

NORTHERN AFFAIRS PROGRAM
CONTAMINATED SITES PROGRAM
PERFORMANCE REPORT

2002 – 2003

December 2003

Table of Contents

TABLE OF CONTENTS	i
TABLE OF FIGURES	1
MANAGEMENT STATEMENT	1
PROFILE OF NAP CONTAMINATED SITES PROGRAM.....	2
VISION	2
NAP CONTAMINATED SITES MANAGEMENT AND GOVERNANCE	2
PERFORMANCE MEASUREMENT	4
OBJECTIVES	4
PROGRESS ACHIEVED	4
Policy and Legal Obligations	4
Management	5
Priority Sites	7
Financials	9
Social and Economic Benefits	13
Polluter Pays	18
FUTURE DIRECTIONS	18
LIST OF ACRONYMS.....	20

Figures and Tables

<i>Figure 1: Map of Priority Sites</i>	3
<i>Figure 2: CSP Governance Structure.....</i>	3
<i>Figure 3: CSP Performance Highlights</i>	4
<i>Table 1: Number of Contaminated and Physical Hazard Sites, 2003.....</i>	6
<i>Table 2: CCME Classification of Sites, 2003</i>	7
<i>Table 3: Current Status of Priority Class 1 Sites, 2003.....</i>	8
<i>Table 4: Expenditures by Region, 1991 – 2003.....</i>	9
<i>Table 5: Expenditures by Site, 2001 – 03</i>	10
<i>Figure 4: Proportion of Expenditures by Site, 2002 – 03</i>	11
<i>Table 6: Requested vs. Allocated vs. Spent Funds, 2002 – 03.....</i>	11
<i>Figure 5: Budget Forecast by Activity, 2003 – 04</i>	12
<i>Table 7: Liability by Region, 2001 – 03</i>	13
<i>Table 8: Regional Proportion of Liability, 2001 – 03</i>	13
<i>Table 9: Training by Type and Site, 2002– 03</i>	14

Management Statement

We are pleased to introduce our second Performance Report. In the pages that follow, you will read about the environmental, health and safety, and community relations' practices of the Northern Affairs Program (NAP), Contaminated Sites Program (CSP). To better understand our progress, the report is enhanced by many charts and numbers that quantify our performance. Examples of the commitment and initiative of the employees, contractors and suppliers who support the CSP are also provided.

We have taken significant steps to reduce the risk to human and environmental health and liability associated with the contaminated sites we manage. We have also made positive economic and social contributions to the communities in the North where our sites are located. Our program spent approximately \$37 million during the year and achieved a number of results at priority sites, including:

- ongoing care and maintenance at 5 sites;
- site assessment work at 9 sites;
- consultations at 4 sites;
- remediation work at 6 sites; and
- site monitoring at 19 sites.

We continue to work toward further site remediation and reductions in human and environmental health risks and liability, as well as work with community members who live or work near the sites we manage.

The 2002-2003 fiscal year was a time of change and challenge for our program. We continued to work towards securing stable funding to support the CSP. We were encouraged by the Finance Minister's announcement in the February 2003 budget of the Federal Contaminated Sites Accelerated Action Plan. Also, the Office of the Auditor General of Canada (OAG) audit results made a number of recommendations that the program will be addressing in the next fiscal year.

CSP staff continued to apply their dedication and resourcefulness to accomplishing the program's objectives.

We accomplished many of the priorities we set out to achieve last year, such as:

- approval of the INAC Contaminated Sites Policy;
- approval of the NAP Contaminated Sites Management Framework;
- continued care and maintenance at high-priority contaminated sites;
- training delivered to increase the consistent use of the inventory database; and
- continued progress at priority sites.

While proud of our accomplishments, we also recognize areas of continued challenge, such as:

- fully integrating the Contaminated Sites Management Framework into operations, and;
- addressing all issues identified in Office of the OAG audits.

This Performance Report gives readers an in-depth perspective on CSP's achievements over the past year, as well as on its goals for the years to come. A list of acronyms can be found at the end of the report. To ensure continued improvement, I invite readers to provide comments and feedback on this report.¹ Thank you for your interest in our program.

Liseanne Forand
Assistant Deputy Minister
Northern Affairs Program
Indian and Northern Affairs Canada

December 17, 2003

¹ Please see the end of the report for contact information.



This report presents the results of Indian and Northern Affairs Canada's Northern Contaminated Sites Program in Canada's three territories for the period April 1, 2002, to March 31, 2003. This second Performance Report focuses on CSP's performance over the past year. For more historical and contextual information about our program, please refer to our web site at www.ainc-inac.gc.ca/ps/nap/consit/index_e.html or our first report can be viewed at www.ainc-inac.gc.ca/ps/nap/consit/1csrep0102_e.html.

Profile of NAP Contaminated Sites Program

As custodian of most federal lands in the North, Indian and Northern Affairs Canada (INAC) manages abandoned contaminated properties in the three territories. Many of the contaminated properties in the Northwest Territories (NWT), Yukon and Nunavut are a result of private sector mining, oil and gas activities and former government military activities. In the NWT, the major sites include mines and military sites. In Yukon, the focus is on mining properties and in Nunavut, the focus is on military sites. **Figure 1** on the next page illustrates the locations of priority sites in Canada's North.

CSP currently has a dedicated team of 19 staff members, located at INAC headquarters in Gatineau, Quebec (2) and in three regional offices, including NWT (12.5), Yukon (3) and Nunavut (1.5). Staff numbers have not changed compared to the previous reporting period. The core staff is supported where possible and required by other Northern Affairs Program staff in areas such as water resources, environmental assessment and justice.

