#### Foreword

#### **Focused on Action**

When we finally have the occasion to reflect on our work, as is the case in preparing our annual report, we find a moment to put our efforts in perspective. The Contaminated Sites Management Working Group (CSMWG) is truly unique: we are a voluntary committee comprising working level, line-management employees; we pool our resources (in the absence of central funding); we cooperate in hosting events, sponsoring activities and sharing knowledge; and, we report annually, chronicling our progress towards our common goal. In fact, it is this uniqueness that has led us to an important place in the federal government – we have become the centre of expertise on contaminated sites.

When we created this committee some five years ago, it was not our intention to be the focal point for federal action on contaminated sites. We simply foresaw a need to work cooperatively on a complicated and costly activity, and we recognized the mutual benefits of sharing information and resources. We still do and it is still our desire to solve our common problems together.

This past year has a been an interesting one. The renewed interest in contaminated sites by the Standing Committee on Environment and Sustainable Development, the increasing scrutiny of the Auditor General's Office, and the media attention on the Sydney Tar Ponds has brought the issue to the environmental forefront. And our own efforts to define the problem have led everyone to the same conclusion – the more we learn about contaminated sites the more we realize how much more we need to know.

On the surface, it seems such a simple issue – contaminated sites. Yet this seemingly simple issue overlaps with every other management and environmental issue: What performance indicator does one use to measure progress? Who has legal liability for the site? How do you divide financial liability? What is meant be site remediation? Even defining a site is complex: Is it defined by size, location or problem?

Members of the CSMWG continue to grapple with these questions, while actively working on their departmental sites and programs. Herein lies the reason for our success, we have been and we continue to be focused on action. While we try to answer some of the theoretical questions, we continue to address the practical issues. You will see this in reading our 1998-99 Annual report.

Ms. Ginger Stones National Defence and Chairperson CSMWG

#### 1.0 Introduction

#### 1.1 The Contaminated Sites Management Working Group

Established over four years ago, the Contaminated Sites Management Working Group (CSMWG) is an interdepartmental committee that works cooperatively with the Federal Committee on Environmental Management Systems (FCEMS). The CSMWG was created to develop a common federal approach to the management of contaminated sites under federal custody, as well as provide expert advice to the contaminated sites sub-committee of the Environmental Accountability Partnership (EAP) Steering Committee.

A great deal has changed since the creation of this Working Group five years ago. The FCEMS still exists and continues to deal with a number of greening of government issues in much the same way as the CSMWG, however the EAP has not met in over two years. In addition, legislation was passed obliging all federal departments to prepare and implement sustainable development strategies and an environmental auditor, the Commissioner of the Environment and Sustainable Development, was created. These changes have all led to an increase in activity in getting the federal house in order and increased attention on contaminated sites.

Activities of the Working Group are cost-shared by all participating departments, which in 1998-99 included the following:

Agriculture and Agri-Food Canada Canadian Heritage/Parks Canada

Canada Mortgage and Housing Corporation Department of Finance

Environment Canada Fisheries and Oceans/Canadian Coast Guard

Health Canada
National Defence
Indian and Northern Affairs Canada
Natural Resources Canada

Public Works and Government Services Canada
Solicitor General/Royal Canadian Mounted Police
Transport Canada

Treasury Board Secretariat

Since its inception, the Working Group has identified needs and priorities for federal contaminated sites, and has worked towards the development of a consistent federal approach to the management of these sites. As a result of its success and longevity, the CSMWG is recognized as a centre of expertise in the federal government. The Commissioner on Sustainable Development and Environment, Treasury Board and departmental deputy ministers continue to view this group as the source of information and action on contaminated sites. More information on the CSMWG and a list of members can be found in Appendix A.

# 1.2 Annual Reporting

Annual reporting first began in the 1996-97 fiscal year, and the CSMWG has continued that tradition of tracking and reporting on its activities. The purpose of reporting is threefold: to provide an historical account of the activities of the CSMWG to senior managers throughout government responsible for environmental programs; to serve as a repository of information for new members who would be joining the CSMWG, either as a replacement for an existing member, or as a new departmental representative; and, to help in planning activities for the following year. Copies of the previous annual reports are available on the CSMWG web site at www.solutions.ca/csmwg.

This report is intended to serve as a summary of the Working Group's activities, initiatives and accomplishments over the course of 1998-99.

