

Chapter 3

Section 3.08

Ministry of the Environment

Hazardous Waste Management

Background

Hazardous wastes include a broad range of materials that are corrosive, radioactive, toxic, pathological, or flammable, such as manufacturing residues (for example, waste acid, contaminated sludge, and complex chemicals), medical waste from hospitals, spent photofinishing chemicals, waste pesticides, motor oil, discarded batteries, and unused cleaning products from homes. These wastes require special handling to reduce their adverse effects on human health and the environment. Hazardous waste is primarily generated by industrial and manufacturing processes; however, it can also be generated by the commercial and institutional sectors, and by households.

The Ministry of the Environment (Ministry) is responsible for ensuring that hazardous waste is collected, stored, transported, treated, and disposed of with due regard for the environment and public health. Excluding households, Ontario produces approximately 400,000 tonnes of hazardous waste annually, according to ministry estimates. About 30,000 tonnes are disposed of on-site in private landfills or in incinerators, or discharged to approved sewage treatment systems, and the remainder (370,000 tonnes) is transferred

off-site for storage, processing, treatment, or disposal. Ontario has one commercial landfill site that receives about 170,000 tonnes of hazardous waste for disposal each year. Much of this waste is imported from the United States, which has stricter hazardous waste requirements, and from other provinces.

The Ministry governs the management of hazardous waste by authority of the *Environmental Protection Act* and its regulations, primarily Regulation 347—General Waste Management. This regulation requires generators of hazardous waste to register with the Ministry on an annual basis, provide details of the type and quantity of hazardous waste to be generated, and pay related fees. Carriers must obtain authorization from the Ministry to transport hazardous waste, and receivers must obtain Ministry authorization to receive, store, or process it. Each off-site movement of hazardous waste must be tracked on a form known as a manifest. The manifest accompanies the waste from its point of origin to its point of disposal and is signed off by each party as the waste transfers from the generator to the carrier and the receiver. Each party submits a copy of the manifest to the Ministry so that it can track the movement of the hazardous waste. In Ontario, there are approximately 24,000 generators, 800 carriers, and 800 receivers of

hazardous waste. All carriers and receivers must obtain certificates of approval from the Ministry that outline the specific conditions their operations must follow in order to protect the environment. Compliance staff at the Ministry's district offices and in its Sector Compliance Branch perform inspections to help ensure compliance with hazardous waste legislation and ministry policy.

Operating expenditures for the Ministry's Hazardous Waste Program totalled \$14.6 million in the 2006/07 fiscal year. Most of these expenditures relate to ensuring compliance (\$8.2 million), reviewing certificates of approval (\$1.2 million), and monitoring waste shipments (\$2 million).

Audit Objective and Scope

The objective of our audit was 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.

The criteria used in our audit were discussed with and agreed to by ministry management and related to systems, policies, and procedures that the Ministry should have in place.

The scope of our audit included a review and analysis of relevant documentation, as well as discussions with ministry staff responsible for program delivery. We also analyzed data from the Ministry's systems for registration and tracking of hazardous waste. Our work was carried out at the Ministry's main offices in Toronto and at selected district offices throughout Ontario.

We did not rely on the Ministry's internal auditors to reduce the extent of our work because they had not conducted any recent work in the areas covered by our audit.

Summary

Partly owing to continuing problems with a computer system implemented in 2002, the Ministry does not yet have adequate monitoring and inspection procedures in place to ensure compliance with legislation and regulations aimed at protecting the environment from the risks posed by hazardous waste. Specifically, the system implemented in 2002 was not, at the time of our audit, achieving its intended purpose of supporting an electronic-manifest system, nor was it readily providing the information needed for district and head office staff to identify potential problems on a timely basis. In fact, most staff we talked to indicated that the previous system had better and more user-friendly analytical and reporting capabilities, enabling them to focus their inspection and other activities on those areas presenting the highest risk. The system's weaknesses limit the ability of staff to effectively monitor the volume of hazardous waste activity in the province and contributed to many of the following concerns:

- We identified over 5,000 generators that were registered as hazardous waste generators in 2004 but not in 2005, yet the Ministry had not determined whether they were still in operation and generating hazardous waste. Also, many generators registered after the deadline, resulting in unnecessary costs to the Ministry, necessitating reminder notices and preventing the Ministry from effectively following up on these generators—yet there are no penalties for filing late.
- Certificates of approval from the Ministry are required for hazardous waste carriers and receivers to establish, operate, enlarge, or extend a site or system. The Ministry reviews certificate applications to ensure that the applicant's operations will not have an adverse effect on the environment. As of

January 2007, we found that of the certificate applications yet to be processed, 50% had been in the assessment stage for more than one year and 20% for more than three years. The Ministry also does not routinely follow up on companies whose applications were refused or that are found to be operating without a certificate of approval, and we found a number of companies that were operating without the required certificate of approval.

- We identified over 26,000 shipments of hazardous waste in 2005 where the quantity received was less than the quantity shipped by the generator. The difference was greater than 10% in half of these shipments, with no explanation for or follow-up on the discrepancy. The lack of follow-up and other exceptions noted during our audit indicated that there is a risk that a significant amount of hazardous waste may not be disposed of properly.
- We identified almost 900 registered hazardous waste generators that apparently had not shipped any hazardous waste for the last three consecutive years—as evidenced by the absence of manifests, which are required to accompany all shipments of hazardous waste. The absence of manifests could indicate that hazardous waste, if not being accumulated on-site, was being shipped without the required documentation and disposed of inappropriately. The Ministry does not produce a report to highlight registered generators with no manifest activity so that they could be inspected to see whether they were still generating hazardous waste to be disposed of off-site.
- The Ministry may require carriers and receivers of hazardous waste to provide financial assurance to ensure that the government does not need to pay for hazardous waste cleanup. As of April 2007, the Ministry held \$150 million in financial assurance from over

700 carriers and receivers of waste. However, the financial assurance collected is not sufficient to fund cleanup costs when significant problems do arise. For example, a chemical company that provided financial assurance totalling \$3.4 million for a landfill site experienced problems with leakage, and cleanup costs have been estimated to be \$64 million.

