SQGs) are exempted from this treatment provision. An SQG is a generator that produces a total of less than 100 kg in any month of hazardous waste chemicals, hazardous industrial wastes and characteristic wastes. Acute hazardous waste chemicals and severely toxic wastes are excluded from the SQG requirements and must meet LDR registration, notification and treatment standards.

This SQG exemption is not the same as the small quantity exemptions as described below. As such, all of the other hazardous waste requirements, including registration and manifesting, need to be met by these small quantity generators.

Small quantity exemptions (SQE)

Ontario's management framework for hazardous wastes includes generator registration, manifesting for waste shipments, as well as approvals for the carriers and receivers of this waste. If a generator has very small amounts of hazardous waste, the definition in the regulation excludes this small amount from these requirements. The amount excluded can be up to a maximum of 1 kg or 5 kg per month, depending on the type of hazardous waste.

For example, if a dry cleaner generates less than 5 kg of waste dry cleaning solvent in a month (solvent is used to clean clothes), then this waste is not considered to fall within the hazardous

waste requirements of the regulation. If at any time they generate more than this amount, it must be managed as hazardous waste.

Use of incineration technologies to meet LDR treatment standards

The Environmental Commissioner, in his 2000-2001 annual report, identified that there was an urgent need for Ontario to harmonize the management of hazardous waste with the United States by adopting its land disposal restrictions program. As a result of the Government amending Regulation 347 in 2005 to include land disposal restrictions, the Commissioner wrote in his 2005-2006 annual report that "Ontario's new land disposal restrictions represent the most significant reform of the province's waste management regulation in decades, addressing past concerns raised by the ECO and stakeholders that hazardous wastes were being imported to Ontario to avoid tougher U.S. requirements."

The land disposal restriction (LDR) program sets out specific treatment standards for hazardous wastes that need to be met before they can be land disposed in Ontario. The U.S. Environmental Protection Agency developed these treatment standards based on extensive research using available technologies that best minimized contaminant mobility and/or toxicity. These treatment standards either destroy or remove the harmful contaminants from the waste or reduce the mobility of these contaminants to prevent them from adversely affecting the land and groundwater.

Some treatment standards specifically identify combustion as the required treatment technology to meet LDR requirements (e.g. for specific hazardous waste chemicals); however the majority of LDR treatment standards are concentration-based. While many of these standards may be based on incineration technologies, there is no requirement to use incineration if alternate technologies can achieve the same level of treatment.

All air emissions, including those from incinerators, must meet the requirements of Ontario Regulation 419, which came into effect in 2005. This regulation introduced 40 new standards for air toxics. The regulation was amended in 2007, introducing an additional 19 standards. In addition to that, any incinerator built in Ontario must meet Canada wide standards on dioxins and furan and mercury.[110]

APPENDIX 2: MUNICIPAL SEWAGE TREATMENT PLANTS STUDY

The Ministry provided the following information on results of a current study to monitor out-products from municipal treatment plants:

> To support policy and program development, the Ministry carried out a survey of the inputs to and outputs from 46 municipal sewage treatment plants and the leachates from 36 landfill sites that are treated at municipal sewage treatment plants.
>
> The study was carried out to determine the general chemical characteristics of STP influents, effluents, untreated sludges and landfill leachates. The study compared a selection of municipalities with different sizes and types of treatment plants, regional differences, those receiving leachate and not receiving leachate, and also reflective of different types of discharges to the treatment plants (e.g. industry, rural, urban).
>
> Overall, from the report, it can be concluded that STPs are performing according to their design to remove conventional compounds associated with domestic wastewater.
>
> The results of each plant and landfill have been shared with their respective municipalities and the report is expected to be finalized in August 2008. The Ministry will be exploring those areas identified in the report as requiring further assessment. We anticipate completion of a more thorough evaluation by the end of 2008 to identify next steps in treating any substances of concern.[111]