#### 1.3 The Focus in 1998/99

In fiscal year 1998-99, the CSMWG continued its work in defining the scope of the federal problem and its understanding of the size and nature of federal contaminated sites inventory in terms of costs, liabilities and risks. Over the 1998-99 year, the Working Group served a vital function for all participating departments. It has provided a forum for the exchange of information on contaminated sites and the opportunity to pool resources and experiences. In a cooperative and consensual manner, the CSMWG has continued to focus on improving awareness and understanding of contaminated sites within the federal government.

During the year, the Working Group continued its prominent role as a centre for expertise on federal contaminated sites, and it completed many of the major activities it had begun in the previous year. It continued to participate in policy formation by providing detailed input for the Treasury Broad draft policy on *Accounting for Costs and Liabilities Related to Contaminated Sites*, and it continued building long-term solutions by improving the contaminated sites web site and completing the glossary. In addition, the Working Group continued its work on the framework document — *A Federal Approach to Contaminated Sites*.

#### 2.1 A Federal Approach to Contaminated Sites

A Federal Approach to Contaminated Sites Management is being developed to support and augment the interdepartmental Environmental Accountability Partnership (EAP) Subcommittee's policy on contaminated sites, which promotes consistency in process for managing contaminated sites.

The Federal Approach proposes a "step-by-step" approach for addressing contaminated sites, and incorporates a number of supporting tools. These tools include: a common inventory reporting template; references to scientific documents for further information; and generic statements of work to assist proponents in developing terms of reference for specific projects.

The Federal Approach will provide a mechanism for policy implementation and will assist the CSMWG in serving its mandate in establishing a uniform and government-wide approach to the management of contaminated sites under federal custody.

The Federal Approach will be finalized by the CSMWG members and published later this year. Once finalized, the Federal Approach will be available on the CSMWG web site at www.solutions.ca/csmwg.

# 2.2 Legal Workshop on Liability Exposure

In Ottawa on May 28, 1998, four representatives of Justice Canada gave lectures on the legal obligations associated with federal contaminated lands. All four lectures highlighted the importance of departments working closely with their own departmental counsel before any action is taken. As well, members were encouraged to be prudent and diligent, and to incorporate the management of contaminated lands in their departmental environmental management systems.

Emphasis was placed on the need for due diligence and proper disclosure of contaminated sites when transferring property. In additions, all lawyers cautioned participants on *cavate emptor* (buyer beware) when purchasing property.

#### 2.3 Remediation Technology

To keep abreast of emerging technologies for site remediation, the CSMWG organized two presentations for its members this year and participated in other remediation technology information activities.

#### GeoRemediation<sup>™</sup>

The first presentation was given by Environmental Management Solutions and Harbour Remediation, who together provided a scientific and technical explanation for their GeoRemediation™ process. The process takes contaminants which are soluble, and when mixed with enzymes, transforms them into insoluble, non-leachable material. The technology is suited for sites contaminated with heavy metals and organics. This technology has been successfully used at the National Convention Centre in Toronto in 1995 and more recently in Venice. As well, the technology has been short listed for the clean-up of New York City Harbor.

#### • Bio-slurping

The second presentation was given by the Ottawa office of Beatty, Franz & Associates, who provided a half hour overview of the multi-phase extraction technology, or what is more commonly known as bioslurping. The technology was initially developed by the US Air Force. Bio-slurping employs two technologies simultaneously — the pumping of air and the vacuuming of liquids. This approach eliminates the need for a phased approach or using remediation technologies sequentially.

This type of remediation technology is used for situations involving free product, typically hydrocarbons located between five and 25 metres below the surface, and is not recommended for shallow situations. The technology may be cost effective when compared to excavation and transportation off site.

The presentation also included a description of how a decontamination project team goes through a series of decisions as information is gathered and when the bio-slurping option should be considered. To optimize the use of the technology, a pilot study is recommended before a decision is made to proceed to full site remediation.

#### PCB in Paints Workshop

The Department of Indian and Northern Affairs, National Defence and Environment Canada held a technical workshop on June 8 and 9, 1998 in Edmonton that focused on the disposal of materials coated with PCB amended paints. Over 50 participants including research scientists from universities, government employees and consultants attended the workshop. Discussion concentrated on the risks posed to the environment from paints containing in excess of 50 parts per million PCBs.