DEVOLUTION

Devolution of responsibilities to the Yukon Territorial Government (YTG) is scheduled for April 1, 2003. The Yukon Devolution Transfer Agreement (DTA) specifies that the YTG has a significant role in managing the large, abandoned mines in Yukon, but also stipulates federal funding commitments to address these territorial contaminated sites. Over the reporting period, INAC and YTG have been working closely together to define roles and responsibilities and reporting relationships.

Vision

The vision of the CSP is to:

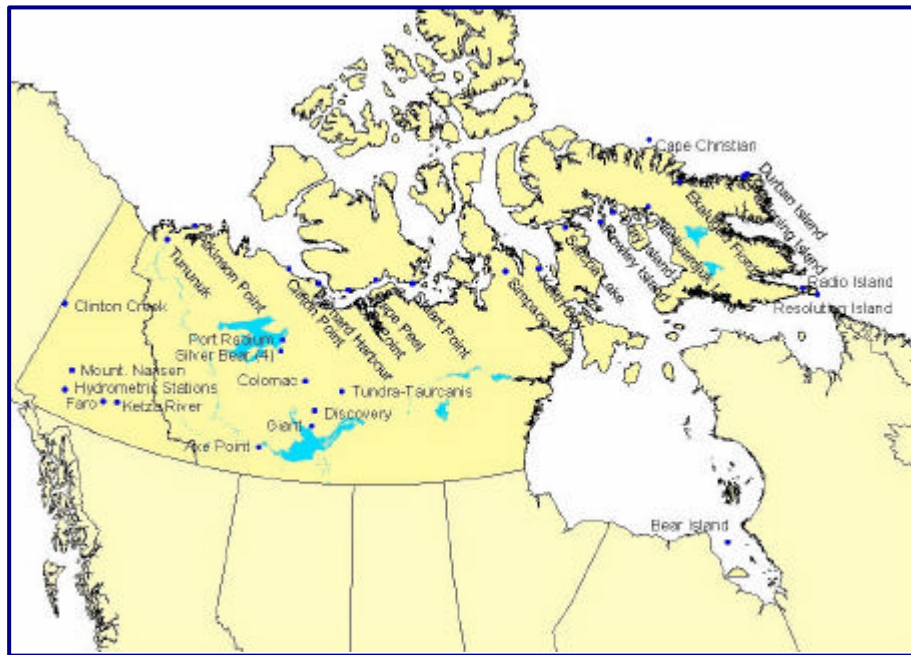
...manage contaminated sites in a cost-effective and consistent manner, to reduce and eliminate, where possible, risk to human and environmental health and liability associated with contaminated sites.

How CSP achieves this vision and its strategic commitments is reported in the following sections of this Performance Report.

NAP Contaminated Sites Management and Governance

Overall responsibility for the CSP rests with the Deputy Minister, INAC, and the Assistant Deputy Minister, NAP. Key decisions are supported through a committee process in four separate bodies. **Figure 2** illustrates the roles and relationships of the principal governing bodies.

Figure 1: Map of Priority Sites²

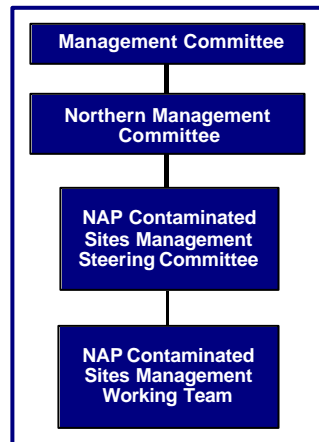


The Management Committee (MC) is responsible for resource allocation for multi-year projects for the entire department. It approves the funding for CSP. The key corporate governance body in the CSP is the Northern Management Committee (NMC). Chaired by the Assistant Deputy Minister (ADM) of Northern Affairs and comprising regional and sector Directors General and Directors, this committee brings together senior operational and financial executives. The NMC approves the annual contaminated sites workplan and forwards it for funding consideration by the MC. The NAP Contaminated Sites Management Steering Committee (CSMSC) is chaired by the Director General, Natural Resources and Environment, with all NAP Regional Directors General as contributing members. CSMSC provides overall direction to the program and oversees implementation of approved projects. The NAP Contaminated Sites Management Working Team (CSMWT) is chaired by the CSP Manager (HQ), and consists of all Regional Program Managers and Project Managers. During the 2002-2003 reporting

period, the CSMSC and the CSMWT met three times.

The CSP is a decentralized program, implemented in the three Northern regions located in each of the three territories. Primary front-line responsibility for program implementation rests with the regions. Headquarters supports the regions by providing program management support and strategic direction. Headquarters also provides regular progress reports on implementation and management, monitors optimal delivery and management of the CSP and participates in regular audits and evaluations.

Figure 2: CSP Governance Structure



² For a discussion about priority sites, please see the Performance Section.

Performance Measurement

Objectives

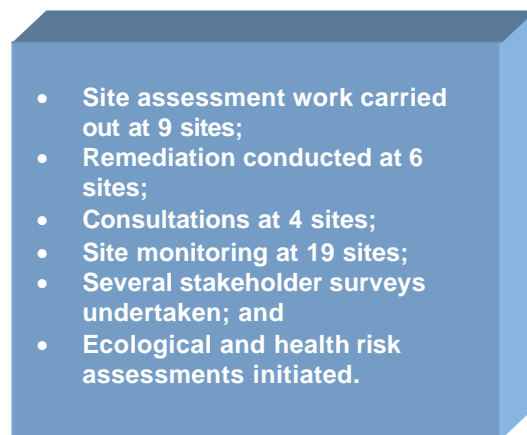
The CSP has established the following strategic objectives to guide its activities:

- to meet federal and departmental policy requirements and legal obligations regarding the management of contaminated sites;
- to provide a scientifically defensible risk management framework for setting priorities, planning, implementing and reporting on the management of contaminated sites;
- to require that, where a suspected contaminated site has been identified, the site be assessed in a timely, consistent and cost-effective manner;
- to remediate, based on approved resource levels, all National Classification System (NCS) Class 1 contaminated sites in the North, and Class 1 and 2 contaminated sites on reserve, on a priority basis, unless it can be demonstrated that for a specific site an alternative form of management is appropriate;
- to promote the social and economic benefits that may accrue to First Nations, Inuit and northerners when carrying out activities required by this policy; and
- to promote the federal "polluter pays" principle.

