
MINISTRY OF THE ENVIRONMENT

Operations Division

BACKGROUND

Under the *Environmental Protection Act*, *Ontario Water Resources Act*, *Environmental Assessment Act*, *Pesticides Act* and other related acts and regulations, the Ministry of the Environment is charged with a broad mandate of protecting the quality of the natural environment in order to safeguard the ecosystem and human health.

The Operations Division carries out its responsibilities by administering the Ministry's approvals and enforcement activities. It also responds to reports of pollution and spills that may have health and environmental impacts. In addition, the Division may clean up abandoned contaminated sites using funds available in the Environmental Clean-Up Fund.

The Division operates through a province-wide network of inspection, technical and investigative staff in regional, district and area offices; a 24-hour Spills Action Centre; a Smog Patrol; and a centralized approvals and environmental assessment office.

For the 1999/2000 fiscal year, the Division had total expenditures of \$62 million and about 680 staff. Since 1994, the Division has reduced its staff level by over 25%.

AUDIT OBJECTIVES AND SCOPE

Our audit objectives were to assess whether the Ministry had satisfactory systems and procedures in place to:

- administer approvals and enforce compliance with environmental legislation;
- measure and report on the performance of the Division in contributing to the effectiveness of the Ministry in protecting the environment and human health; and
- ensure that the Division's resources were managed with due regard for economy and efficiency.

The scope of our audit, which was substantially completed in March 2000, included interviews with appropriate staff and review and analysis of policies and procedures, management reports, samples of files and financial and management systems. We also researched practices in other jurisdictions. We did not rely on the Ministry's internal auditors to reduce the extent of our audit work because they had not recently conducted work within the scope of our audit.

Our audit did not include the Environmental Assessment or Conservation and Prevention programs which, as a result of a recent ministry reorganization, are now responsibilities of the

Operations Division. These areas were covered as part of our 1997 audit of the former Conservation and Prevention Division.

Prior to commencing the audit, we identified the audit criteria that would be used to conclude on our audit objectives. These were reviewed and accepted by senior ministry management.

Our audit was conducted in accordance with the standards for assurance engagements, encompassing value for money and compliance, established by the Canadian Institute of Chartered Accountants, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

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OVERALL AUDIT CONCLUSIONS

We concluded that the Ministry did not have satisfactory systems and procedures in place to administer approvals and enforce compliance with environmental legislation. A number of our observations resulted from the Ministry not having appropriate systems and/or information to properly support the Division's inspection and enforcement activities. Our major concerns included:

- The Ministry's systems were inadequate for assessing whether and to what extent the over 220,000 certificates of approval issued since 1957 needed to be updated with new conditions and requirements. (A certificate of approval is required for any facility that discharges contaminants into the environment.) As a result, it did not know the extent to which facilities were not meeting current environmental standards.
- Over \$90 million in financial assurance, such as cash or collateral, was not obtained from facility operators as required under legislation and ministry policy. This poses significant financial risk to the province should the operators become insolvent and government funds then be required to clean up damages to the environment caused by the operators.
- A reduction in staff of 25% over the last four years had contributed to a 34% decrease in the number of ministry-initiated inspections conducted per year. Further, the Ministry identified significant violations in 31% of the inspections conducted. The rate of non-compliance would have been even higher had many violations the Ministry considered minor been more appropriately treated as significant.
- The Ministry relied extensively on facility operators to comply voluntarily rather than impose stringent enforcement measures, such as issuing control orders or laying charges. This was of particular concern as one third of violators were repeat offenders. In addition, the Ministry did not appropriately follow up on many violations to ensure that deficiencies had been corrected.
- Environmental fines imposed on violators have averaged \$1.5 million per year. Over \$10 million in fines that had accumulated over many years remained unpaid. In order to more effectively enforce payment and environmental legislation, the Ministry needs to more aggressively advise operators that it will use its statutory authority to suspend their operations.

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- The Ministry typically learned of contaminated sites only after serious harm to the environment had already occurred. This made it difficult to hold facility operators responsible for the damages where significant clean-up costs were required and long time periods had elapsed. The Ministry needs to develop a strategy for early identification of high-risk contaminated sites to allow for better planning and prioritization of clean-up efforts.

The Ministry, having recognized many of these problems, had conducted a number of internal reviews—the results of which were consistent with the findings in our audit—and was in the process of addressing these issues.

To demonstrate its progress in managing the environment, we concluded that the Ministry needed to measure and report on its performance in a comprehensive and objective manner.

Overall Ministry Response

The report on the audit of the Operations Division offers many constructive comments and recommendations regarding the Division's role in delivering the Ministry's mandate for protection and conservation of the natural environment. The Operations Division, over the past two years, has initiated an aggressive in-depth review of its practices and procedures and is actively implementing action plans based on this work. The Ministry is pleased to note that many of the recommendations of the report complement a number of the initiatives the Ministry is pursuing. Work is well underway on several key components of these recommendations, while other items have phased review and implementation plans that involve the whole Ministry.

DETAILED AUDIT OBSERVATIONS

COMPLIANCE WITH ENVIRONMENTAL LEGISLATION

CERTIFICATES OF APPROVAL

Under the *Environmental Protection Act* and the *Ontario Water Resources Act*, a certificate of approval is required from the Ministry for any facility that discharges contaminants into the environment. Certificates of approval are issued for waste, water and sewage treatment facilities, and for facilities that may emit a contaminant into the air. Facilities may have multiple certificates of approval for various systems and equipment used in their operations. The Ministry is responsible for reviewing and approving almost 8,000 applications each year.

Certificates of approval document site-specific requirements, including a description of the undertaking, the engineering principles of the site, system or process, and the controls and contingencies. For requirements that are not already specified in an act or regulation, the certificates of approval are used as a compliance mechanism to relate standards and pollution parameters to applicants in a legally binding manner. Legislation provides significant discretion

to the Ministry to impose operating, financial and reporting requirements as a condition of approval.