The primary purpose of the workshop was to evaluate the viability of landfilling debris coated with these paints. A number of parameters were evaluated including: the volatility and leachability of PCBs when bound in a solid paint mix; the fate of paint particulates when transported; and the long term stability of the paints. Although the information presented demonstrated that landfilling held some promise, the participants agreed that additional research would be needed prior to drawing a final conclusion.

#### 2.4 Workshop on the Management of Federal Contaminated Sites

The CSMWG sponsored a workshop on the management of federal contaminated sites held on November 16-18, 1998, in Ottawa. The workshop was aimed at presenting federal custodial departments with updated information on current approaches in the assessment, remediation, and management of contaminated sites under federal custody, as well as providing updates on federal programs and legal issues pertaining to the management of contaminated sites.

Sixteen speakers and ten contractors gave presentations and displayed exhibits to the more than 100 participants. Presentations included topics such as legal issues, Contaminated Sites Framework developments, risk assessment, the *Canadian Environmental Assessment Act*, and remediation technologies. In addition, workshop participants were taken on a field trip and a tour of Environment Canada/SAIC's Environmental Technology Centre to view several remediation technologies.

# 2.5 Glossary of Technical Terms on Contaminated Sites

A reference document, *Glossary of Technical Terms*, related to the identification, assessment, remediation and monitoring of contaminated sites, has been prepared. The glossary will serve as a valuable reference tool for property managers and others who deal with contaminated sites. The second draft is being reviewed by the CSMWG and the final version will be released in the fall, and will be posted on the CSMWG web site.

#### 2.6 CSMWG Web Site

The web site is now fully operational and was updated regularly throughout the year with the addition of CSMWG minutes, the 1997-98 Annual Report, the CCME National Classification System and links to relevant web sites including the Canadian Housing and Mortgage Corporation. The web site address is www.solutions.ca/csmwg.

The CSMWG web page is available in both official languages to the public as well as to civil servants. The web site is divided into two sections; the main part of the site is available through the internet, and the "Members" section is accessible by federal government employees through the *Publiservice*. This combination allows the CSMWG to post general information which is of interest to a wide audience and more specific information for use by federal employees.

Over the summer months, the web site will be re-purposed and will not be accessible until mid September 1999.

#### 2.7 Raising Awareness Among Federal Departments and Agencies

In March 1998, the CSMWG committed to continuing its work with federal departments and central agencies in raising the profile and awareness of contaminated sites issues and in developing a consistent and common approach to dealing with the issues. The work of the committee over the course of 1998-99 demonstrates this commitment.

#### 2.8 Other Activities

# • Status Update on the Treasury Board's Draft Policy on Accounting for Costs and Liabilities Related to Contaminated Sites

Departmental comments, including those submitted by members of the CSMWG, on the draft policy on *Accounting for Costs and Liabilities Related to Contaminated Sites* were considered and incorporated in a subsequent draft, which was released to all Departments in February 1999. This revision also incorporates recommendations of the Public Sector Accounting and Auditing Board dealing with the accounting treatment for solid waste landfills.

This new draft can be found at www.tbs-sct.gc.ca/fin/SIGS/FIN\_13/siglist\_e.html.

The annual call letter from the Deputy Comptroller General of Canada to departments for the Valuation of Assets and Unrecorded Liabilities was released to departments in March 1999, and requires departments to report on their environmental liabilities in accordance with the draft policy. This call letter may be found at www.tbs-sct.gc.ca/fin/SIGS/FIN\_15/siglist\_e.html..

Presentations on the draft policy were made to members of the environmental and financial communities at the National Conference on November 16, 1998 and at the CSMWG-sponsored workshop on January 26, 1999. The quality of departmental responses to the annual call letter due in May 1999 will determine the next steps in the implementation of the accounting policy.

#### • Environmental Performance Indicators

The CSMWG was approached by the Office of the Auditor General to participate in developing a series of performance indicators and to lend their expertise specifically in determining the appropriate performance indicator for contaminated lands. In a brainstorming session, a series of indictors were discussed and an attempt was made to select the most appropriate ones for each of the federal priority areas. The CSMWG is aware of the difficulty in selecting indicators for contaminated sites, having looked at the issue in 1997.

The Office of the Auditor General used the information gathered and the input of the participants to prepare a short list of performance indicators. This information was reviewed by the CSMWG and a

recommendation was made that the Office of the Auditor General approach each department individually to discuss what would be appropriate.