Progress Achieved

NAP CSP has developed a Results-based Management and Accountability Framework that specifies outcomes and indicators to track performance and progress in meeting the program's strategic objectives. **Figure 3** summarizes the highlights of our program accomplishments in the 2002-2003 reporting period. The progress against each can be found in the sub-sections that follow.

Figure 3: CSP Performance Highlights



Policy and Legal Obligations

The context in which CSP operates consists of an array of regulations, policies and technical guidelines and standards. These are continually evolving. CSP keeps abreast of these changes and incorporates them into its operations. CSP follows federal environmental legislation related to contaminated sites such as the *Fisheries Act* (FA), as well as territorial land and water legislation.

CSP's work is also largely influenced by the policy requirements related to contaminated sites that have emerged from the Treasury Board Secretariat (TBS) over the last several years.³

There were no recorded non-compliances against CSP projects in the 2002-2003 fiscal year. However, at a number of sites, there is the potential for non-compliances to occur should care and maintenance activities be reduced. CSP also conforms to TBS policies and guidelines.

³ More information related to TBS policies and guidelines on contaminated sites is available at <http://www.tbs-sct.gc.ca/dfrp-rbif/cs-sc/home-accueil.asp?Language=EN>.

Management

The specific outcomes related to the management objective include:

- to implement the program in a consistent, cost-effective and accountable manner; and
- to establish appropriate multi-year funding levels.

The NAP Contaminated Sites Management Framework, approved in October 2002, includes:

- policy;
- strategy;
- governance framework;
- results-based management and accountability framework; and
- corporate procedures.



Bulkhead at Giant mine, NWT

These elements provide the building blocks to ensure that the program is implemented in a consistent, cost-effective and accountable manner. This report is a key part of the management framework.

An important management tool to assess the effectiveness of the framework is the result of audits and evaluations. NAP CSP did not conduct any management system audits during the reporting year; however, the OAG conducted two separate audits in 2001 and released the results in October 2002. The two audits focussed on: Federal Contaminated Sites and Abandoned Mines in the North, respectively.

The first audit reported that departments were not systematically managing contaminated sites and did not have accurate estimates of liability. With respect to abandoned mines, the second audit reported that there were inadequate resources to address the significant risk associated with these sites. These audits focussed attention on INAC's contaminated sites management and resulted in a number of recommendations.⁴ INAC concurred with most of the audit findings and will be implementing measures to address them.

Establishing appropriate multi-year funding has not yet been achieved. The program has been working with the inter-departmental Contaminated Sites Management Working Group (CSMWG) that includes Treasury Board Secretariat (TBS) and Environment Canada as the co-chairs responsible for the Federal Contaminated Sites Accelerated Action Fund to address this need.

GIANT

The program has a number of contaminated site issues to manage at the Giant Mine in NWT, including tailings and arsenic trioxide dust build-up, a by-product of the ore processing. It also has over 100 structures that remain on the mill and mine town site that contain asbestos insulation, which are heavily contaminated with arsenic or are around areas of hydrocarbon-contaminated soil. INAC is represented on the Yellowknife Arsenic Soil Remediation Committee (YASRC). This is a government, industry and community stakeholder committee developing regional arsenic remediation criteria for soils in the Yellowknife area. A health risk assessment was undertaken in support of work required to set soil remediation criteria. A report was presented to the public in mid-2002. This is a key component in setting the final remediation standards and developing the final plan and costing for the Giant site.

In early 2002, public meetings were held in Dettah, N'dilo and Yellowknife in order to consult with stakeholders. Studies to support the development of the Arsenic Trioxide Management Project Description also took place during the reporting period. However, due to a lack of funding, no substantive cleanup or demolition activity was undertaken.

⁴ The results of the audits and INAC's response to the audit recommendations are available at http://www.oag-bvg.gc.ca/domino/cesd_cedd.nsf/html/menu3_e.html.

In order to track the progress of contaminated sites, NAP maintains a contaminated/waste site database, which also includes information on waste sites and other physical hazards that represent a human health and safety risk and a liability to the department. While not considered in the TBS Contaminated Sites Management Policy, physical hazards (e.g. abandoned mines with open adits,⁵ dams and other structures with geotechnical stability issues) must be managed by NAP.

As of March 31, 2003, there were a total of 1823 sites (contaminated and physical hazards) in the NAP Contaminated/Waste Sites Inventory. This is five more than identified in 2001-2002 due to an increase in contingent liabilities in NWT and Nunavut.

Of these 1823 sites:

- 976 have been assessed and require no further action or have been remediated;
- 825 still require action including assessment, remediation or risk management; and
- 22 are contingent liabilities.⁶

Of the 825 sites that still require action, 328 have been assessed and 497 still need assessment or site inspections to ascertain the level of contamination, should it be present. **Table 1** identifies the number of assessed and suspected contaminated sites and physical hazards by region.

Table 1: Number of Contaminated (c.s.) and Physical Hazard (p.h.) Sites, 2003

Region	Assessed			Suspected			Total
	C.S.	P.H.	Sub-Total	C.S.	P.H.	Sub-Total	
Yukon	10	31	41	14	61	75	116
NWT	29	127	156	183	77	260	416
Nunavut	24	107	131	117	45	162	293
Total	63	265	328	314	183	497	825

When identifying and classifying the level of contamination at a particular site, the program uses the Canadian Council of Ministers of the Environment (CCME), National Classification System (NCS). Sites are classified according to the following classes:

- Class 1:** Action Required;
- Class 2:** Action Likely Required;
- Class 3:** Action May be Required;
- Class N:** Action Not Likely Required; and
- Class I:** Insufficient Information.