- Hazardous waste generators are required to pay fees to the Ministry to recover the costs related to the management of hazardous waste in the province. In the last two years, the Ministry spent over \$30.6 million to administer the Hazardous Waste Program and collected only \$12.4 million.
- Ministry compliance staff may inspect any hazardous waste generator, carrier, or receiver governed under the *Environmental Protection Act*. Although the Ministry performed a significant number of inspections over the last three years, its selection of facilities for inspection was often not based on risks posed to the environment. Only four of the 20 largest hazardous-waste-producing sectors had been inspected, and in at least the last five years, the Ministry had not performed any inspections at 11 of the 30 largest hazardous-waste-generating facilities in the province. In addition, there was no process in place to identify and inspect unregistered facilities.
- Ministry inspectors had found a significant level of repeat non-compliance over the last three years. For example, 40% of the inspection reports we reviewed at the Ministry's district offices showed that similar violations had occurred in the past, but the Ministry had given these repeat violators more severe penalties in only 20% of the cases tested. Overall reported non-compliance rates may also be lower than is actually the case because district offices do not conduct surprise inspections, 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.

We sent this report to the Ministry and invited it to provide responses. We reproduce its overall response below and responses to individual recommendations following the appropriate recommendation.

OVERALL MINISTRY RESPONSE

The Ministry appreciates the observations and recommendations of the Auditor General and will take action to implement improvements to its Hazardous Waste Program.

For example, in 2005, the government amended Regulation 347 under the *Environmental Protection Act*, which banned the land disposal of untreated hazardous wastes in Ontario. Updated registration, storage, and processing requirements have been phased in. The first treatment standards related to the land disposal restrictions took effect on August 31, 2007. The remainder of the treatment standards will become effective on December 31, 2009. These new, strict regulations and standards have brought Ontario onto an equal footing with the United States and will help to ensure that these wastes are made as safe as possible before being finally disposed in landfills.

The Ministry also continues to make hazardous waste management a priority in our inspection and compliance programs. Provincial inspections of hazardous waste producers are helping us better assess overall hazardous-waste-management activities in the province and continuously improve the program. Information learned from inspections is used to plan for future years to ensure that we target those facilities that pose the greatest risk to human health and the environment.

Detailed Observations

HAZARDOUS WASTE MANAGEMENT OPERATIONS

Registration of Hazardous Waste Generators

Regulation 347 under the *Environmental Protection Act* (Act) defines a “generator” as the operator of a waste generation facility. Pursuant to Regulation 347, every hazardous waste generator that is involved in the production, collection, handling, or storage of hazardous waste must register with the Ministry before transferring any hazardous waste from its generation facility and must submit an annual generator registration report on or before February 15 each year.

In 2003, we reported that a majority of the hazardous waste generators failed to register on time, and the Ministry made little effort to follow up on delinquent registrants. We 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. To address this recommendation, the Ministry stated that it would send reminder notices to hazardous waste generators known to it.

During our testing, we were informed that notices were sent to over 30,000 generators in November 2006 to remind them to renew their registrations by the February 15, 2007, deadline. Following the registration deadline, second notices were sent to those generators that had failed to renew their registration. Of the generators that registered in 2006, almost 30%, or over 5,000 generators, registered after the February 15 deadline with no repercussions. The Ministry claimed that up to five reminder notices were sent to non-compliant

generators for the 2005 registration period. The sheer volume of non-compliance results in unnecessary costs to the Ministry in terms of reminder notices and limits the effectiveness of any follow-up actions.

Although renewal notices were sent to those that failed to re-register from one year to the next, a large number of generators still did not register. We identified over 12,000 generators that were registered in 2004 but not in 2005. According to the Ministry, almost 7,000 were no longer in operation. However, there was no evidence that district offices had been contacted to investigate whether the remaining 5,000 generators of hazardous waste that had not registered were still in operation.

RECOMMENDATION 1

To ensure that all hazardous-waste-generating facilities are registered as required, the Ministry of the Environment should:

- consider implementing deterrents to encourage generators to register by the legislated deadline and help reduce the significant volume of non-compliance; and
- 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.

MINISTRY RESPONSE

The Hazardous Waste Information Network (HWIN) system produces exception reports on shipments originating from unregistered generators or handlers not authorized by their certificates to handle hazardous waste that are sent to district offices for follow-up and resolution. The HWIN system can also report on generators, carriers, receivers, inactive companies, and manifest quantity discrepancies. The Ministry will monitor and report on those generators not registered by legislated timelines and inform

district offices for follow-up action in the event of any non-compliance.

Certification of Hazardous Waste Carriers and Receivers

The *Environmental Protection Act* requires carriers and receivers of hazardous waste to obtain certificates of approval from the Ministry that permit them to establish, operate, enlarge, or extend a site or system. Carriers are those who operate the facilities, equipment, and vehicles used in the collection, transportation, and storage of waste. Receivers operate processing or treatment facilities as well as landfill sites.

Certificates of approval are legally binding documents that outline specific conditions that must be met by the operator of each hazardous waste site to ensure the protection of the environment. Certificates detail a number of requirements such as the preparation of records, the maintenance of equipment, and the appropriate handling, disposal, and storage of hazardous waste. For management information purposes, the details of hazardous waste certificates, along with certificates for other waste, as well as for air and water programs, are to be recorded in the Ministry's Integrated Divisional System (IDS).

We reviewed the certificate of approval process and noted that:

- The Ministry annually receives approximately 1,000 certificate-of-approval applications for hazardous and non-hazardous waste. Although IDS cannot distinguish between hazardous and non-hazardous waste certificates, we estimate that approximately 100 hazardous waste certificates are approved annually. As of January 2007, there were over 600 waste applications yet to be processed, of which 50% had been in the assessment stage for more than one year and 20% for more than three

years. According to the Ministry, over the past 15 years there has been an increase in both the number of applications received annually and the workload per application as the complexity of the applications is increasing.

- The Ministry has established a target processing time of 50 days for waste applications. According to ministry policy, processing time excludes the time staff are waiting for information from the applicant. In our sample, the average processing time was over 120 days. In each of the last five years, the Ministry has not been able to meet its 50-day target for 40% of the waste applications processed. Ministry staff indicated that, in addition to staff shortages, delays were sometimes caused by factors such as the complexity of operations and the hearings that were required for controversial facilities. The onus is primarily on the Ministry to assess the appropriateness of the application, whereas other government programs such as forestry and mines require the applicant to submit independent third-party evidence that the proposal complies with legislation and will adequately protect the environment.
- The Ministry utilizes a checklist to ensure that all required information for certificate-of-approval applications is received and documentation is complete. We reviewed a sample of applications processed in the 2005/06 fiscal year and noted that applications for waste disposal sites were generally complete, but over half of the carrier applications tested were missing required documents such as detailed operational plans and proof of specialized driver training.
- The Ministry does not routinely follow up on companies whose applications were refused or that are found to be operating without a certificate of approval. We followed up on a

sample of facilities inspected by the Ministry before March 31, 2006, that were found to be operating without certificates of approval. As of April 2007, eight of the 12 companies that were found to be operating without a certificate of approval had still not applied for a certificate, and another facility, whose application was refused in 2006, was operating nevertheless without the legally required certificate.