More information on environmental performance indicators can be found on the web site of the Office of the Auditor General at www.oag-bvg.gc.ca.

#### • RMC Report

Commissioned by the CSMWG in 1998, staff from the Royal Military College (RMC) attempted to answer the question, "How are we doing?". The Working Group wanted to assess the progress on contaminated sites since the last audit by the Auditor General, and to get an up-to-date picture of contaminated lands under federal responsibility. However, obtaining the information proved to be somewhat difficult.

While awareness and understanding of the issue has greatly increased across the federal government, defining the situation has only become more challenging. In drafting the questions and soliciting responses, the authors discovered that there was little uniformity in definitions or interpretations of the issues surrounding contaminated sites across all departments. As a result, answering the question, "How are we doing?" has become a much longer process than anticipated, and the CSMWG continues to work with the authors on this project. The work on this project will continue into the next fiscal year.

#### PWGSC Standing Offer for PCB Disposal

In 1995 PWGSC was requested to act as the federal government's service agent for the collection. transportation and destruction of all stored PCBs. PWGSC subsequently developed an implementation strategy for the disposal of PCBs, which was endorsed by Environment Canada as the most expedient and cost effective method.

PWGSC entered into a contract with Chem-Security in Swan Hills, Alberta. During the two years of the contract PWGSC shipped over 1,500 tons of PCB wastes. Due to an explosion at the Chem-Security facility in October 1996, Environment Canada issued an advisory to all federal departments to suspend shipments of wastes to Swan Hills. The advisory was lifted in January 1999.

To deal with the ongoing disposal of PCBs, PWGSC prepared a Request for Standing Offers and expects to have offers in place by the end of July 1999.

# 2.9 Departmental Progress Reports

In addition to their involvement in the CSMWG, federal departments continued to make progress on contaminated sites in their custody during the fiscal year 1998-99. A summary of each departments' advancements can be found in Appendix B.

# **Appendices**

# **APPENDIX A** Contaminated Sites Management Working Group

This section describes in detail the original mandate and objectives of the CSMWG. The objectives will be revisited in 1999/2000 to better reflect the work of the CSMWG and the current status.

# **APPENDIX B** Departmental Progress Reports

This section provides brief overviews of the work done by each participating member of the CSMWG.

# **APPENDIX A** Contaminated Sites Management Working Group

Since its inception in the summer of 1995, the CSMWG has worked towards increasing its federal membership, defining its structure and determining the scope of the 'problem'. Through its activities, it has been able to complete an initial assessment of the current federal situation and identify key areas which need addressing.

#### Mandate

The CSMWG's mandate is to investigate, propose and develop a common federal approach for dealing with contaminated sites under federal custody.

#### **Strategic Goal**

The goal of the CSMWG is to promote and develop a consistent federal approach for the management of contaminated site issues which integrates sustainable development and pollution prevention principles, while meeting environmental regulations and protecting public health, safety and the environment.

# **Strategic Objectives**

The CSMWG will strive to meet the following strategic objectives.

- 1. To establish a forum for discussion and sharing, evaluation and rationalization of the various existing processes, guidelines and policies.
- 2. To better define the scope of the federal problem and to contribute to the determination of the size and nature of the federal contaminated sites inventory, in terms of costs, liabilities and risks.
- 3. To demonstrate and promote due diligence in the management of contaminated sites.
- 4. To properly mitigate the potential risks to human health and the environment so as to relieve, to an acceptable level, public concern and liabilities to the government within a reasonable time frame and with the most effective use of affordable resources.
- 5. To develop and promote an overall management approach that will provide for the multi-year funding for the assessment and remediation of high-risk sites.
- 6. To develop proper risk management approaches considering technically, economically, socially and politically acceptable alternative actions tailored to respond to the specific probability and gravity of risks due to contamination or potential contamination.

- 7. To maintain, to the extent possible, the operational capacity of contaminated or suspected to be contaminated sites in order to disturb as little as possible the delivery of government services to Canadians and the cost to society as a whole.
- 8. To preserve the value of sites that are contaminated or suspected to be contaminated.

#### **Specific Objectives**

By meeting its strategic objectives, the CSMWG intends to promote a consistent federal approach to achieving the following specific objectives.