KITTIKAZUIT BAY

A number of accomplishments were achieved at Kittigazuit Bay during the reporting period, including:

- put the majority of contaminated soils and materials into containers;
- demolition of the boiler house, collection and compilation of other visible debris;
- removal and incineration of barrels from Sewage Lake as well as the Bay;
- detection of a hydrocarbon plume that needs further delineation and soil removal, and;
- located DDT soils on the site within the area of the Reindeer Herding Cabins, which are important to the Inuvialuit and form a heritage site.

Kittigazuit Bay, NWT



⁵ A nearly horizontal entrance or passage in a mine.

⁶ A contingent liability is an existing condition or situation involving uncertainty concerning possible gain or loss to an organization that will ultimately be resolved when one or more future events occur or fail to occur. Resolution of the uncertainty may confirm the acquisition of an asset or the reduction of liability or the loss or impairment of an asset or the incurrance of a liability, or the party responsible for cleanup has not been determined.

FARO

The Faro Mine is located in Yukon and consists of waste rock dumps, ore processing facilities, water treatment plants, tailings disposal facilities and offices, shops and miscellaneous buildings. INAC is responsible for paying for care and maintenance activities, as well as investigations leading to further development of abandonment plans.

Care and maintenance activities carried out throughout the reporting period focusses on preventing the discharge of contaminated water. In the absence of ongoing collection and treatment, the discharge of contaminated water from the site would violate the *Fisheries Act*. INAC spent approximately \$4.6 million on activities such as:

- a water pump and treatment program;
- environmental monitoring programs; and
- modifications to the water treatment system.

A number of projects to gather and contribute information related to final closure / abandonment plans, as well as determining a risk-based priority list for future activities were also completed.

As part of the assessment process related to the renewal of the water licences for the mine site, an initial round of stakeholder consultations were held in fall 2002. The traditional use of the Faro area by the Ross River Dena has been affected by the development and operation of the mine. Both hunting and fishing have been reduced due to the effects of mining on the quality of the fish and game. To address such concerns, in 2002, the risk assessment was expanded to obtain a better understanding of the human health and ecological risks as well as those related to environment, health and safety management.



Barge at Faro mine, Yukon

Table 2 identifies the classification of sites that require further action by region according to the CCME system.

Table 2: CCME Classification of Sites, 2003

Class	Yukon	NWT	Nunavut	Total
1	8	14	20	42
2	2	9	4	15
3	0	5	0	5
N	0	1	0	1
I	0	0	0	0
TOTAL	10	29	24	63

Priority Sites

The priority—NCS Class 1—contaminated sites are the focus of many CSP activities due to the higher risks associated with these sites. **Table 3** on the following page illustrates the status of these priority sites according to the CSMWG ten-step process.

Resolution Island, Nunavut



Indian and Northern Affairs Canada

RESOLUTION ISLAND

Over \$4 million worth of remediation work took place at Resolution Island over the reporting period. Approximately 1100 cubic metres of PCB-contaminated soil were excavated and 234 conical shipping containers were filled for off-site shipment. Approximately 25,600 litres of waste oil were incinerated. The removal of asbestos from buildings and burial in landfill is completed. A Tier II landfill design was also developed for future disposal.

COLOMAC

Colomac is an abandoned gold mine located in NWT. INAC has been operating the mine since 1999, primarily undertaking care and maintenance activities. During the reporting period, a Water Licence and a Land Use Permit were applied for and granted. This enabled site staff to conduct various activities, including:

- assembling and then operating two pilot plants over a five-month period to test tailings water treatment options;
- establishing a field lab to allow onsite analysis of water samples;
- undertaking monitoring programs involving regular sampling and profiling as well as submitting regular reports to the Water Board - four sampling wells were installed to monitor potential seepage;
- evaluating additional water diversion options and the risks of the preferred water treatment;
- constructing a winter road to the site; and
- conducting specified care and maintenance activities:
 - 400,000 litres of fuel and 24 tonnes of mono-ammonium phosphate (MAP) were transported to the site;
 - new generators were installed and commissioned;
 - the site electrical distribution system was maintained;
 - waste oil continued to be incinerated in an onsite heat recovery facility; and
 - numerous studies and assessments were conducted to support the development.

Financials

Expenditures

To accomplish much of the work described above, CSP spent approximately \$37 million, an increase of approximately \$6.5 million from expenditures in the previous fiscal year.

Table 4 illustrates the program's expenditures by region over the last 13 years. Over the last several years, the budget for the program has been steadily increasing.