- Limitations in the Ministry's certificate management system make it difficult to monitor certificates of approval. Certificates require the holder to take certain actions at specified times. For example, certificates for hazardous waste sites usually require the holder to submit an annual report to the district office. Reporting requirements written into a certificate are not tracked by the management system. This makes it difficult to know when a holder may be in violation of its certificate and which requirements it is not meeting. In addition, the system does not contain all existing certificates, because certificates that were issued before 1986 and are still valid have not been entered into the system, and the system does not interface with the computer system that tracks the movement of hazardous waste. Thus, certificate information must be independently entered into both systems.

RECOMMENDATION 2

To help ensure that certificates of approval are in place for all carriers and receivers of hazardous waste and that certificate applications are properly assessed and approved on a timely basis, the Ministry of the Environment should:

- 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.

MINISTRY RESPONSE

As part of the inspection of carriers and receivers, the Ministry ensures that a valid certificate of approval has been obtained and that the holder of the certificate is complying with all of its conditions.

The Ministry has begun to:

- draft improved application guidance material to ensure that requirements for certificates of approval are clearly described. This will help ensure that applications are properly assessed and processed on a timely basis;
- re-engineer application in-take procedures to accept only complete applications and quickly return deficient applications; and
- fast-track backlogged applications.

The Ministry will consider options for the submission of independent third-party evidence that indicates that application proposals comply with legislation and adequately protect the environment.

By November 30, 2007, district offices will be notified when applications are refused or returned to applicants, allowing for appropriate follow-up and resolution.

The Integrated Divisional System is being updated to distinguish between hazardous and non-hazardous waste certificates and will allow staff to track and report on conditions in the certificates of approval. These enhancements are scheduled for completion by November 30, 2007.

Monitoring Hazardous Waste Shipments

Pursuant to Regulation 347 under the *Environmental Protection Act*, all shipments of hazardous waste must be accompanied by a manifest, be received from a registered generator, and be delivered to a certified receiver. In response to our 2003 audit of the Hazardous Waste Information Network (HWIN), the Ministry made a commitment to develop a comprehensive and integrated program for monitoring hazardous waste from the point of generation to its ultimate disposal.

We reviewed the Ministry's monitoring of hazardous waste shipments and found that the Ministry did not have adequate procedures in place to ensure that only certified carriers transported hazardous waste from registered generators to certified receivers. Consequently, there is a risk that a significant amount of hazardous waste is not being disposed of properly. Specifically, we noted:

- Unregistered generators made over 5,000 shipments of hazardous waste in 2005. The Ministry could not explain to us why the generators were not registered. Although the majority of these shipments were listed on generator exception reports, we traced a sample to determine if related inspection or incident reports were noted in the Ministry's

Integrated Divisional System. We found no evidence that district offices had performed any follow-up action on these unregistered generators. During our 2003 HWIN audit, we noted similar concerns, in that 1,697 incidents were noted where hazardous waste was transported by unregistered generators without any evidence of ministry follow-up.

- We identified manifests where carriers transported hazardous waste and receivers received hazardous waste even though they were not authorized to do so according to their certificates of approval. All of the uncertified carrier movements were included in carrier exception reports, but only half of the uncertified receipts of waste were included in the receiver exception reports. Regardless, ministry follow-up was generally inadequate for both types of exceptions, as there was no record of an inspection or incident report for 80% of the cases where unauthorized shipments or receipts were noted.
- We identified almost 900 registered hazardous waste generators that had no manifest activity for the last three consecutive years. Such a situation could indicate that hazardous waste, if not being accumulated on-site, was being shipped without the required documentation and disposed of inappropriately. The Ministry does not produce a report to highlight registered generators with no activity, nor were there procedures in place to ensure that carriers with no manifest activity were also being highlighted for possible investigation.
- We identified over 26,000 shipments of hazardous waste in 2005 where the quantity received was less than the quantity shipped by the generator. We traced a sample back to its original manifests and noted only one instance of data entry error. In all other cases no explanation was provided for the

discrepancy. The Ministry responded that the management system is designed to accept a 10% variance between quantity shipped and quantity received. However, over half of these waste shipments had variances in excess of 10%, with some as high as 90%. The Ministry did not conduct sufficient follow-up to ensure that the quantity of waste shipped was reasonable compared to the amount received.

- The Ministry relies on manifest data to determine how much waste is produced and disposed of in Ontario. However, because waste transfer stations are treated as both receivers and generators, a significant amount of hazardous waste is double-counted. The Ministry cannot determine how much hazardous waste has been double-counted and therefore does not have reliable information on the quantity of hazardous waste produced and disposed of in the province.

RECOMMENDATION 3

To ensure that hazardous waste shipments are properly monitored to minimize risk to the public and the environment, the Ministry of the Environment 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 shipment 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.

MINISTRY RESPONSE

Hazardous waste carriers and receivers that are not authorized to handle manifested waste are identified through the current exception-reporting process and all district offices are required to follow up on every exception report.

As part of the inspection of carriers and receivers, the Ministry ensures that a valid certificate of approval has been obtained and that the conditions of the certificate are being complied with. This includes verifying that the carriers and receivers are authorized to handle the waste manifested.

Our planned inspection program will help to ensure that hazardous waste in the province is managed in a safe and responsible manner.

For example, as part of our 2007/08 inspection plan we will:

- inspect generators repeatedly manifesting waste without registering or whose registration has expired;
- inspect companies that have historically generated high volumes of waste but have significantly reduced their waste manifesting; and
- follow up on significant variances between the amount of hazardous waste shipped and the amount received.

Storage and Disposal of Hazardous Waste

There are no accurate figures for the amount of hazardous waste produced in the province, but the Ministry estimates that approximately 370,000 tonnes of manifested hazardous waste are shipped to waste management facilities annually. In recent

years, Ontario has imported a significant amount of hazardous waste from the United States, which has stricter hazardous waste requirements, and from other provinces. This waste is disposed of in a major landfill site in the Sarnia area or transported to other waste management facilities to be processed into less hazardous or non-hazardous waste.