UPDATING CERTIFICATES OF APPROVAL

Since 1957, when certificates of approvals were first introduced, the Ministry has issued over 220,000 approvals. Certificates of approval generally do not have expiry dates or renewal requirements. They remain in effect until a request is made by the facility operator to change its process, the facility closes, or the Ministry initiates changes or, because of violation problems, decides to revoke or suspend the certificate of approval.

We found that the Ministry did not have an adequate system in place to review the terms and conditions of the existing certificates of approval to ensure they met current environmental standards:

- Approvals issued before 1986, which totalled about 130,000, were recorded on a manual card index system. The manual system made it impractical to summarize or analyze the conditions of the approvals and to determine whether these approvals had expired or been revoked or updated.
- Approximately 90,000 approvals issued between 1986 and October 1999 were stored within various databases. For many of these approvals, the conditions were not described in detail or were not recorded in the databases. We also identified instances where the certificate of approval should not have been listed as active, such as when a new certificate had replaced an earlier one.

Over time, there have been many amendments to legislation and ministry policies and guidelines. These have resulted in more stringent conditions attached to certificates of approval that require greater accountability and due care by the owner or operator of a facility. For example, new certificates of approval may limit operational capacity, effluent and discharge parameters, and require either periodic reporting of water and air quality test results to the Ministry or making the results available upon inspection. As changes were made, existing approvals were generally not adjusted although legislation provides the Ministry with the authority to do so. For instance, approvals granted before 1983 included few, if any, conditions.

The Ministry's management advised us that updating existing approvals would involve a significant workload and expense for facility operators and the Ministry. Generally, the Ministry's approach has been to apply changes only to new certificates of approval or to certificates being amended when facilities or sites initiate any adjustments to their process or structure.

As a result, many owners and facilities were operating with certificates of approvals that did not meet current standards for such approvals and inconsistencies existed between site operators operating under the same environmental conditions. A system for updating approvals where deemed necessary would help ensure that legislative and ministry requirements are being applied consistently and that existing systems are operating as originally intended.

Ministry management had initiated an internal assessment of its approval process to evaluate different approaches for ensuring that certificates of approval are updated to reflect current conditions.

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Recommendation

In order to ensure that existing certificates of approvals reflect current environmental standards, where required, and are being applied consistently, the Ministry should:

- **improve its information systems so that all certificates of approval can be assessed on the extent to which they need to be updated with new conditions and requirements;**
- **develop systems that would allow for updating certificates of approval in a timely and efficient manner; and**
- **establish action plans and timetables for when certificates of approval will be required to be up-to-date.**

Ministry Response

We agree. The Ministry is fundamentally changing the way certificates of approval are issued and amended. The Program Effectiveness Review currently in progress will develop options to ensure certificates of approval are current and updated. The terms of reference have been modified to incorporate the Provincial Auditor's recommendations.

Reviews of priority sectors, such as water and hazardous waste, have already been undertaken or are in progress to improve certificates' currency, accuracy and compliance. For example, approvals for municipal water treatment plants will now be consolidated into a single-site document that will be reviewed and renewed within a three-year cycle.

The Integrated Divisional System (IDS), once fully implemented, will enable the Ministry to assess over time the extent to which certificates of approval need to be updated. The matter of populating this system with information on historical certificates of approval, the resource impacts, and alternate options to fulfill the need identified will be addressed in the Program Effectiveness Review.

FINANCIAL ASSURANCE

Under legislation passed in 1986, the Ministry may require as a condition of approval that facility operators provide financial assurance, such as cash or letter of credit, to the Ministry as security. The purpose of financial assurance is to indemnify the Ministry against losses such that funds are available, if needed, for rehabilitating or cleaning up sites should the operator be unable or unwilling to do so. The Ministry has established policies that identify higher-risk activities for which financial assurance is a mandatory requirement (for example, private landfill sites) and those for which it can be required at the discretion of the program director.

The policies also outline procedures, primarily based on risk, for calculating the amount of security required. Depending on the type of operation, the security required could be used to cover the costs of long-term monitoring of the site, clean-up of the property or spills, temporary

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operating costs, and for providing alternative water supplies. The amount of financial assurance averages about \$120,000 and can be as high as several million dollars. Financial assurance is returned to the applicant once the terms of the approval or order are met or upon the termination of operations. As of March 31, 2000, the Ministry held securities totalling approximately \$98 million.

We concluded that the Division's controls over obtaining financial assurance for approvals were inadequate and posed significant financial risk to the province should companies fail to meet their obligations or become insolvent. Specifically:

- During 1999, the Ministry conducted a division-wide assessment of the financial assurance obtained for certain types of approvals. It found that, of about 1,100 approvals, financial assurance was not obtained as required in about 710 or 65% of the cases. In about half of these 710 approvals, the requirement for financial assurance was not specified in the certificates of approval. While the Ministry's information systems did not allow for a more precise estimate of how much financial assurance was not obtained as required, we estimated the amount to be over \$90 million.
- We noted several cases where the amount of financial assurance required was not sufficient to cover clean-up costs in the event of non-performance by the facility operator. For example, in one recent case where an operator experienced financial difficulties, the potential clean-up costs were estimated at \$1 million to \$2 million in April 2000 whereas the financial assurance required and obtained was only \$38,200.
- Ministry policy for the types of securities accepted was also not followed. The policy states that in certain situations only cash or government bonds can be accepted as financial assurance. However, letters of credit and surety bonds were regularly accepted for such approvals even though these types of securities can be cancelled by the operator with only two months' notice.

Recommendation

To minimize financial risk to the province relating to environmental clean-up costs, the Ministry should:

- **establish controls to ensure financial assurance requirements are assessed and specified in the certificates of approval and then followed; and**
- **identify, for each facility operator, the correct amount of financial assurance outstanding and take timely action to obtain the necessary assurance.**

Ministry Response

The Ministry's internal review of its financial assurance requirements has also demonstrated deficiencies in the collection of financial assurance requirements, and corrective action has been implemented in financial assurance administrative procedures for ensuring financial assurance requirements are met in the future. In addition, the Ministry is undertaking a

review of its financial assurance policy, including appropriate forms of security.