Tailings at Colomac Mine, NWT

Table 4 : Expenditures by Region, 1991 – 2003

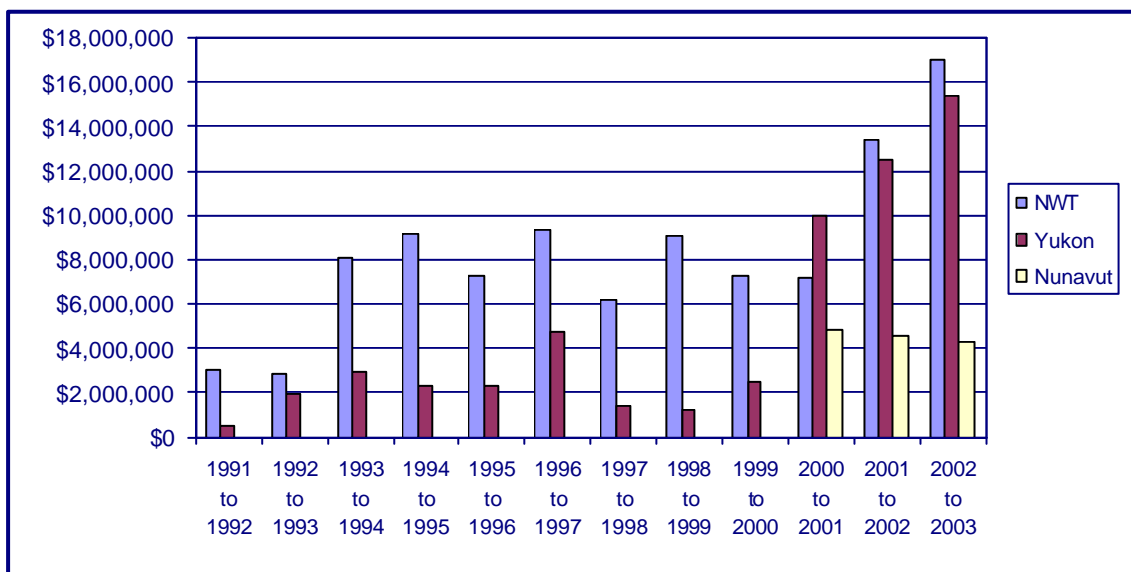


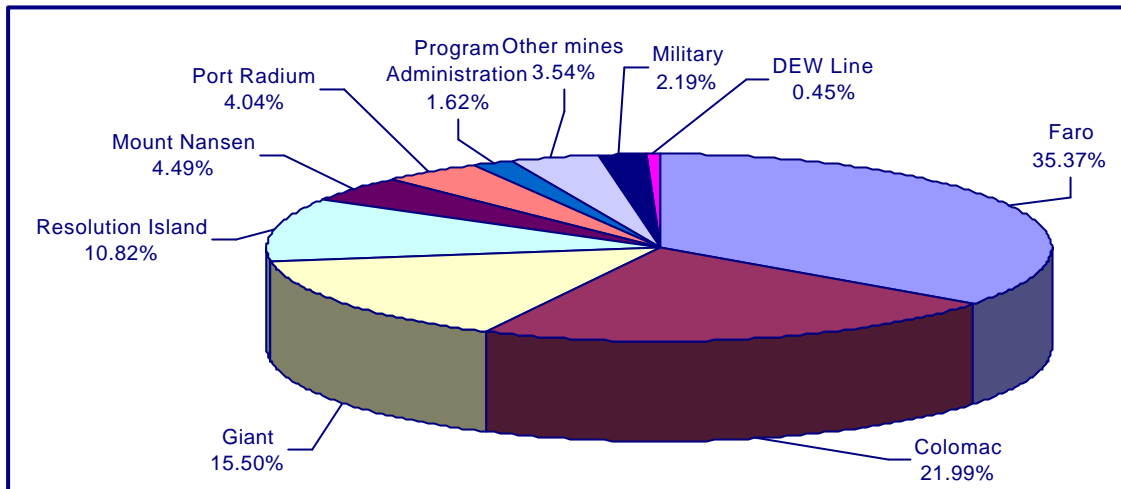
Table 5 illustrates the expenditures spent by site over the last two fiscal years, including the specific activities that took place. Figure 4 on the following page identifies the proportion of

expenditures by site in 2002-2003, clearly illustrating that the large mines account for the greatest share of the program's expenditures.

Table 5: Expenditures by Site, 2001 – 2003

Site Name	Spent 2001-02	Type of Activity	Spent 2002-03	Type of Activity
Arctic Gold & Silver	\$24,000	Monitoring	\$2,500	Monitoring
Axe Point	\$152,694	Assessment		
BAF 3 - Breevort			\$11,300	Assessment
Bear Island	\$73,000	Assessment		
Bernard Harbour			\$22,280	Monitoring
Brooks Brook	\$77,000	Remediation	\$2,000	Monitoring
Cape Christian	\$91,905	Assessment	\$27,900	Monitoring
Cape Peel			\$22,280	Monitoring
Cat & Grainger Camp	\$464,374	Remediation		
Clifton Point			\$22,280	Monitoring
Clinton Creek	\$140,000	Assessment	\$500,000	Consultation, Remediation, Monitoring, Project Management
Colomac	\$5,382,455	C&M, Assessment, Remediation	\$8,157,833	C&M, Assessment, Regulatory Approvals, Consultation, Remediation, Monitoring, Project Management
Contact Lake	\$11,043	C&M	\$4,820	Monitoring
Discovery	\$90,000	Monitoring	\$398,247	C&M, Assessment, Monitoring
Durban Island			\$27,900	Monitoring
Ekalugad Fiord			\$27,900	Monitoring
Faro	\$8,263,000	C&M*, UW**, Assessment, Remediation	\$13,124,750	C&M, Assessment, Regulatory Approvals, Remediation
Giant	\$5,218,000	C&M, UW, Assessment, Remediation	\$5,751,500	C&M, Assessment, Consultation, Monitoring, Project Management
Horton River			\$20,000	Monitoring
Jean Marie River			\$28,155	Assessment
Ketza River	\$125,000	Assessment		
Kittigazuit Bay			\$800,000	Remediation
Mount Nansen	\$2,050,000	C&M, UW, Assessment	\$1,665,000	C&M, Assessment
Padloping Island	\$91,500	Assessment	\$27,900	Monitoring
Peel River	\$986,000	Remediation	\$2,000	Monitoring
Port Radium	\$1,775,000	Assessment	\$1,500,000	Assessment, Consultation, Monitoring
Radio Island	\$83,000	Assessment		
Rayrock	\$206,000	Monitoring	\$140,000	Monitoring
Resolution Island	\$4,235,202	Remediation	\$4,015,000	Remediation
Ross Point			\$22,280	Monitoring
Sarcpa Lake			\$2,000	Monitoring
Silver Bear			\$103,086	Remediation
Snag	\$5,000	Monitoring	\$3,500	Monitoring
Tundra	\$135,000	UW	\$71,868	Assessment & Monitoring
UKHM	\$850,000	C&M		
Venus Tailings	\$2,000	Monitoring	\$1,500	Monitoring
Program Administration			\$599,724	Regional & HQ
Total	\$30,531,173	6 C&M; 4 UW; 12 Assessment; 7 Remediation; 5 Monitoring	\$37,105,503	5 C&M; 9 Assessment; 2 Regulatory Approvals; 2 Consultations; 6 Remediation; 19 Monitoring; 3 Project Management
* C&M = care and maintenance		** UW = urgent works		