Much of the imported hazardous waste that is disposed of in the Sarnia landfill site remains untreated. In 2004, 177,000 tonnes of hazardous waste were deposited into this site. Of this amount, 79,000 tonnes were generated in Ontario and 98,000 tonnes were imported from the United States (73,000 tonnes) and other provinces (25,000 tonnes).

Pre-treatment requirements for depositing hazardous wastes at landfill sites have been in place in the United States since the mid-1980s. In 2005, Ontario Regulation 347 was amended to put in place restrictions that would eventually prohibit the disposal of untreated hazardous waste in landfill sites and require the waste to meet specific treatment standards. These new standards will be phased in and are expected to be fully in place by December 31, 2009. Once in place, they are expected to bring Ontario in line with stricter U.S. standards and therefore reduce the importation of hazardous waste from the United States and other provinces. Restrictions on the disposal of untreated hazardous waste in landfill sites are also expected to encourage industries to produce less hazardous waste because of the added costs of treatment. The amendment also sets new on-site storage rules that are intended to ensure that waste is stored appropriately and not indefinitely.

Some medical waste may be inappropriately disposed of in municipal waste systems. The Ministry informed us that the current definitions of medical waste in Ontario are outdated and provide little guidance for the health community to properly segregate municipal waste from waste that requires special attention, such as medically related waste.

As well, this lack of clarity could result in significant amounts of non-hazardous waste being treated as hazardous waste, which unnecessarily increases costs. One definition of medical waste was initially prepared in 1992 and issued as a ministry guideline. In 2001, the Ministry drafted a regulation for a new definition of medical waste, but certain sectors of the industry objected and the regulation has not been implemented. The new definition would have clearly identified the types of waste that require special handling and set out comprehensive treatment requirements. As well, it would have prohibited the disposal of pharmaceuticals and blood into municipal waste systems, which is allowed under the current regulation.

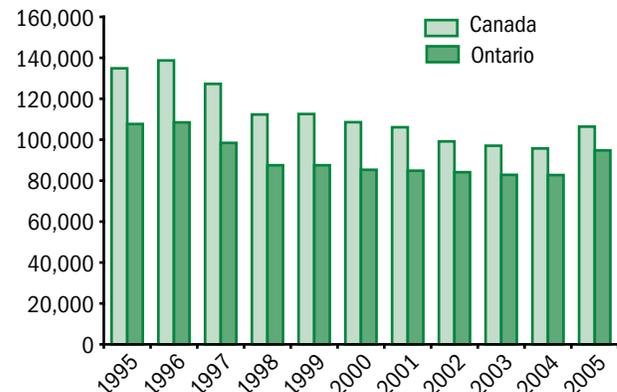
In addition to hazardous waste disposals, a significant amount of hazardous waste is stored at a number of facilities throughout the province—in particular, approximately 95,000 tonnes of polychlorinated biphenyls (PCBs) are stored at 479 sites. PCBs are industrial chemicals that are present in electrical equipment, heat exchangers, hydraulic systems, and several other specialized applications that were manufactured up to the late 1970s. They present a very serious hazard to human health and the environment. As a result, the federal government banned the importation, manufacture, and sale of PCBs, as well as their release into the environment. However, federal legislation has allowed owners of PCB equipment to continue using the equipment for the remainder of its service life. Environment Canada reports that despite reductions in PCB inventories since the implementation of regulatory controls, release of PCBs into the environment through spills and fires continues to occur.

In 2005, Ontario accounted for 90% of PCBs in storage across Canada. According to the Ministry, the Ontario government itself holds the largest inventory: approximately 73,000 tonnes of PCB waste.

As Figure 1 suggests, over the last 10 years, little progress has been made in the reduction of PCBs in storage. The Ministry drafted a regulation in 2001 for the destruction of PCBs in storage, but owing to concerns about the potential costs and the limited options for destruction, the regulation has not been implemented. In 2004, the Ministry considered but did not proceed with a regulation to require the destruction of all PCBs, including contaminated soil, by the year 2014. The Ministry confirmed that available treatment options have not been aggressively pursued because treating PCBs costs considerably more than storing them. However, although the Ministry has performed 500 PCB site inspections over the last three years, the continued storage of PCBs poses a risk to the public and the environment.

Figure 1: PCBs in Storage, Canada and Ontario, 1995–2005 (tonnes)

Source of data: Environment Canada



RECOMMENDATION 4

To help reduce the substantial risk that the disposal and storage of hazardous waste pose to the public and to the environment, the Ministry of the Environment should develop a strategy to resolve the concerns that have delayed regulatory amendments designed to reduce the risks posed by medical waste and PCBs.

MINISTRY RESPONSE

The Ministry is currently considering whether to review the biomedical guidelines.

With respect to PCBs, 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 will 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.

Household Hazardous Waste

Household hazardous waste includes such items as paint cans, solvents, antifreeze, used oil and filters, batteries, and pharmaceuticals. Under the *Environmental Protection Act* and its regulations, all wastes generated by households are excluded from the definition of hazardous waste and therefore can be disposed of in municipal landfill sites.

Between 1986 and 1995, the Ministry provided funding to municipalities to set up one-day collection events or permanent depots in an effort to divert household hazardous waste from municipal landfill sites. The number of temporary or permanent collection depots has increased over time. In 2005, 89 municipalities, serving a population of 11.4 million people, managed to recover 15,800

tonnes of household hazardous waste through collection programs, of which more than 50% was recycled. However, the Ministry cannot measure the true effectiveness of these special collection programs because it does not know the total amount of hazardous waste produced by households, and hence the portion diverted from municipal landfill sites.

Although most major centres have permanent drop-off locations, there is a concern with how well known and accessible they are to the public. Home pickup or curbside collection of household hazardous waste could result in diverting more of this waste because of the convenience for homeowners. Currently, according to the Ministry, only two municipalities (Toronto and Sudbury) offer any form of home pickup for hazardous materials.

Depots that collect and dispose of household hazardous waste must obtain certificates of approval from the Ministry specifying the types of hazardous waste they will accept, register as generators for each hazardous waste type they will accept, and submit manifests when moving waste from the collection depot to the final disposal site. Such depots are open to the public but are not found in all areas of the province and can only collect and dispose of the types of waste specified in their certificates of approval.