An action plan to rectify outstanding financial assurance requirements has been put in place.

COSTS OF MONITORING COMPLIANCE

The large volumes of over 220,000 existing certificates of approval and almost 8,000 new certificates issued each year make it impractical for ministry staff to closely monitor all site operators for compliance with the conditions of their approvals. Where monitoring does take place, the costs to monitor site operators for compliance can be significant, particularly for large operations. For example, we estimated it cost the Ministry \$80,000 per year in environmental officer salaries to monitor just one mining operation. Therefore, there is a need to ensure that conditions of approval include self-monitoring requirements for approval holders to report on their performance and demonstrate their compliance to the Ministry. Though the Ministry has, in some cases, already imposed such requirements, we believe the practice could be expanded:

- Comprehensive monitoring and reporting requirements have already been established or are planned for large companies that discharge contaminants into the waterways and air. For example, under the Municipal/Industrial Strategy for Abatement (MISA) program, regulatory requirements were established in 1993 and 1995 for approximately 190 large, municipal, industrial mining and electricity producing companies that discharge wastewater into Ontario's waterways. These operators are required to conduct and pay for regular testing of their effluents to ensure compliance with discharge parameters and to make their testing public upon request.

However, these comprehensive regulations generally apply to the largest operators only, which represent a small number of the total certificates of approval granted.

- For a few large landfill sites and demonstration pilot projects, the Ministry required the applicants to pay for the monitoring costs of either full-time or part-time independent inspectors since monitoring these operations would have placed large demands on ministry resources. However, the vast majority of approvals for landfill sites and industrial operations did not include this requirement.

We noted that on October 27, 1999, a decision by the Environmental Appeal Board recommended that the Ministry consider requiring all landfill site operators to pay for the cost of independent inspectors.

- Once a certificate of approval has been issued for a system or equipment, there are no further requirements for the approval holder to periodically submit an audit or assessment by an independent expert that the system is operating as intended. Furthermore, we noted that Ministry staff generally did not conduct site visits during the application period and relied on reports from the owner that the installation was made in accordance with the approval requirements.

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Requiring independent experts to certify systems and equipment both at the time of installation and at periodic intervals thereafter would help ensure that conditions of approval and ministry standards are met and would significantly reduce the Ministry's inspection requirements for these facilities.

- For facilities that discharge significant air pollution, the Ministry has established and operates air monitoring stations in their vicinity to monitor compliance. There are 137 stations in 24 communities monitoring about 50 facilities. Furthermore, eight of these facilities receive data from the stations. In a few cases the Ministry has been successful in establishing partnerships with facility operators to help pay for the air monitoring station costs. For example, in one area the Ministry pays for only 20% of the approximately \$200,000 annual operating costs for air monitoring stations.

We were advised that the Ministry is developing a strategy, to be completed by January 2001, to have facility operators pay for all operating and upgrading costs for monitoring stations in the vicinity of large facilities.

Recommendation

To enable the Ministry to cost-effectively increase the scope of its environmental oversight role, it should consider imposing conditions on certificates of approval that include:

- **greater use of self-reporting requirements that demonstrate owner compliance, including, where warranted and practical, certification by independent experts; and**
- **owners paying a greater share of costs associated with monitoring their compliance.**

Ministry Response

The Division is committed to expanding the use of facility self-monitoring and compliance reporting conditions in certificates of approval. The Ministry will be developing guidelines to identify appropriate activities, circumstances and mechanisms to require third-party compliance verification by independent experts and reporting.

The Ministry has recently taken action to put in place new self-monitoring and compliance reporting for municipal water treatment plants that directly addresses recommendations in the Provincial Auditor's report regarding the costs of monitoring compliance. In the new drinking water protection regulation, third-party assessment in the form of a detailed engineering self-assessment report is required for all water treatment facilities within the next year. These engineering reports will be reviewed by ministry staff and new certificates of approval issued to ensure that adequate treatment equipment, and operating, self-monitoring and public reporting systems will be in place at all municipal water facilities.

Another example is the pilot program for new site-wide air certificates of approval that was initiated this past year. This pilot program has received considerable support, and incorporates conditions for self-monitoring and reporting, requiring owners to demonstrate compliance on an ongoing basis. Approximately 30 facilities per year are subject to this program. The site-wide pilot program will be monitored over time and rolled into a permanent program if results are satisfactory. As well, the Ministry is systematically requiring the larger industrial emitters to perform an engineering assessment of their compliance with conditions in certificates of approval and in regulations.

ENFORCEMENT

The *Environmental Protection Act* is the Ministry's primary piece of legislation providing powers and duties to environmental officers for abatement activities. Abatement activities include measures to control, prevent, reduce or eliminate pollution sources, including enforcement. Depending on the severity and circumstances of an incident, environmental officers can seek compliance either through voluntary cooperation or by using enforcement tools available under the legislation to compel corrective action. Measures for enforcing compliance include issuing control orders to individuals or companies and revoking or suspending certificates of approval. The Ministry may also take corrective action on its own in more serious cases where compliance is not obtained in a timely manner.

Over 20,000 pollution occurrences are reported to the Ministry each year. Environmental officers respond to each according to established protocols. In addition, during 1999/2000, environmental officers conducted approximately 4,400 ministry-initiated inspections, including of water and sewage treatment plants, PCB storage sites, hazardous and non-hazardous waste landfill sites and transfer and recycling sites and facilities.

Each year, approximately 1,000 formal investigations are initiated as a result of abatement activities. Penalties can include issuing summary convictions (fines) for lesser offences or seeking larger penalties as specified in the Act for significant violations. About 250 significant violations are referred annually to the Ministry of the Attorney General for prosecution.