Figure 4: Proportion of Expenditures by Site, 2002 – 2003



In fiscal year 2002-2003, the CSP was funded primarily by existing departmental funds and was supplemented by additional resources from Treasury Board Program Integrity.

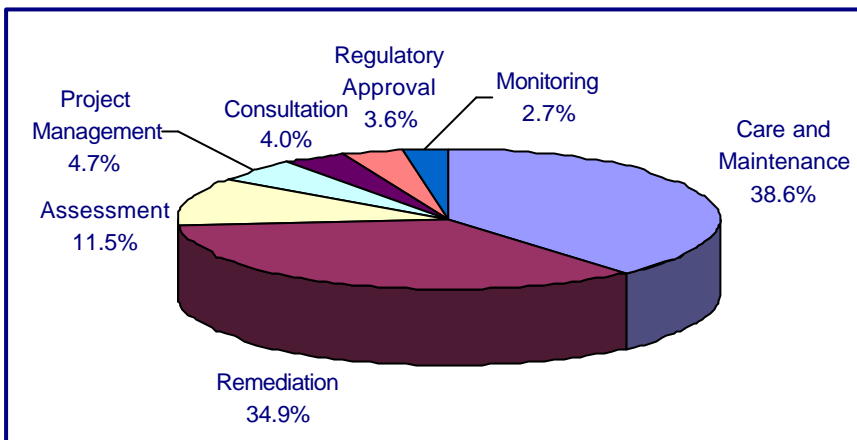
Table 6: CSP Source of Funds 1999 - 2003

Source	1999-2000	2000-2001	2001-2002	2002-2003	Total
INAC	\$9,868,747	\$21,139,607	\$8,621,000	\$23,743,500	\$63,372,854
Program Integrity	\$0	\$0	\$19,023,435	\$9,262,000	\$28,285,435
FCSAI	\$0	\$1,000,000	\$1,925,000	\$0	\$2,925,000
TOTAL	\$9,868,747	\$22,139,607	\$29,569,435	\$37,105,503	\$98,683,292

Of necessity, the majority of CSP funds are spent on care and maintenance, even as new priorities are identified by site assessments, and new mine sites are added to the inventory.

Figure 5 illustrates the budget forecast for the 2003-2004 fiscal year, which shows that care and maintenance absorbs a slightly higher percentage of the budget than remediation. Once major mine properties advance to the implementation of a final abandonment and restoration plan, care and maintenance costs will decrease; however, they are anticipated to remain relatively steady for the next three to five years.

Figure 5: Budget Forecast by Activity, 2003 – 2004



Liabilities

CSP has set an objective to ensure accurately quantified liabilities for all the sites for which it is the custodian. Liabilities are based on engineering and site inspection reports prepared by qualified personnel. Because sites are continually undergoing various levels of assessment and remediation, liability figures may fluctuate from year to year. In order to track the quality of liability estimates, the program monitors the percentage of indicative versus substantive estimates used to determine site liabilities.⁷ As of March 31, 2003, 85.7% of liabilities were indicative and 14.3% were substantive for the program's priority contaminated sites. This is very similar to last year's numbers.

Of the 63 sites that are known to contain contamination, INAC is responsible for a total liability of approximately \$754 million up from \$723 million in 2001-2002. Most of the liability is associated with 35 sites, which have accordingly been designated as high priority sites. In 2001-2002, there were 37 sites; however, Kittigazuit Bay (NWT) fell to an NCS 2 as its remediation nears completion, and Contact Lake's (NWT) NCS score was also reduced to N (Action not likely required) as new information was made

available. More assessment is required to determine the sites' relative priority.

As sites are remediated and further assessments are conducted, the department's overall liability fluctuates. **Table 7** and **Table 8** on the following page identify the program's overall liability by region, in dollars and by regional proportion (percentage of liability in each region). Note that liabilities have changed since the last reporting period from March 2002 to March 2003. Overall, there was an increase in the Yukon region, whereas liabilities in NWT and Nunavut have decreased. In NWT, the decrease is explained by the narrowing of remediation alternatives at Giant Mine, whereas in Nunavut, it is explained by the continuation of remediation at Resolution Island. In Yukon, the increase is due to Faro Mine for which several assessments were conducted during the reporting period, consequently raising the liability; however, the estimate is still indicative.

Despite the overall decrease in liabilities in NWT, it accounts for the largest proportion of liabilities at 42%. Comparatively, five of CSP's major sites – Faro Mine (Yukon); Giant, Colomac, Ekalugad Fjord and Resolution Island (Nunavut) – account for over 70% of the total liability.

⁷ Based on Treasury Board definitions, an indicative liability is a low quality, order of magnitude estimate, and a substantive liability is one of sufficiently high quality and reliability that is based on detailed system and component design and taking into account all project objectives and deliverables (TBS Federal Contaminated Sites Inventory – Input Guide).