Waste Diversion Ontario (WDO) was created in 2002 under the *Waste Diversion Act* as a partnership between the Ministry, industry, municipalities, and non-governmental organizations. WDO's mandate is to develop, implement, and operate waste diversion programs for a wide range of materials. By the time of our audit, WDO had developed a program for recycling paper, and was in the process of developing a waste diversion program for electronic equipment. In 2006, the Minister of the Environment prescribed Municipal Hazardous or Special Waste as a designated waste under the *Waste Diversion Act*. Shortly after, the Minister directed Waste Diversion Ontario to develop and fund a waste

diversion program for household hazardous waste, to consider financial or other incentives to encourage reuse or recycling of household hazardous materials, and to increase the number of collection sites. The government has also asked WDO to support the program through educational and public awareness activities.

RECOMMENDATION 5

To build on its recent initiatives for the disposal of household hazardous wastes, the Ministry of the Environment should work with Waste Diversion Ontario and municipalities on a province-wide strategy for reducing the impact of household hazardous waste on the environment.

MINISTRY RESPONSE

In December 2006, the Ministry directed Waste Diversion Ontario to develop an industry-funded diversion program plan to enhance the proper management of Municipal Hazardous or Special Waste. The program plan was received and posted on the Environmental Registry for a 30-day public comment period on June 11, 2007. The proposed program addresses both the collection of unused material as well as consumer education regarding proper handling and use. The Ministry is currently reviewing comments received.

INFORMATION AND REPORTING SYSTEMS

Hazardous Waste Information Systems

The Ministry uses two management information systems to track the movement of hazardous waste from waste generators to receivers. These two systems are the Hazardous Waste Information System

(HWIS) and Hazardous Waste Information Network (HWIN). HWIS was implemented in the early 1990s, and information from paper documents is manually input into this system. Such documents include generator registration forms and manifests that detail hazardous waste movements from one location to another. HWIN, a fully electronic system, was developed in 2002 to replace the older HWIS system. Information was to be electronically input into the new system directly from generators, carriers, and receivers of hazardous waste. The two systems annually process 24,000 registrations and more than 220,000 manifests.

In 2003, shortly after the new system was developed, we audited it and noted a number of concerns, the most significant of which was that the new system could not accept manually input information from paper documents. If any one of the parties to a manifest transaction (24,000 generators, 800 carriers, and 800 receivers) did not have the capability or inclination to submit information to HWIN electronically, the entire multi-part manifest would have to be manually input into the old system and electronically transferred to the new system. In our 2003 audit, we found that over 99% of the hazardous waste manifests were being manually input into the old system. At that time, we indicated that resolving this issue was critical to the success of the new HWIN system. However, during our current audit we found that the proportion of manifests submitted electronically had actually decreased, and the old system was now processing 99.9% of the manifests generated.

Since HWIN has not been successfully implemented, the originally perceived benefits have not been achieved. For example, timely information is not available to the Ministry's enforcement staff to help ensure that hazardous waste is transported in compliance with legislation. At an estimated annual cost of \$250,000, the Ministry must devote staff to manually input virtually all hazardous waste manifests. The Ministry must also absorb the costs

of maintaining two systems simultaneously that are intended to perform the same function. In addition, ministry staff from various branches informed us that even if the industry were able to submit electronic manifests, they did not believe the new system was capable of handling the job. Finally, ministry staff indicated that the previous system had better and more user-friendly analytical and reporting capabilities to enable them to focus their activities on high-risk areas.

In 2005, the Ministry hired an external consulting firm to evaluate the hazardous waste information systems and conduct an assessment of the alternatives. The consultant's report stated that both systems underperformed and neither system supported the needs of the Ministry's enforcement, operational, and policy areas, nor the needs of the hazardous waste industry. The consultant recommended the development of a new system to manage hazardous waste information, but stated that such a system could cost as much as \$100 million.

RECOMMENDATION 6

To ensure that management and inspection staff have reliable and relevant information for monitoring whether hazardous waste is transported and disposed of in accordance with legislation, the Ministry of the Environment 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.

MINISTRY RESPONSE

The Ministry agrees that the Hazardous Waste Information System should ensure that operational areas are supported and recognizes that technology support is essential to its environmental-protection efforts. There is work

under way as part of a multi-year initiative to modernize the Ministry's environmental systems and look for efficiencies. This will enhance data integration and business-driven information systems, and enable systems like the Integrated Divisional System to interface with others such as the Ministry's Hazardous Waste Information Network.

The Ministry recognizes that enhancing communication between our technology systems will improve our ability to track and analyze information. The Ministry is currently examining its business architecture to identify a manageable and economically prudent approach to meeting its technology and information requirements. As part of this examination, the Ministry will consider the experience and approaches of other jurisdictions with similar hazardous-waste-management requirements.

Measuring and Reporting Program Effectiveness

One of the government's key priorities, as noted in its 2005/06 annual plan, is to achieve better health for Ontario residents by preventing and reducing illness from environmental pollution. Properly managing hazardous waste can help achieve this priority. The Ministry has stated that promoting waste reduction, recycling, and environmentally safe disposal would improve the management of Ontario's hazardous waste. However, the Ministry has not developed formal measurable objectives for the hazardous waste program.

The Ministry had established one performance measure for the hazardous waste program, that is, the percentage of hazardous waste recycled. However, the performance measure was established without a stated target. According to the Ministry, a detailed assessment of the hazardous waste generated is required to determine which

hazardous wastes have the potential to be diverted to recycling and to measure estimated increases in recycling rates. The Ministry had other performance measures in the past, such as reducing PCBs in storage and reporting on the trend in the number of non-compliance charges laid, but these measures were not reported from one year to the next, not followed up in subsequent years with any results, or not reported in relation to hazardous waste.

The Ministry does not provide the public with any quantifiable assessment of how well it is managing hazardous waste in Ontario. We noted that other provinces publicly report on a number of activities that clearly show trends in how well they manage hazardous waste, to reduce risk and highlight areas that require increased efforts. For example, British Columbia reports trends in PCB contamination in fish, wildlife, and soil samples throughout the province as well as what is being done to help reduce this contamination. Manitoba reports trends in the collection of household hazardous waste and reported that government initiatives resulted in the collection of 559 tonnes of household hazardous waste in 2005/06, a 12% increase over the previous year. Alberta reports a positive trend in the amount of hazardous waste recycled annually over the past 15 years but cautions that overall there is an upward trend in the amount of hazardous waste produced in the province. The report goes on to outline what is being done to reverse this negative trend.