INSPECTION COVERAGE

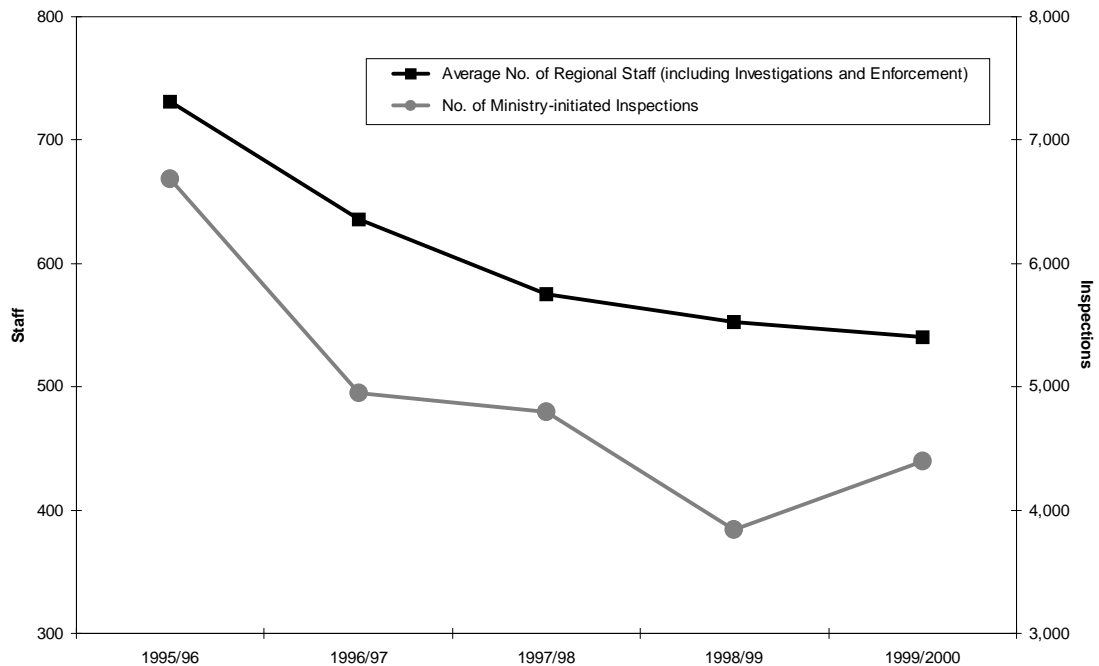
Inspections are an important means of assessing a facility's level of compliance with legislative requirements and play a key role in promoting voluntary compliance. The visible presence of inspectors also helps promote public confidence that environmental standards are being enforced. While other sources of information, such as public complaints, are typically received after a significant pollution incident has occurred, inspections can be proactive in preventing such occurrences.

Each year, the Ministry provides guidelines for ministry-initiated inspection activities to district and area offices. The guidelines outline mandatory inspections for certain types of facilities on a yearly or multi-year basis, set criteria for inspecting a minimum number of certain types of other facilities during the year, and provide criteria for selecting facilities that are optional, at the discretion of local staff.

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The Ministry had a well-defined process in place for allocating available staff resources to ensure that the types of facilities inspected were based on priorities of highest risk. However, we noted that there had been a significant reduction in ministry-initiated inspections since 1996. While regional staff was reduced by over 25% during this period, ministry-initiated inspections decreased by 34%—trends that are illustrated in the chart below. For example, from 1995/96 to 1999/2000, ministry-initiated inspections of hazardous and liquid industrial waste sites declined from about 2,000 to 1,190 per year. Similarly, inspections of municipal water treatment plants declined by over half, from over 400 to about 190 per year, over the past five years.

**Number of Inspections and Regional Staff
(including Investigations and Enforcement)**



Source: Ministry of the Environment data

The Ministry has only been tracking compliance rates from inspection activities since 1998/99. For 1999/2000, it identified significant violations in 31% of the ministry-initiated inspections conducted. In view of the level of significant violations being detected and the large number of new approvals being issued each year, the Ministry ought to consider expanding its inspection activities. This would enable it to more effectively meet its legislative responsibilities.

Recommendation

To more effectively enforce compliance with environmental legislation, the Ministry should explore options and develop procedures for significantly increasing its inspection coverage.

Ministry Response

The Ministry will strategically target its compliance inspection and enforcement activities, while maintaining a cyclic baseline inspection function.

RESOLVING VIOLATIONS

The Ministry's compliance guidelines require environmental officers to promptly assess the significance of any violation to determine whether an emergency situation exists that poses a potential or immediate danger to health or property. For all other situations of non-compliance, criteria exist for assessing whether voluntary or mandatory abatement activities are necessary.

For environmental legislation to be effective, the Ministry needs to be taking enforcement action in an aggressive, appropriate and timely manner when violations are identified, particularly repeat violations. Our audit concluded that more stringent enforcement is required. Specifically, we noted instances where environmental officers:

- did not follow up on violations to ensure that the facility operator had subsequently corrected the deficiency; and
- responded inappropriately, such as using voluntary compliance measures where mandatory compliance was required or not following up in a timely manner.

Ministry guidelines allow environmental officers the option to use voluntary instead of mandatory compliance measures if the reasons for the decision are documented in an occurrence report. We noted that voluntary compliance measures were generally used but such decisions were rarely documented. In this regard, there was frequently a lack of supervisory reviews of enforcement actions taken to ensure the appropriateness of decisions made by environmental officers.

We were concerned that the guidelines allowed environmental officers the discretion to use voluntary measures even in cases of significant or repeat violations and in cases where corrective action had not been taken on a timely basis.

During 1999, the Ministry conducted an internal review of the effectiveness of its inspection program. The internal review identified concerns similar to ours with regard to the inappropriate use of voluntary compliance measures. The internal review determined that in 69 of the 100 inspection reports reviewed, violations were identified, including 22 considered significant by the Ministry. However, enforcement actions taken included only one control order issued and no fines or charges. In 19 cases, the environmental officer requested that the facility operator provide a voluntary abatement action plan; however, only one plan was actually received.

In addition, the internal assessment noted that approximately one third of all violations identified were repeat violations. We noted that the policy of other regulatory programs is to prosecute if a violation found during a routine inspection has been identified on previous inspections.