Table 7: Liability by Region, 2001 – 2003

Region	Estimated Cost of Evaluation and Remediation Liability		
	2001-02	2002-03	% Change
	Yukon	\$226,851,400	\$283,781,000
NWT	\$341,730,000	\$316,227,505	-7%
Nunavut	\$154,653,000	\$153,853,000	-1%
Total	\$723,234,400	\$753,861,505	4%

Table 8: Regional Proportion of Liability, 2001 – 2003

Region	Regional Proportion of Estimated Cost of Evaluation Liability		
	2001-02	2002-03	% Change
	Yukon	31%	38%
NWT	47%	42%	-5%
Nunavut	21%	20%	-1%
Total	100%	100%	

Social and Economic Benefits

Contaminated sites projects can have substantial social and economic benefits to the communities in the North. INAC's CSP operates with the intent of ensuring that these benefits accrue to First Nations, Inuit and Northern peoples, where possible.

Enhancing the skills of the local labour force is an objective of the program and is essential to the continued success of the program because workers are needed to complete the many cleanup projects that will be necessary in the years to come.

The program is still developing the appropriate information management systems to collect data on the social and economic benefits that result from CSP's activities in the North. However, as an example, 85 % of Resolution Island's staff of 72 people is First Nation, Inuit or Northern. At Colomac mine, they represent 83% of the total staff. **Table 9** identifies the types of training that have taken place at different sites.

Table 9: Training by Type and Site, 2002– 2003

Site Name	Training										
	HAZWOPER	WHMIS	Construction Trades	Administration	Mechanics	Engineering Work	Heavy Equipment Operations	Asbestos Remediation	Monitoring	Water Treatment	
Resolution	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Port Radium				✓					✓		
Discovery		✓		✓		✓			✓	✓	
Mt. Nansen					✓				✓	✓	
Kittigazuit							✓				

Beyond training, CSP projects also inject revenue into the local economies through the provision of jobs and purchasing of goods and services from northern suppliers. At Faro mine, for example, half of its expenditures is spent in the Yukon and at Mount Nansen mine, 87 percent. We are committed to improving our collection of this information and developing a better understanding of our socio-economic impact in the North.

Finally, it is important to note that CSP staff was also trained on different requirements during the reporting period, including a 40-hour hazardous materials management training course which took place in NWT (see pictures below). A training package for Program Managers on the Management Framework including TBS policy and guideline requirements was prepared to be delivered in 2003-2004.



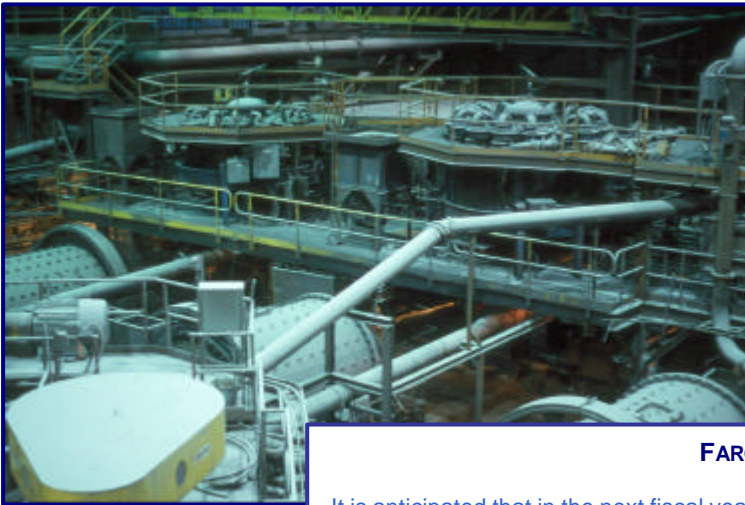
RESOLUTION ISLAND

The Resolution Island Project focusses on decommissioning and cleanup mainly of PCB-contaminated soils. INAC is responsible for the cleanup, but has contracted Qikiqtaaluk Corporation, an Inuit-owned company, to conduct the cleanup. Seventy percent of Qikiqtaaluk staff is of Inuit heritage and, therefore, INAC is supporting a homegrown business that has emerged as a Nunavut leader in the remediation of contaminated sites. The Resolution Project itself has maintained an Inuit hiring ratio of around 80% since its start-up in 1997. In 2002, it reached its highest level at 85%. In 2002, 72 Inuit workers were employed for total salaries / fees of \$800,000. Since start-up in 1997, the Resolution Island Project has paid Inuit workers a total of \$5.72 million in salaries / fees and has contributed over \$7 million worth of business opportunities to the local economy. Many workers receive valuable training in Hazardous Waste Operations and Emergency Response (HAZWOPER), Workplace Hazardous Material Information System (WHMIS), as well as construction trades, heavy equipment operation, mechanics and management. The direct result of this training is increased capacity in the regional workforce, which will contribute to Nunavut's long-term economic development. The table below indicates the total number of person-days on the job versus the total number of person-days dedicated to training over the last three years.

Project Year:	2000	2001	2002
Total number of person-days	4,200	2,900	2,500
Person-days dedicated to training	1,000	725	750
Percentage of training hours	25%	30%	30%



Polar bear at Resolution Island, Nunavut



Water treatment plant at Faro Mine, Yukon.

FARO

It is anticipated that in the next fiscal year there will be local employment at the Faro Mine site totalling a minimum of 26- 28 persons. This will be a slight drop from the 38 First Nations / Inuit / Northern staff employed during the reporting period. If some of the significant special projects are approved for the coming year, the number of site personnel could be between 32 and 34 people. As was done during this reporting period, the intention is to employ and train people from the First Nations, particularly from Ross River. In addition, there is a strong emphasis to ensure where possible and economically viable, that expenditures occur in the Yukon relating to operating activities. Based on 2002-2003 spending, over 60% of the dollars required for operations were expended in the Yukon.