- 1. Identification/compilation of sites already known to be contaminated or suspected to be contaminated.
- 2. Assessment of sites suspected to be contaminated or sites that require further investigation to determine the means of remediation.
- 3. Remediation of contaminated sites in descending order of immediate risk to human health and the environment and legal compliance.
- 4. Identification and evaluation of operations that might be the source of further contamination and, once evaluated, modification of these operations where technically, operationally and economically feasible.
- 5. Establishment of federal funding to meet requirements for activities at sites as indicated in the priorities above.
- 6. Clarification of legal requirements.
- 7. Promotion of joint projects to share resources and knowledge processes and technologies.

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# **APPENDIX D** Departmental Progress Reports

# AGRICULTURE AND AGRI-FOODS CANADA

## Approach

All activities related to the management of Agriculture and Agri-Foods Canada (AAFC) contaminated sites are carried out by Environmental Engineers from Assets Management and Capital Planning (AMCP) in the Corporate Services Branch (CSB). These activities consist of assessment, analysis and remediation of contaminated sites. To date all contaminated sites have been assessed using the *CCME National Classification System for Contaminated Sites*.

# **Progress Achieved/Status**

AAFC has assessed all known waste disposal sites and inventoried all underground storage tanks. To date all high risk sites have been remediated or are being risk managed. Funding has been allocated in the Department's long-term capital investment plan to address any unforeseen environmental situations that may arise.

#### **Management Information**

All inventories of land holdings (acquisitions and disposals) and storage tanks (under and above ground) are managed corporately by AMCP. A complete summary database of all contaminated sites including underground storage tanks will be finalized in June 1999. This report will automatically generate data required by the draft Treasury Board policy as well as other pertinent data required for managing our inventory.

It is the intention to integrate this information as a component of the Departmental Environmental Management System (EMS).

#### **EMS/SDS Linkages**

AAFC is implementing it's EMS in support of the Departmental Sustainable Development Strategy (SDS).

#### CANADIAN HERITAGE/PARKS CANADA

#### Approach

Canadian Heritage/Parks Canada is using a risk-based management approach to address, as a priority, contaminated sites where there are significant risks to human health and safety. Potentially contaminated sites are identified and the risk to human health and the environment is assessed. Remedial action is carried out in compliance with the Canadian Council of Ministers of the Environment (CCME) standards.

# **Progress Achieved/Status**

As of May 1999, Canadian Heritage/Parks Canada reported 276 actual and potential contaminated sites. Of these, 153 have been prioritized using the *National Classification System for Contaminated Sites* developed by the CCME.

A database has been developed to document all contaminated sites and track past expenditures, as well as to project future requirements. The database will also facilitate a coordinated approach to the management of contaminated sites. Parks Canada/Natural Resources Branch has obtained detailed contaminated sites data from field units and is in the process of inputting the information into the database.

#### **EMS/SDS Linkages**

Canadian Heritage's EMS in organized around a set of 14 environmental aspects, and contaminated sites is identified as one of the priorities among this set. In Canadian Heritage's SDS, actions under contaminated sites include: the completion of a national inventory of known or suspected contaminated sites by the end of March, 1998; classification of each site according to risk; and the preparation of action plans for all contaminated sites within a year after identification. The comprehensive national inventory was compiled in March, 1999. To monitor progress in the management of contaminated sites, the following performance measures have been developed:

- 1. number of known contaminated sites in a field unit:
- 2. number of contaminated sites in a field unit with remediation plans and/or risk management plans; and
- 3. number of contaminated sites in a field unit which are being restored, remediated or risk managed.

In addition, to facilitate the efforts of field unit managers in monitoring and recording performance measures, an EMS Performance Measure Guide was developed. The Guide provides definitions and overall directions and detailed calculations to ensure an understanding and common standards practices in performance measure monitoring across Parks Canada's field units.

#### NATIONAL DEFENCE

#### Approach

Consistent with its "Contaminated Sites Remediation Framework", the Department of National Defence (DND) continued to move forward with the characterization, remediation, and risk management of its contaminated sites, in fiscal year 1998/1999.

# **Progress Achieved/Status**

This year, 415 projects were undertaken to achieve the departmental target of identifying and/or initiating remedial/risk management action plans for all DND properties by the year 2001. Of these 415 projects/sites, 105 involved the remediation of sites previously identified as being contaminated in excess of the Canadian Council of Ministers of Environment (CCME) remediation criteria, 217 included initial or supplementary site investigations, and 93 involved the risk management/monitoring of contaminated sites. Of all these sites, currently 140 are Priority 1 sites according to the CCME National Classification System (NCS) for contaminated sites and 165 are Priority 2 sites.