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Recommendation

To make enforcement actions more timely and effective, the Ministry needs to strengthen its enforcement activities by:

- taking appropriate action on violations and following up on a more timely basis; and
- ensuring policies and procedures manuals encourage the use of more stringent compliance measures, where appropriate.

Ministry Response

The Ministry has made and continues to make significant changes in the way we respond to violations. The recent Program Effectiveness Review of our inspection program identified the need to clarify and reinforce the use of mandatory compliance measures.

In March 2000, the Division issued a clear direction to field staff to pursue more aggressive use of mandatory abatement actions against violators. Mandatory abatement includes actions such as issuing field orders that specify actions and completion dates to bring about compliance. The number of field orders issued since March 2000 has increased from an average of 20 per month to a current average of 90 per month.

Training is underway for all Provincial Officers in the use of the new enforcement tools provided under Bill 82. The investigator training is completed and the abatement officer training is underway.

A new regulation has been drafted to provide for the use of Administrative Monetary Penalties (AMPs). This regulation is scheduled to be posted on the Environmental Bill of Rights Web site for public comment in September 2000. AMPs will allow for a penalty for violations to be levied against a violator that will not be processed in the court system.

SIGNIFICANT VERSUS MINOR VIOLATIONS

Ministry guidelines require environmental officers to focus their efforts in areas where the greatest environmental and human health benefit can be achieved. We found that Ministry management and staff only considered violations as significant where an adverse effect, such as a spill, was evident. Violations considered as minor included preventative measures outlined in environmental legislation, even though such violations, if not corrected, may increase the risk of extensive damages to the environment and human health.

For example, the Ministry's assessment of its inspection program conducted during 1999 considered as minor 51 of the 58 violation types noted. Violations considered to be minor included failure to take or report samples of effluent or water quality, use of an uncertified operator, lack of a contingency plan should systems fail, and the operation of water and sewage facilities not in accordance with approval specifications. However, depending on the

circumstances, the violations identified could be significant, such as if the facilities were high risk and/or the operators had a past history of violations.

Recommendation

To minimize environmental and health risks, the Ministry should:

- **reassess its policies, procedures and criteria for determining the severity of violations; and**
- **ensure that the significance of preventative measures is better understood and communicated to staff.**

Ministry Response

The Ministry recognizes the challenge to prevent and to deal with risks and violations to environmental and public health. The Ministry is committed to directing its efforts to promoting preventative measures, ensuring compliance and enforcing the law.

It recognizes that its traditional reliance on voluntary abatement is not achieving desired compliance levels and has shifted its emphasis to greater use of mandatory compliance tools to address violations. The impact of this shift may be noted in the increased number of orders being issued. This is particularly evident in the numerous orders being issued during the inspection blitz of all municipal water treatment facilities.

Operations Division will complete a review of its operating policies and procedures this winter to ensure consistent and appropriate use of its compliance tools across all program areas.

This Ministry has and continues to play an active part in the current government-wide review of the inspections, investigations and enforcement functions across 13 ministries. The Division will draw, where appropriate, from the work of this review to improve its policies and procedures for inspection, investigation and enforcement functions.

MANAGING INSPECTIONS

Our visits to ministry district offices identified the following discrepancies in the management of inspection activities:

- Management at only three of the six districts we visited maintained detailed reports on facilities planned for inspection, those actually completed and the results. One of these districts also noted whether the facility should be inspected again in the following year. However, two other districts only kept copies of inspection reports and did not compare them with planned inspections, while another district was unable to provide us with a list of inspections planned for or completed during the current or previous years.

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- None of the six district offices maintained documentation on how the Ministry's selection criteria had been applied to arrive at the final list of sites planned for inspection.
- There was no consistency among district and area offices on whether their ministry-initiated inspections were conducted on a surprise basis or by appointment with facility operators. Guidelines provided to staff do not address this matter. Surprise inspections have significant advantages for identifying violations, as well as acting as a greater deterrent.

Recommendation

To make its inspection program more effective in supporting the enforcement of environmental legislation, the Ministry should:

- review its policies, procedures and guidelines over ministry-initiated inspection activities to ensure that adequate record keeping and reporting requirements are in place; and
- ensure that inspections are consistently planned for and conducted.

Ministry Response

To ensure adequate record keeping and reporting, the Ministry has now implemented the first of its inspection databases, the Interim Inspection System for water treatment facilities. This system is part of the Ministry's Environet information management strategy. It allows the Ministry to track the progress of inspections, to record findings and to follow up on deficiencies, as well as to generate inspection reports. Systems comparable to the Interim Inspection System are under development for all facilities inspected by ministry staff.

Operations Division is reviewing its work planning manual and will strengthen the procedures for planned inspections.

MANAGEMENT INFORMATION

For enforcement action to be effective, violations have to be identified and resolved based on good information. In this regard, a number of our observations in this report were the result of the Division's staff not having appropriate systems and/or information to perform their duties more effectively and efficiently. We noted the following:

- Upon approval, a copy of the certificate of approval is forwarded to the ministry district office for monitoring. However, the Ministry did not have an adequate tracking system to ensure that conditions of the approval were complied with. As a result, the district offices did not have the information needed to initiate follow-up action, such as sending reminder notices or conducting inspections, to enforce the conditions of approval in a timely manner.
- The Ministry's Occurrence Reporting Information System maintains information on reports of public complaints and potential violations identified from inspections. Information to track the generation, transportation and disposal of all hazardous and liquid industrial wastes is kept in the Hazardous Waste Information System. In addition, each district and area office

maintains its own list of sites that require mandatory cyclical inspections by using local databases or manually prepared lists.

These systems only provided information on individual sites or facilities and did not allow for the creation of facility profiles or the linking of information between districts. Such capabilities would allow staff to better manage their activities and identify the types of environmental risks that exist in specific areas. For example, knowing all the approvals granted to facilities in the same industry or area would help identify those that had been operating without proper approvals.