RECOMMENDATION 7

To enhance ministry decision-making and provide the public with information on its success in managing hazardous waste, the Ministry of the Environment 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.

MINISTRY RESPONSE

The Ministry is committed to continuous improvement in its programs and will continue to review its performance measures and look to ways to ensure that adequate performance measures are implemented and information needs are met. As part of this commitment, the Ministry will examine the experiences and approaches of other jurisdictions to determine appropriate performance measures.

FINANCIAL ASSURANCE AND REVENUE

Financial Assurance

Under the *Environmental Protection Act*, the Ministry may require carriers and receivers of hazardous waste to provide financial assurance as a condition of a certificate of approval or pursuant to a director's order or a regulation. The purpose of financial assurance is to provide the Ministry with financial security to ensure that the taxpayer is not financially responsible for the costs of dealing with spills and leakage of hazardous waste as well as the decommissioning, cleanup, rehabilitation, monitoring, and perpetual care of facilities such as waste processing and disposal sites.

Financial assurance can be provided to the Ministry in the form of cash, irrevocable letters of credit, surety bonds, a letter of guarantee, marketable securities, or any other collateral acceptable to the Ministry. As of April 2007, the Ministry held \$150 million in financial assurance for over 700 carriers and receivers of hazardous and non-hazardous waste, with the security held ranging from \$270 to \$8.9 million. A majority (85%) of the financial assurance held by the Ministry was for hazardous waste disposal sites. Letters of credit (for

over \$110 million) were the most common form of security held by the Ministry.

The requirement of financial assurance is often at the Ministry's discretion. While all mines in the province are required to provide financial assurance to cover mine closure costs, the Ministry does not know what percentage of waste management carriers and receivers have been required to provide financial assurance. In a sample of certificates we reviewed, only 60% were required to provide financial assurance.

For the certificates that did require financial assurance, we had the following concerns:

- Financial assurance is not always being collected when required. Almost 30% of the applications we sampled provided financial assurance to the Ministry after the date required—in one case, as late as five years, because the company disputed the amount of assurance required. In two other cases, financial assurance was never provided, yet the entities were still allowed to operate. The January 2007 Financial Assurance Variance Report, which is used to track outstanding amounts, indicated that \$3.4 million in financial assurance was outstanding for more than six months from 24 certificate holders.
- There was no process in place to ensure that the amount of financial assurance required is being reassessed on a regular basis. Only half of the certificates sampled that required financial assurance stipulated that the amount be reassessed on a regular basis. Of those that did require regular reassessment and whose review period had arrived, only 40% had been reassessed.
- Financial assurance collected may not be sufficient to fund potential cleanup costs. In such cases, the Ministry and in turn the taxpayer may become liable for such costs. For example, a chemical company had provided the Ministry with financial assurance totalling

\$3.4 million for an on-site landfill, but after the company experienced problems with leakage, the cleanup costs were estimated at \$64 million.

RECOMMENDATION 8

To ensure that the hazardous waste operator, rather than the taxpayer, is responsible for financing cleanup costs from hazardous waste contamination, the Ministry of the Environment 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.

MINISTRY RESPONSE

The Ministry has a guidance document available to explain when financial assurance is required and how it is determined. A second guidance document is to be available in November 2007 to provide current cost information to determine the appropriate amount of financial assurance that will be collected prior to issuing a certificate of approval. To ensure that financial assurance amounts are being reassessed on a regular basis, new and amended certificates of approval requiring financial assurance will include a standard condition for annual re-evaluation of financial assurance amounts.

The Ministry is reviewing financial assurance for all hazardous waste files, and this review will include verification of appropriate financial assurance. The risk of costs to taxpayers for cleaning up contaminated sites will be reduced as a result of this work.

Hazardous Waste Fees

Pursuant to Regulation 347 under the *Environmental Protection Act*, hazardous waste generators are required to pay the Ministry \$50 for registration, \$5 per manifest, and disposal fees of \$10 per tonne of hazardous waste. These fees came into effect January 1, 2002, and, as reported to the Management Board of Cabinet, were expected to be sufficient to fully recover the costs relating to the management of hazardous waste in the province and to encourage generators to reduce the amount of hazardous waste they produce. Certain waste generators are exempt from all fees—household hazardous waste depots, contaminated sites, and sites requiring emergency generator registration.

The registration fee is due at the time of registration. Various payment options exist for manifest and tonnage fees, but the general principle is that they must be paid before any waste is shipped. Any outstanding balances must be settled before a generator can re-register the following year. Fees collected in the last five years are shown in Figure 2.

We reviewed the Ministry's management of hazardous waste fees; some of the issues we noted are as follows:

- Hazardous waste fees were developed with the intent to fully recover the Ministry's costs relating to the management of the Hazardous Waste Program, including costs associated with monitoring, compliance, and enforcement.

However, we noted that hazardous waste fees generated significantly less revenue than originally anticipated. For example, in the 2004/05 and 2005/06 fiscal years, the only years for which hazardous-waste-related expenditures were disclosed separately, the Ministry spent \$30.6 million to administer the program and collected only \$12.4 million.

- The Hazardous Waste Information Network (HWIN), one of the management information systems used by the Ministry, does not always identify those generators that have yet to pay their fees. According to the Ministry, HWIN automatically flags generator registrations as expired once the February 15 deadline passes for registration and the generator has not renewed its registration. We identified a number of generators that were still registered in the system even though they had not made any payments for 2006. Ministry staff advised us that these registrations should have been marked as expired in HWIN and that the error was caused by a flaw in the system software.
- The Ministry relies on the HWIN system to accurately calculate fees and does not reconcile the amount of fees received with the registration, manifest, and disposal activity recorded in the system. The Ministry could not demonstrate that the total fees collected were reasonable—based on the actual hazardous waste activity recorded in the system over

Figure 2: Hazardous Waste Fees Collected Annually (\$ thousand)

Source of data: Ministry of the Environment

	Calendar Year					5-year Total
	2002	2003	2004	2005	2006*	
registration fees	1,103	1,048	1,253	1,274	1,224	5,902
manifest fees	511	1,137	1,076	1,115	870	4,709
tonnage fees	2,483	4,339	4,445	4,523	3,344	19,134
Total	4,097	6,524	6,774	6,912	5,438	29,745

*11 months; based on the most current data available

the last five years—because the system does not generate the information needed to do so.