Field surveys and initial assessments on all DND properties suspected of being contaminated should be completed by the end of fiscal year 1999/2000. Remediation and risk management projects will take several more years to complete.

#### **Management Information**

DND is using a contaminated sites database to track the progress of individual projects. The information in the database assists personnel in making decisions, allocating resources, monitoring progress, and briefing senior management.

#### **EMS/SDS Linkages**

In December 1997, DND tabled its Sustainable Development Strategy (SDS) in Parliament and set a target to identify all contaminated sites in accordance with the contaminated sites remediation framework by fiscal year 2001. Following identification, action will be taken to either remediate or risk manage these contaminated sites. To meet this commitment, the Department will be allocating between \$10M and \$15M per year over the next five years.

An ISO-14000 Environmental Management System (EMS) is being developed department-wide as a tool to plan, implement, and regularly assess environmental performance, enabling DND to fulfill the commitments made in its SDS.

#### **ENVIRONMENT CANADA**

# Approach

Environment Canada's facility inventory identifies sites through a listing approach, ranging from sites with no contamination suspected nor expected, to sites suspected or known to be contaminated. In the early years of the departmental program, a representative sample of facilities was initially assessed in order to evaluate the source and level of risk anticipated over the entire inventory. Facilities at highest risk have subsequently been assessed and remediated or risk managed.

### **Progress Achieved/Status**

Environment Canada performed assessment and remediation work at 32 facilities during fiscal year 1997/1998 and at 28 facilities during fiscal year 1998/1999. Based on the results of these two years and on previously available information, the Department now has a contaminated sites information database, which guides the development of yearly management programs.

# **Management Information**

Regular updates are provided to the Management, Administration and Policy Table (MAP), chaired by the Deputy Minister and comprising Regional Directors General and Assistant Deputy Ministers. The contaminated sites management program is integrated with the departmental management program. A yearly report is produced on the progress made in reducing contamination risks within Environment Canada.

#### **EMS/SDS Linkages**

Environment Canada's EMS is organized around a set of 23 environmental aspects and contaminated sites management is identified as a priority among this set. A departmental working group was set up specifically for the management of contaminated sites and to develop environmental objectives and targets, performance indicators, action plans, and procedures to reach those targets; and to measure and report on results using the indicators selected.

#### HEALTH CANADA

#### Approach

A series of environmental compliance reviews of Health Canada facilities was completed in the summer of 1997. Information from these reviews, including information related to contaminated sites and aboveground and underground storage tanks, is held in the departmental environmental database maintained by the Corporate Services Branch.

# **Progress Achieved/Status**

In order to develop a risk management strategy and a remediation schedule, Environmental Services of PWGSC was hired to assess the sites and storage tank systems identified as having potential for contamination. These assessments are almost complete, and some remediation work is scheduled to begin this summer.

#### **Management Information**

Senior managers of the Department's Facilities Management organization and the responsible Branch have been briefed on the findings and will be kept informed of the results from the sites and tank systems assessments, as well as all remediation activities.

#### **EMS/SDS Linkages**

In its SDS, Health Canada included a commitment to incorporate existing sound environmental practices into a departmental environmental management system, which includes the management of underground and aboveground storage tanks. Within this context, the Department remains committed to identifying all contaminated sites and preparing a remediation plan by 2000-1.

# INDIAN AND NORTHERN AFFAIRS CANADA INDIAN AND INUIT AFFAIRS PROGRAM

# Approach

In 1998/1999 the Indian and Inuit Affairs Program (IIAP) continued with its activities under the Environmental Issues Inventory and Remediation Plan (EIIRP) for inhabited reserves across the country. In addition, it completed the development of a strategy and methodology for the prioritisation of the remaining assessment and remediation activities of historical contaminated sites on reserve.

# **Progress Achieved/Status**

The IIAP has completed the identification and documentation of some 3,870 environmental issues on reserve, of which 2,320 relate to contamination. During 1998/1999, 104 assessments were initiated and 112 remediation and risk management projects were underway.