- The Occurrence Reporting Information System was not complete. We noted several examples of reports prepared by environmental officers that did not include coding of the violation type, which would allow for statistical reporting. The Ministry's internal review of inspection activities also noted that violation types were recorded for only 32% of cases.
- The Ministry had not conducted any detailed assessments of the types and frequency of violations typically identified from reports of pollution incidents and inspection activities. The information would be useful in identifying common difficulties that facilities are having in meeting requirements and in targeting enforcement efforts and educational awareness campaigns.

The effectiveness of the Ministry's compliance measures was also not assessed. For example, it would be useful to assess the extent that voluntary compliance measures, such as warnings and follow-ups, were effective and an efficient use of staff resources. In addition, the use of more immediate measures, such as fines, could be assessed to determine their success as a deterrent for violators.

Recommendation

To better support and to improve the delivery of its enforcement efforts in protecting the environment, the Ministry should:

- **establish a system to identify all conditions of approvals that require follow-up by specific dates to assess owner compliance and where necessary, initiate timely enforcement action;**
- **develop an accurate and comprehensive management information system to assist in identifying and prioritizing facilities for inspection; and**
- **periodically assess the types and frequency of violations and the effectiveness of enforcement measures used.**

Ministry Response

Operations Division agrees that a good information base is needed on which to make management operational decisions as well as set enforcement and inspection priorities. Our new Integrated Divisional System (IDS) has been designed with these goals in mind. Approvals are now generated on one system, which has the capability of alerting due dates for all conditions of a certificate of approval.

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The design of the remainder of the IDS is almost completed. This next phase is scheduled for start-up in spring 2001. This will provide our Division with the new ability to run reports focused on facility type, inspection reports, violation types and enforcement actions. With this information we will have the capability of prioritizing facilities and sectors for inspections. This will enable the Division to strategically target its compliance inspection and enforcement activities, while maintaining a cyclic baseline inspection function.

IDS will allow regional and district office management to closely monitor activities and focus field staff efforts into areas that have the most impact on environmental protection. This advancement is critical in moving from a reactive to proactive approach in environmental compliance and protection.

An Investigations and Enforcement Branch data system has just been enhanced to measure the level of enforcement action taken and sort by environmental program areas. This new information allows comparison of our efforts to specific areas of environmental enforcement. This information can be used to determine our effectiveness in sectors of environmental protection.

An examination of compliance techniques and risk assessment across the various ministries is underway. The findings from this initiative will have a twofold result. They will provide feedback on the current tools in use by this Ministry and will provide further techniques that may have application across the Ontario government or within specific ministries. As well, Operations Division will complete a review of its operating policies and procedures this winter to ensure consistent and appropriate use of its compliance tools across all program areas.

UNPAID FINES

Over the last five years, the total environmental fines imposed on violators by the justice system have averaged \$1.5 million per year. However, as of March 31, 2000, the Ministry of the Attorney General reported that over \$10 million in environmental fines that had accumulated over many years remained unpaid. The significant amount of unpaid fines compromises the extent to which enforcement measures act as an effective deterrent.

The Ministry of the Environment has statutory authority to suspend certificates of approval for violators with outstanding fines. However, such suspensions are rarely imposed. Our analysis identified a number of companies with outstanding fines that had active certificates. In view of the significant amount of outstanding fines, a system that issues warnings and, if necessary, suspends approvals would be an effective tool for enforcing payment of fines.

Recommendation

To be more effective in enforcing environmental legislation and to improve collection of outstanding fines, the Ministry should investigate the reasons why outstanding fines are unpaid and use its statutory authority to suspend environmental approvals for violators who do not pay their fines.

Ministry Response

The responsibility for the collection of fines rests with the Ministry of the Attorney General. Notwithstanding the above, we support the Provincial Auditor's recommendation and will use all the tools at our disposal to support the collection of fines as deterrence against environmental violators.

Training of ministry staff on the new streamlined process to suspend all ministry licences to encourage payment of court fines will be completed by October 2000. Investigators have now been trained to initiate the forfeiture of seized property to the Crown from the defendant upon conviction or upon default of fine payment.

The Ministry will initiate discussions with the Ministry of the Attorney General to provide the most efficient tracking of environmental fine payments to the courts. This will provide the information we need to then initiate appropriate licence suspensions and property forfeiture actions, to encourage fine payments.

CONTAMINATED SITES

The Ministry generally directs its clean-up efforts to contaminated sites that are of significant public concern, such as when surrounding properties are adversely affected by the contamination. Owners or previous owners of those sites can be held legally and financially responsible for the contamination.

The Ministry provides detailed guidelines to property owners and environmental consultants for assessing the environmental condition of a property, as well as for determining whether restoration is required and the kind of restoration needed to allow continued use or change of use of the site. The owner may also be required to obtain municipal approvals for land-use changes where contamination impairs the use of the property. Site assessments are particularly important to potential purchasers since contamination could restrict the use of the site and may transfer the clean-up costs to the new owner.

The Ministry is responsible for administering an Environmental Clean-Up Fund, which makes funding available for serious or urgent environmental problems. Funds are mainly directed for cleaning up or restoring contaminated sites where the responsible persons cannot be identified, are unable to pay or where enforcement efforts have not been effective. In many Environmental Clean-Up Fund cases, it is not practical or technically feasible to fully clean up the sites after prolonged or severe contamination. Nevertheless, in severe cases, the Ministry

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has spent significant funds to clean up such sites in order to contain the damage or minimize the environmental and health risks associated with the contamination.

For the 1999/2000 fiscal year, the Fund provided funding to over 45 clean-up projects totalling \$5 million. Since it was established in 1985, the Fund has paid out approximately \$160 million.

IDENTIFYING CONTAMINATED SITES

Early identification of contaminated sites can minimize damage to the environment, reduce costs and identify the responsible parties. The Ministry can then require corporations to establish funds to clean up their site while they are still operating.

The Ministry did not have a program to identify contaminated sites nor a central inventory of contaminated sites. As a result, no timetable or cost estimates for clean-up of contaminated sites had been established. Priorities were set reactively when contaminated sites were identified from pollution incident reports.