- Fees are payable by generators whether they dispose of hazardous waste on their own property or off-site. The amount of waste disposed of off-site is recorded on manifest documents that are signed by the receiver as evidence of third-party verification. The amount of waste disposed of on-site over the course of a calendar year is to be reported to the Ministry by the generator at the time of re-registration, although no third-party confirmation is required. All generators that dispose of waste on-site must obtain certificates of approval, and related details are stored in the Integrated Divisional System (IDS). The HWIN system calculates on-site disposal fees based on information submitted by the generator, but if a generator does not report its on-site disposals, the Ministry cannot interface the HWIN system with IDS to identify generators that have failed to report their activities and pay the fees due.
- At December 31, 2005, HWIN showed an outstanding balance of \$1.3 million in fees receivable. The Ministry could not provide us with a breakdown of receivables by generator or a report showing how long these debts had been outstanding. Without such details, the Ministry cannot initiate collection efforts in an efficient manner. The Ministry stated that no balance could be outstanding for longer than one year because a generator must settle outstanding balances upon annual re-registration. However, not all generators re-register on a timely basis. For example, any balances owing by the 12,000 generators that registered in 2004 but not in 2005 would still be outstanding.

RECOMMENDATION 9

To ensure that hazardous waste fees are sufficient to recover program costs, are accurately recorded, and are collected on a timely basis, the Ministry of the Environment 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 the Hazardous Waste Information Network (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 the HWIN system so that it can calculate and identify outstanding debt by generator and track the amount of time debt has been outstanding, so that collection efforts can focus on generators with significant balances that have been outstanding for extended periods of time.

MINISTRY RESPONSE

The Ministry 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 to 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.

COMPLIANCE

Selection of Facilities for Inspection

For the administration of the *Environmental Protection Act* and its regulations, ministry compliance staff may inspect any hazardous waste generator, carrier, or receiver governed under the Act.

Compliance staff at ministry district offices and in its Sector Compliance Branch perform inspections to help ensure compliance with hazardous waste legislation and ministry policy. If compliance cannot be achieved by district or branch staff, violators are referred to the Ministry's enforcement staff for further investigation and, if necessary, prosecution.

Compliance staff at district offices perform ongoing inspections of hazardous waste facilities in their local areas. The inspections conducted are program-specific and focus on one responsibility, such as hazardous waste, as opposed to water contamination or air pollution. Districts conduct four types of waste inspections—on hazardous waste generators, carriers/processing sites, PCB storage sites, and disposal sites/facilities. Figure 3 shows the declining number of inspections conducted by ministry district offices over the last three years.

The Ministry's Sector Compliance Branch complements the inspection work of its district offices by conducting province-wide inspections of selected industrial sectors. Each inspection includes, if applicable, all program areas such as air, water, sewage, and waste. Hazardous waste is the primary concern in the waste management

industry sector, but hazardous waste is also generated by many other industry sectors that produce pollutants that may be an equal or greater threat to the environment. The Sector Compliance Branch also conducts roadside inspections of waste carriers. Figure 4 shows the inspections conducted by the branch over the last three years.

We reviewed the processes that three district offices and the Sector Compliance Branch used to determine which hazardous waste generators, carriers, and receivers were to be inspected and noted the following:

- At district offices, hazardous waste facilities were assigned one of three levels of risk—A, B, and C—with A being the riskiest. For the three districts we visited, for the 2006/07 fiscal year, the breakdown of hazardous waste facilities selected for inspection by risk category was 10% A (high-risk) facilities, 60% B (medium-risk) facilities, and 30% C (low-risk) facilities. Three times as many low-risk facilities were selected for inspection as high-risk facilities. District staff informed us that there is no requirement to select a certain number of facilities from each risk category. The only annual requirement is to conduct a specified total number of inspections. To set targets in such a manner could lead to the selection of facilities based on the amount of time required and the avoidance of complex, high-risk, and time-consuming inspections.

Figure 3: District Office Hazardous Waste Inspections by Type, 2003/04–2005/06

Source of data: Ministry of the Environment

Fiscal Year	Hazardous Waste Generators	Carriers/ Processing Sites	PCB Storage Sites	Disposal Sites/Facilities	Total District Inspections
2003/04	613	104	262	26	1,005
2004/05	557	73	163	27	820
2005/06	516	46	77	21	660
Total	1,686	223	502	74	2,485

Figure 4: Sector Compliance Branch (SCB) Hazardous Waste Inspections by Type, 2003/04–2005/06

Source of data: Ministry of the Environment

Fiscal Year	Hazardous Waste Generators	Carrier Vehicle Inspections	Hazardous Waste Receivers	Total SCB Inspections
2003/04	122	583	21	726
2004/05	52	508	5	565
2005/06	153	506	17	676
Total	327	1,597	43	1,967

- The risk analysis used by the Sector Compliance Branch to select industrial sectors for inspection was out of date. The 2006 ranking was based on data collected from 1996 to 2000. Branch staff informed us that the risk ranking was just a tool, and that they considered other factors when selecting sectors, such as informed judgment and ministry priorities. However, since the inception of the Sector Compliance Branch in 2000, only four of the 20 sectors that produce the most hazardous waste have been inspected.
- The Sector Compliance Branch had identified several sectors it had not inspected, such as the transportation, hospitals, and electric-power sectors. The hospitals and electric-power sectors have specific hazardous waste requirements that require monitoring for compliance. Also, in our discussions, the Ministry confirmed that it had not followed up with the federal government to ensure that federally regulated sectors such as transportation had been inspected for environmental violations. Such follow-up could ensure that federally regulated sectors comply with provincial requirements.
- Both the district offices and the Sector Compliance Branch identified for inspection only those facilities registered with the Ministry, instead of considering other potential candidates such as manufacturers or carriers currently not registered with the Ministry.

Consequently, there is no process in place to identify and inspect possible unregistered facilities.

- Ministry staff informed us that the Sector Compliance Branch and district offices co-ordinate their efforts when selecting facilities for inspection, but we saw no documented evidence of this co-ordination. Using information submitted to the Ministry by registered generators, we identified the 30 facilities that generated the most hazardous waste and found that 11, or over one-third, had not been inspected by either the Sector Compliance Branch or district offices since 2002.