# **Management Information**

The automated national database manages and tracks the progress of contaminated sites on reserve. The information contained within the database is available to regional and headquarters staff to help them track the progress of environmental issues, allocate resources, make decisions, and brief senior management.

#### **EMS/SDS Linkages**

Remedial action of priority issues, identified through the EIIRP, continues to be addressed as stated in the Department's sustainable development objectives. An internal review of the Department's SDS is scheduled to commence in May 1999, to determine the Department's progress to date.

# INDIAN AND NORTHERN AFFAIRS CANADA NORTHERN AFFAIRS PROGRAM

#### **Approach**

The Northern Affairs Program (NAP) is using a risk assessment approach to address, as a priority, waste sites where there are significant risks to human health and safety, or where legal and land claim obligations exist.

To meet its commitments and make the most efficient use of limited resources, the Program will follow strict managerial and technical procedures over the next twenty years that will include a clean-up time frame. Consistent with the Gathering Strength Initiative, this will allow the continuation of a successful approach to northern capacity building, involving northern people and businesses to the greatest extent possible.

# **Progress Achieved/Status**

The Waste Program has inventoried, assessed or prioritized more than 1,800 waste sites from exploration, mining and former Canadian and United States DEW line/military operations. Approximately 784 of these sites have been cleaned up. Assessments indicate that of the remaining sites, approximately 64 need remediation because of physical or chemical hazards, and the remainder are either non-hazardous or require further work and more detailed assessment.

The costs for clean-up since 1991 have been approximately \$75 million. In the fiscal year 1998/99, approximately \$12 million was spent on site clean-up activities in the Yukon and Northwest Territories. These activities include clean-up and remediation, monitoring, engineering, and risk assessment at about 30 sites, as well as initiatives such as inventory and data base development in support of the Waste Program.

#### **EMS/SDS Linkages**

The Waste Program will continue to be an integral part of Environmental Management System and sustainable development objectives.

#### NATURAL RESOURCES CANADA

#### **Approach**

The Department of Natural Resources Canada (NRCan) respects the Code of Environmental Stewardship and deals with its contaminated sites using a risk-based management approach. Potentially contaminated sites are identified and the risk to human health and the environment are assessed. Remedial action is carried out in compliance with the Canadian Council of Ministers of the Environment (CCME) quality criteria for contaminated sites.

Site assessments are carried out on an ongoing basis during operations or activities that involve storage tank removal/replacement or during property disposal. Currently, NRCan is preparing to assess all its properties to systematically review the departmental situation.

A survey will be used to identify potentially contaminated sites based on historical data and to establish a comprehensive inventory. All activities related to the management of contaminated sites are carried out by the staff of the Real Property, Environment and Security Branch, of the Corporate Services Sector.

#### **Progress Achieved**

To date, NRCan has assessed all sites identified as having a potential for contamination, including all underground storage tank sites.

Two sites were remediated in 1996. To ensure proper remediation of these two sites, monitoring activities were carried out in 1997 and 1998.

A third site, which has been identified as contaminated, remains to be dealt with. This site does not require immediate attention due to the low risk it presents to the environment and to the health and safety of people. It does however, require considerable amount of money for clean-up. NRCan's Senior Management is aware of the eventual need to clean-up the site and the time of disposal. The funding requirements will be reported to Treasury Board as a contingent liability.

#### **SDS/EMS Linkages**

The NRCan Environmental Policy, which is the basis of NRCan's Environmental Management System (EMS), commits the Department to conduct the assessment and rehabilitation of contaminated sites following a risk-based approach.

#### PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

# Approach

In fiscal year 1998-99, the Department of Public Works and Government Services Canada (PWGSC) continued to forge ahead with the implementation of its "Contaminated Sites Remediation Framework". This involves the establishment of an electronic "repository" of financial and management decision information for the inventory of PWGSC contaminated sites. This will serve the accounting requirements under the new Treasury Board draft policy *Accounting for Costs and Liabilities Related to Contaminated Sites*.

PWGSC continues to apply a risk management procedure to assessing its sites, which involves a step approach to identifying, assessing, remediating or monitoring its contaminated sites.

#### **Progress Achieved**

PWGSC is presently taking steps to implement an "Accounting Policy" and "Corporate Policy" which will take into account the financial reporting and management principles/requirements for its contaminated sites.

The departmental inventory is still being updated as Phase I Environmental Site Assessments are being conducted and documented for PWGSC properties.