Specifically:

- The Ministry did not have a system that required owners of high-risk industrial and commercial sites to conduct site assessments to determine the extent of contamination on their sites. Site assessments were only required by the Ministry if it was known or suspected that contaminants were causing off-site, adverse effects. In addition, the Ministry did not routinely conduct assessments of remediation programs implemented by corporations to ensure that their efforts and progress were satisfactory.
- In 1991, we reported that the Ministry had not taken action to assess closed private and municipal landfill sites to determine whether they posed a hazard to surrounding areas. These sites typically were built and operated prior to ministry regulations and may have lacked controls to prevent leaching of contaminants to off-site areas. At that time, the Ministry had classified 700 of the 2,400 landfill sites as a priority, of which 200 had received an inspection and another 250 an administrative review. We noted that no further action had been taken since 1991.
- No program or initiative existed for identifying abandoned, underground, fuel storage tanks, which represented about half of the projects being funded by the Environmental Clean-Up Fund.

We also noted that, under the Ministry's Provincial Water Protection Fund, \$5 million had been made available to municipalities since 1997 to identify potential contamination of groundwater supplies. However, as of March 31, 2000, the funds had been fully allocated to 39 municipalities and no further funds were available for this purpose.

LIABILITY AND FINANCIAL CONSIDERATIONS

Several U.S. and Canadian jurisdictions have legislation that limits responsibility for owners who have complied with clean-up guidelines and for parties not directly responsible for causing a contamination. In Ontario, there is no legislation that requires the Ministry to provide owners who have restored contaminated sites with assurance that the restoration was performed in compliance with its guidelines. For example, if the Ministry's standards change after clean-up, owners want assurance that additional clean-up will not be required. Without such assurances, owners may be reluctant to voluntarily clean-up sites.

We also noted that other jurisdictions have programs to promote redevelopment of brownfield sites. These are typically large, abandoned or decaying industrial or commercial sites with contamination that limits their future use. The costs to clean up these sites are high. According to the Ministry, Ontario does not have as large a problem as does the U.S. However, it acknowledges that brownfield areas do exist, but it does not keep an inventory of these areas.

During our audit, the Ministry was in the process of assessing liability issues and the need for brownfield redevelopment programs.

Recommendation

To help ensure that the Ministry's efforts and programs are effective in minimizing damage to the environment, the Ministry should develop a strategy for:

- **the early identification of all contaminated sites and responsible parties, which would allow for prioritizing clean-up requirements; and**
- **the establishment of incentives to encourage property owners to voluntarily clean up contaminated sites.**

Ministry Response

We agree in principle that early identification of contaminated sites and responsible parties and that finding ways to ensure owners clean up those sites are key factors in protecting the environment.

Our efforts are focused on these priorities:

- ***working jointly with the ministries of Municipal Affairs and Housing and Economic Development and Trade on a brownfield contaminated sites policy review;***
- ***implementing the Memorandum of Understanding with the Technical Standards and Safety Authority to deal with leaking underground fuel storage tanks;***
- ***monitoring corrective actions of municipalities dealing with closed landfill sites; and***
- ***providing technical advice to the Ministry of Northern Development and Mines on implementing the new (April 2000) clean-up program of old/abandoned mine sites.***

The Ministry will consider developing a strategy, with the cooperative involvement of other levels of government, to expand efforts that would encompass a wider range of contaminated sites and address means of identifying those sites earlier and encouraging clean-up of those sites.

INFORMATION SYSTEM CONTRACT

During our audit, the Ministry was in the process of designing and developing a new computerized Integrated Divisional System (IDS). When fully implemented, the new system is expected to improve the informational needs and efficiency of the Division by enabling key environmental data to be shared between branches and regional and district offices. The system would also replace the many separate systems that are in place, including the ones used in processing new approvals and monitoring and tracking pollution incident reports.

At the time of our audit, we noted that the IDS project was delayed and was experiencing cost overruns.

In July 1997, the Ministry awarded a contract to develop the Integrated Divisional System to a successful bidder for approximately \$1.5 million. The project, including business process redesign, conversion of historical data, software development, and software and hardware purchases, was to be completed by July 1999. At the time, the Ministry did not seek Management Board approval, which was required for information technology projects over \$1 million, since it only considered the hardware and software costs of approximately \$300,000 in the information technology component of the project.

In December 1999, Management Board directed the Ministry to obtain approval for all costs associated with the project. In this regard, on February 15, 2000, Management Board approved a total cost of about \$2.9 million for this project, which included actual and estimated costs from the 1997/98 fiscal year to the 2002/03 fiscal year.

As of April 2000, the hardware and software had been purchased and certificates of approval since November 1999 had been processed using the new system. Payments to the contractor totalled approximately \$700,000 plus an additional \$800,000 for enhancements not covered by the original contract. However, existing records had not been converted to the new system, the information was not available outside of the Approvals Unit, and the system had not been designed for the rest of the activities in the Division.

During our audit, the Division was in the process of renegotiating its agreement with the contractor, including the completion dates, clarification of the original scope of the project, and any further enhancements needed to the original design. Further cost escalations, if any, would require additional approval by Management Board.

Recommendation

To facilitate the efficient and effective delivery of the Division's programs, the Ministry should ensure that the remaining portions of the Integrated Divisional System are completed in a timely and cost-effective manner and in accordance with required approvals.

Ministry Response

At the time of the audit, the Integrated Divisional System (IDS) was experiencing delays and cost overruns due to a vendor/sub-contractor dispute. Negotiations were taking place regarding what the vendor agreed to

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provide and the expectations of the Operations Division development team. A series of documents were developed and agreed to by both parties and this project is now back on track. The vendor will deliver the system for the original price quoted by January 2001. An agreement was also reached whereby the cost of any change orders for improvements to IDS would remain at the original per-diem rate.

Management Board approval to proceed with this project has also been obtained. Any extra cost to the IDS project will either be allocated from within the Ministry or a new Management Board submission will be made.