RECOMMENDATION 10

To enhance the effectiveness of its inspection process, the Ministry of the Environment 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 the district offices and selecting facilities for inspection based on documented risks;
- updating its risk analysis for the Sector Compliance Branch;
- 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.

MINISTRY RESPONSE

The Sector Compliance Branch (SCB) inspections are aligned with district inspections and their risk-analysis framework has been updated. Districts and SCB are now co-ordinating inspection plans to ensure that high-risk facilities and underperforming facilities receive our attention.

Our planned inspection program helps to ensure that hazardous waste in the province is managed in a safe and responsible manner. In addition to the strategies outlined in our response to Recommendation 3, in 2007/08 we plan to:

- inspect high-risk facilities;
- follow up on generators, receivers, and carriers that have exception reports in the Hazardous Waste Information Network; and
- ensure that the facilities generating the most hazardous waste have had an inspection within the last two years.

This approach will ensure that all inspection and compliance activities are co-ordinated and consistent. We will take strong action to identify and follow up with generators, carriers, and receivers that are out of compliance.

Inspections of Hazardous Waste Facilities

Over the past three years, ministry district offices and the Sector Compliance Branch have performed about 4,500 inspections of hazardous waste generators, carriers, and receivers. While the number of inspections done annually has been declining over the last few years, there are still a significant number of inspections performed. Inspections have indicated that there is a significant level of non-compliance in every sector of the hazardous waste industry, as noted in Figure 5.

Compliance rates between district offices and the Sector Compliance Branch are not directly comparable because the two groups do not assess compliance in the same manner. District offices often record administrative violations (such as lacking a manifest or operating without a certificate of approval) as a “pass” and notify facilities in advance of upcoming inspections. The Sector Compliance Branch performs surprise inspections and assigns a “pass” rating to facilities in compliance, “administrative fail” to facilities in non-compliance with administrative requirements, and “fail” to facilities in non-compliance where there exists the potential to harm human health or the environment. For the 2006/07 fiscal year, the district offices began using the rating “pass with comment” for administrative failures. We question whether some administrative non-compliance matters, such as operating without a certificate of approval, should be considered a

Figure 5: Percentage of Non-compliance Rates in the Hazardous Waste Industry, 2003/04–2005/06

Source of data: Ministry of the Environment

Fiscal Year	Inspections by District Offices				Inspections by Sector Compliance Branch*	
	Hazardous Waste Generators	Carriers/ Processing Sites	PCB Storage Sites	Disposal Sites/Facilities	Hazardous Waste Receivers	Carrier Vehicle Inspections
2003/04	38	41	22	32	100	11
2004/05	32	48	18	56	94	11
2005/06	34	46	21	71	67	15

* excludes hazardous waste generators from other sectors (as noted in Figure 4), because ministry data cannot distinguish hazardous waste violations from violations related to other ministry programs such as air, water, and sewage

pass. Overall, at the district level, at least one-third of the industry is non-compliant in some significant area, and no improvement has been evident in this figure over the last three years. Other inspection concerns noted were as follows:

- The Ministry developed the Informed Judgment Matrix in December 2004 to provide guidance to inspectors on the appropriate enforcement methods to use with regard to the severity of the violation. Severity is assessed in terms of the impact on human health or the environment. Enforcement methods available to inspectors include a notice of violation, an order to correct non-compliance, a ticket that carries a maximum fine of \$500, and referral to the Ministry's enforcement staff for investigation that could lead to charges and, eventually, prosecution. While the matrix is a good initiative, we reviewed a sample of inspections conducted in 2005 and found that the recommended enforcement method had not been used for almost 20% of the Sector Compliance Branch's inspections and 30% of the district office inspections.
- We noted that district offices used more lenient enforcement methods than the Sector Compliance Branch. The Sector Compliance Branch typically issued a violation notice (which is a notification to comply) or a provincial officer order (which places a legal obligation on the recipients to comply) for inspections that received a rating of "fail" or "administrative fail." In contrast, in 70% of district inspections with a "fail" rating, facilities were not issued a similar notice or order but rather received a copy of their inspection report with an attachment outlining actions required to correct non-compliance. Similar violations should result in the use of similar enforcement methods.
- Inspection of trucks hauling hazardous waste involves ensuring that haulers have the proper manifest documents on board and certificates of approval that authorize them to transfer the type of waste noted on the manifests. However, inspectors do not verify the weight or contents of the vehicle as recorded on the manifest. The Ministry confirmed that inspectors do not test-sample the contents of vehicles and that the Ministry has not made any attempts to co-ordinate its inspection efforts with the truck weigh scales operated by the Ministry of Transportation.
- Facilities found to be non-compliant are required to take corrective action. For the sample we tested, the Sector Compliance Branch typically provided deadlines for compliance, but 35% of the non-compliant facilities identified by the district offices were not given a deadline to put corrective actions in place. Of those facilities for which a deadline was set, over half did not achieve compliance within the required time frame. The average time taken for these facilities to achieve compliance was over 200 days for two of the district offices tested. In addition, over 40% of the files we sampled at district offices had had similar violations in earlier inspections. The Ministry gave these repeat violators more severe penalties in only 20% of the cases tested. In more than half of the cases reviewed at the district offices and the Sector Compliance Branch, facilities were instructed to send only a letter by the compliance date to indicate whether they were in compliance, with no requirement to present third-party confirmation. Overall, the follow-up methods used were not adequate to ensure that non-compliant facilities corrected the identified deficiencies within the required time period.

RECOMMENDATION 11

To ensure that inspections of hazardous waste generators, carriers, and receivers effectively encourage compliance with legislation and policy, the Ministry of the Environment 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.

MINISTRY RESPONSE

As part of its regular review and update of the compliance program, the Ministry will 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 will review the reporting methodology and differences in compliance assessment done by the Sector Compliance Branch and district offices with a goal to achieve consistency in our compliance assessment.

District staff conduct frequent unannounced visits as part of ongoing abatement activities or responses to complaints. The Ministry will review these activities and consider how to integrate them into our compliance plan.

The Ministry will undertake periodic verification of the content and weight of a sample of vehicles that transport hazardous waste.

The Ministry follows up on non-compliance and determines corrective actions on a case-specific basis, and may consider willingness, demonstrated progress on environmental projects or compliance, or repeat offences in this process. We will work to improve our compliance activities and incorporate lessons learned into future inspection programs and compliance actions.