NOTES

[1] Ontario, Office of the Auditor General, *2007 Annual Report* (Toronto: The Office, 2007), p. 183.
[2] Ontario Legislative Assembly, Standing Committee on Public Accounts, *Hansard: Official Report of Debates,* 39th Parliament, 1st Session (May 7, 2008): P-147.
[3] Office of the Auditor General, *2007 Annual Report*, p. 185.
[4] Standing Committee on Public Accounts, *Official Report of Debates*, pp. P-147 and P-155.
[5] Ibid., p. P-155.
[6] Ibid., p. P-148.
[7] Ibid., p. P-165.
[8] Ibid., p. P-155.
[9] Ibid., p. P-149.
[10] Ibid., p. P-166.
[11] Ibid.
[12] Ontario, Ministry of the Environment, *Report Back to the Standing Committee on Public Accounts – Questions and Requests for Additional Information: 2007 Annual Report, Auditor General: Section 3.08, Hazardous Waste Management, Ministry of the Environment,* May 22, 2008, p. 5.
[13] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-166.
[14] Ibid., p. P-167.
[15] Ibid., p. P-166.
[16] Ibid.
[17] Ibid., p. P-148.
[18] Ibid.
[19] Ibid., p. P-149.
[20] Ibid., p. P-150.
[21] Ibid., p. P-149.
[22] Ibid., p. P-150.
[23] Ibid.
[24] Ibid.
[25] Ibid.
[26] Ibid., p. P-151.
[27] Ibid., pp. P-149 and P-151.
[28] Ibid., p. P-151.
[29] Ibid., p. P-149.
[30] Ibid., p. P-162.
[31] Ibid., p. P-149.
[32] Ibid., pp. P-155 and P-162.
[33] Ibid., p. P-162.
[34] Ibid., p. P-165.
[35] Ibid.
[36] Ibid., p. P-166.
[37] Office of the Auditor General, *2007 Annual Report*, pp. 190-192.
[38] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-160.
[39] Ibid., pp. P-153 and P-161.
[40] Ibid., p. P-161.
[41] Ibid.
[42] Ibid., p. P-148.
[43] E-mail correspondence with the Ministry of the Environment on November 4, 2008. The Ministry said that the draft Guideline can be accessed via the Ministry's web site at www.ontario.ca/environment by choosing "Environmental Registry" on the Ministry home page. It is then necessary to type "010-3864" in the EBR Registry Number Field.
[44] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-151.
[45] Ibid., pp. P-160-161.
[46] Ibid., p. P-152.
[47] Ibid.

[48] Ibid., p. P-160.
[49] Ibid., pp. P-152, P-153 and P-158.
[50] Ibid., p. P-153.
[51] Ibid., p. P-158.
[52] Ibid.
[53] Ibid., p. P-157.
[54] Ibid.
[55] Ibid., p. P-159.
[56] Ibid.
[57] Ibid., p. P-165.
[58] Ibid., pp. P-164 – P-165.
[59] Ibid., p. P-165.
[60] Office of the Auditor General, *2007 Annual Report*, pp. 192-193.
[61] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-148.
[62] Ibid., p. P-159.
[63] Ibid., pp. P-159 and P-160.
[64] Ibid., p. P-159.
[65] Ibid., p. P-152.
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[67] Ibid., p. P-148.
[68] Ibid., p. P-152.
[69] Office of the Auditor General, *2007 Annual Report*, p. 194.
[70] Ibid., pp. 193-194
[71] Standing Committee on Public Accounts, *Official Report of Debates*, pp. P-155 and P-156.
[72] Office of the Auditor General, *2007 Annual Report*, pp. 194-195.
[73] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-161.
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[83] Ibid., pp. P-156 and P-157.
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[92] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-153.
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[95] Ibid., pp. P-154 and P-155.
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[99] Ibid., p. P-149.
[100] Ibid., p. P-163.
[101] Ibid.
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[103] Ibid., p. P-164.
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[108] Ibid., pp. 201-203.
[109] Standing Committee on Public Accounts, *Official Report of Debates*, p. P-151.
[110] Ministry of the Environment, *Report Back to the Standing Committee on Public Accounts*, pp. 3-4.
[111] Ibid., p. 6.