# **Management Information**

Regional Environmental Services Specialists have for a number of years implemented a risk approach to the management of sites. In the last two to three years, this service has been utilized by a number of other government departments for assessment or remediation projects, from small to large scale.

PWGSC's expertise gained from conducting the majority of property dispositions or acquisition has provided for a broad-base knowledge of environmental issues, liability and contamination.

#### **EMS/SDS Linkages**

The departmental Sustainable Development Strategy, which establishes targets in concurrence with the issues under the EMS, commits the Department to identifying and prioritizing our contaminated sites and the preparation of Action Plans by March 31, 2000.

#### **REVENUE CANADA**

# Approach

Revenue Canada is custodian of 106 land border crossings across the country. The majority of the facilities are small and many are in remote locations. To make the best use of limited resources, the Department has prioritized its environmental issues and facilities (greatest potential liabilities generally related to the largest, busiest facilities). The Department's sustainable development strategy (SDS) and action plan reflect this prioritization.

# **Progress Achieved/Status**

Preliminary assessments were conducted by Public Works and Government Services Canada on 14 of Revenue Canada's custodial sites earlier this year. The reports are being analyzed and plans will be developed for further action that may be required.

The SDS commits the Department to conducting Phase I assessments at priority custodial sites by December 31, 2000. Funds will be allocated in next year's budget to address this action plan commitment and the assessments will be conducted in accordance with the Contaminated Sites Management Framework and the CCME National Classification System. The Department reports progress on SDS commitments through the Departmental Performance Reporting (DPR) system.

A database of contaminated sites will be established in the Department's Corporate Administration System. The system will provide the information required by the draft Treasury Board policy for the Directory of Federal Real Property

#### **EMS/SDS Linkages**

Revenue Canada's SDS commits to enhancing management of existing environmental liabilities and reducing potential for future risks. Developing and implementing environmental management systems for contaminated sites is one of the ways in which the Department will achieve this goal.

#### TRANSPORT CANADA

#### Approach

Transport Canada (TC) divestiture activities continue to leave the Department with a smaller and smaller portfolio of property to manage. To balance the demands of the divestiture programs with the need for a contaminated sites inventory, the Department will continue to focus its efforts on the properties which will remain in its portfolio.

Transport Canada has endorsed the recommended Environmental Accountability Partnership (EAP) Subcommittee policy on contaminated sites and is continuing to work towards its implementation through information dissemination, training and the development of appropriate tools for its application.

Transport Canada is refining its contaminated sites program to be consistent with the federal government-wide approach to addressing contaminated sites. The Department continues to invest resources in the evaluation of suspected contaminated sites, and mitigative actions are initiated where adverse environmental effects are identified.

#### **Progress Achieved/Status**

Transport Canada has approximately 597 contaminated sites. Out of the 597 sites, 436 sites have been assessed and 71 are suspected sites. TC spent approximately \$12M over the last three years on remediating its contaminated sites and \$22M on performing site assessments. TC has completed Environmental Baseline Studies/Environmental Site Assessments at the majority of properties to be transferred.

Contaminated site identification, classification and management continues to be carried out within the regions and related information is being recorded in the departmental contaminated site database.

TC has identified its sites to be classified in accordance with *the CCME National Classification*System and a consultant has been hired to assist in completing the classifications. Further, all future site assessment contracts are to contain a classification requirement.

#### **Management Information**

TC will be revising its existing contaminated sites database to incorporate additional reporting requirements as a result of the draft Treasury Board policy and will be correlating its contaminated sites inventory with Treasury Board's Directory of Real Property (DFRP).

Regions will forward their inventory information to headquarters on an annual basis. Reporting will correspond with the departmental EMS reporting date. Data will be compiled in a national inventory and reported to the Real Property and Finance divisions.

#### **EMS Linkages**

Contaminated site management is one of the key components of the departmental Environmental Management System (EMS). The EMS is being implemented at both headquarters and regional offices. Transport Canada has committed to a specific management objective with measurable targets within its EMS concerning contaminated sites.

Target: Identification and management of contamination by 2003.

To achieve this target, TC will establish a baseline from which to measure its performance. The first step in establishing the baseline will be to correlate the contaminated sites inventory with the Departmental Property Records System.

TC is establishing an intranet-based system that will integrate all of the Department's EMS databases, including the contaminated site database, and allow on-line data management.