MEASURING AND REPORTING ON PROGRAM EFFECTIVENESS

STATE OF THE ENVIRONMENT REPORTING

The Ministry's mandate is to protect the natural environment and encourage conservation of water, energy and material resources. Its vision is an Ontario where clean air, water and land sustain human health, recreation, commerce and industry. The Operations Division supports the Ministry's mandate and vision.

The Ministry reported individual measures of effectiveness through its annual Business Plan. However, the Business Plan did not provide a comprehensive assessment of the overall impact of the Ministry's efforts on the environment. For example, under its goal for Cleaner Land, the only measure reported on publicly was the percentage of PCBs in storage that had been destroyed. Also, under its goal for Healthier Ecosystems, the efficiency of processing approvals and environmental assessments were measured but the outcomes of these approvals were not.

The Ministry also periodically published reports and news releases on its activity over certain key environmental areas. While these documents tended to be informative of recent successes or initiatives taken by the Ministry in addressing specific environmental issues, they generally lacked objective appraisals of the quality of the environment. In addition, the myriad of ministry reports and information sources on the environment that were available did not allow for easy and effective evaluation of the overall state of the environment.

At the time of our audit, the federal government, the U.S. Environmental Protection Agency, several U.S. states, and other provinces had developed or were in the process of developing indicators for measuring changes to the environment over time. A state of the environment report, as it is generally referred to, acts as a mechanism to help monitor progress towards achieving environmental goals, targets and quality. Such a report could also be used to objectively report on Ontario's progress in meeting established provincial, national and international environmental standards and commitments for pollution reduction targets and clean-up efforts.

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Recommendation

To ensure that the Ministry's progress in managing the environment is measured and communicated in an objective manner, a state of the environment report should periodically be prepared using a set of comprehensive outcome measures that assess the quality of and changes to the environment over time.

Ministry Response

The Ministry recognizes its role to provide the public with information on how it is progressing with its programs. It is equally important that the Ministry facilitate the sharing of information on how other sectors of society are performing in their responsibilities relating to the environment.

The Ministry is committed to continually improving its performance measures in its Business Plans. The current Business Plan contains more outcome-based measures than in previous years by which to gauge progress over time.

The Ministry is increasing the use of its Web page to report on:

- *non-compliant facilities discharging to water;*
- *deficiencies identified by inspections of municipal water treatment plants; and*
- *new regulations, one for water treatment plants and another for facilities with air emissions, that require the reporting of sampling and monitoring results.*

The Ministry has also, in partnership with conservation authorities, launched a groundwater monitoring network. This will provide baseline information on the state of the groundwater.

The Ministry has approved and is launching its major initiative, Environet, to make information available to the public. The goal is to provide the public with access to all public information within the Ministry, through one single Internet site. This will greatly enhance and speed up the provision of vast amounts of information to the public in a user-friendly format.

The first three projects of this initiative are:

- *water monitoring and compliance information from water treatment plants;*
- *hazardous waste information on generators and receivers; and*
- *an air emission inventory—for facilities with regulated air emissions.*

In addition, those responsible for emitting any pollutant will have to monitor and report publicly on their performance. All of this information will eventually be required to be posted on the Web on a continual basis.

These projects are to be in place by the summer of 2001.

DIVISIONAL PERFORMANCE REPORTING

The Division reported internally on the performance of its key areas: the Approvals Unit, abatement activities by each region, and the Investigations and Enforcement Branch. Its performance measures were largely based on activities planned for and completed but few outcomes or results:

- The Approvals Unit measured and reported on the efficiency of its operations, such as the average turnaround time and number of approvals issued. However, there were no indicators in place to assess the quality of the over 220,000 approvals issued. Measures that could be considered include: the average age of approvals, whether they are up-to-date with current standards and the extent to which approvals incorporate self-monitoring and reporting requirements.
- Each region monitored the number of ministry-initiated inspections completed. A key measure in the Ministry's Business Plan was the inspection pass rate for municipal water and sewage treatment facilities. Other measures being piloted were the overall pass rate for all ministry-initiated inspections and the percentage of environmental problems resolved. To better monitor compliance efforts by each district, a new monthly report was implemented in mid-1999 summarizing pollution incident reports and enforcement measures used.

Other key measures could be rates of non-compliance by each major industry sector, repeat violations noted within two years of previous enforcement, and the average number of days to bring a facility into compliance. In addition, measures could be established for the Ministry's activities covering contaminated sites.

- The Investigations and Enforcement Branch measured its results primarily on the number of convictions obtained and fines imposed. The Branch was also planning to pilot an efficiency measure that would assess staff time to complete investigations. A number of other measures that would be appropriate include convictions of repeat offenders, amount of unpaid fines and the number of cases prosecuted by investigators that did not require the assistance of the Ministry of the Attorney General. In addition, the activities of the new Smog Patrol should be reported on separately since the unit operates independently.

Recommendation

To provide a more comprehensive assessment of the Division's contribution to protecting the environment, the Ministry should develop more results-oriented performance indicators to measure and report on the effectiveness of the Division's operations.

Ministry Response

The Ministry is committed to continuously improving performance measures reported in the public Business Plan and internal, program-level performance reporting. The Division will continue to develop measures that focus on effectiveness indicators that are results-oriented and/or demonstrate the value added by the regulatory processes to environmental protection.

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In the area of enforcement, the Business Plan includes measures for the enhanced use of environmental enforcement tools to increase compliance and environmental protection. These measures reflect a commitment to utilize the improved investigation and enforcement tools contained in Bill 82.

At the same time, program-level measures for the Ministry's major program areas are also being examined and improved upon. Significant action has been taken to ensure the suite of performance measures tracked by the Ministry will provide critical information for improving the effectiveness of key ministry programs. The Ministry has also developed, or is in the process of developing, performance measures, which Operations Division is a partner in. These include the pilot for the Water Quality Index; the groundwater monitoring network; the assessment of water quality in lakes, rivers and tributaries; mandatory air emissions reporting; the drinking water compliance and drinking water surveillance programs; wastewater compliance reporting; Drive Clean performance; and the environmental results summarized in the Guide to Eating Sport Fish in Ontario.