COLOMAC

INAC has been responsible for care and maintenance at Colomac since 1999. Care and maintenance is provided by a small work crew that stays at the site year round. The crew is responsible for maintaining the system that collects and pumps back water seeping from the tailings containment area (TCA) and for maintaining the mine camp. During the warm season, the onsite crew expands considerably (e.g. tradesworkers, trainees, camp manager, superintendents, cook, mechanic, medic) to provide the support needed for site investigations, assessments and remediation activities. The onsite crews are further supported by specialized tradespeople, mobilized from Yellowknife on an as-needed basis. In 2002-2003, approximately \$8.2 million was spent at Colomac on a variety of different activities, including:

- care and maintenance;
- assessment;
- regulatory approvals;
- consultation;
- remediation;
- monitoring; and
- project management.

These activities provide a boost to the local community and economy.



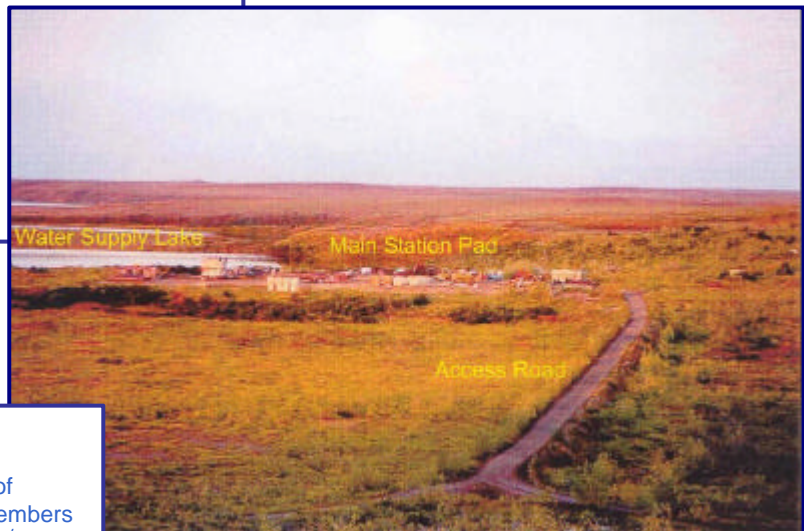
Two pilot water treatment plants at Colomac Mine, NWT

KITTIGAZUIT BAY

Remediation work took place at Kittigazuit Bay during the reporting period. The associated activities provided economic benefits to the nearby community. For example, local residents received 80 hours of training in heavy equipment operation including winching, welding and cutting. Thirty-one Inuvialuit were directly employed on the project, accounting for 91% of the project's staff. In addition to providing much needed employment, the project subcontracted work valued at \$755,000 to Northern or Inuvialuit suppliers, which included:

- marine transportation;
- heavy equipment rental;
- environmental services;
- trucking;
- camp and catering services; and
- waste disposal.

Kittigazuit Bay, NWT



PORT RADIUM

Port Radium conducted a number of studies that involved community members in conducting some of the research / monitoring. Studies focussed on traditional knowledge and environmental effects, including:

- a traditional land use survey;
- a survey of local views on the mine;
- a survey of the local perception of hazard and risk; and
- ecological risk assessment (terrestrial inventory, contaminant levels in terrestrial species, fish and sediment toxicity).

Two community members also took part in training over the winter to learn about various aspects of monitoring changes to the environment to be implemented in the coming fiscal year, including:

- climate change monitoring module;
- NWT cumulative impacts monitoring program; and
- traditional foods monitoring.



Port Radium Mine, NWT

Polluter Pays

Of the 1823 sites in the NAP inventory, 497 need assessment or site inspection. As CSP assesses sites, the entity responsible for any contamination is determined and an attempt is made to ensure that the “polluter pays” for the cleanup.

As mentioned earlier, CSP was involved in completing mine reclamation policies for the NWT and Nunavut during the reporting period. These policies aim to protect the environment and human health in northern communities by effectively addressing the disposition of liability relating to mine closures at operating mines.⁸ The intent is to ensure that the “polluter pays” principle is consistently applied to all new mineral development activities to support the practice of sustainable development.

Future Directions

Building on our successes to date, in the fiscal year 2003-2004, we plan to achieve significant progress at our major high-risk sites and proceed with a number of initiatives to improve and advance the program.

Program management goals include:

- conducting a functional review of the program;
- preparing submissions for long-term funding through the Federal Contaminated Sites Accelerated Action Plan; and
- submitting the Contaminated Sites Management Plan to the Treasury Board Secretariat.

The rapid growth in the NAP Contaminated Sites Program has left Program Managers with an organization that is challenged to keep up with the scale and complexity of the issues and risks being managed. To address this, a functional analysis of the expanded CSP Program is planned, including:

- identification of planned roles, responsibilities and activities;

- assessment of actual roles, responsibilities and activities and functions conducted by CSP personnel (HQ and regions); and
- a review of funding and staffing.

The results of this review will help identify any key gaps in the functions and activities performed by CSP personnel, and in the management framework for program design, implementation, oversight and reporting. It will also identify personnel resource requirements (number, level, core skills) for effective and complete program delivery.

The Federal Contaminated Sites Accelerated Action Plan, announced in the 2003 Budget, provides an opportunity for the department to obtain long-term funding to support the management of contaminated sites in the North. In February, it was announced that \$75 million would be available for federal contaminated sites in the 2003-2004 fiscal year and \$100 million in 2004-2005. NAP CSP will work with the Contaminated Sites Management Working Group, Environment Canada and Treasury Board to prepare a submission for multi-year funding of risk / management and remediation projects at high-risk sites.

Another major initiative over the next fiscal year will be the preparation of the program’s Contaminated Sites Management Plan. This will be developed to meet the requirements of the Treasury Board *Federal Contaminated Sites Management Policy* (2002), as it applies to NAP. It is integral to, and an output of, the NAP Contaminated Sites Management Framework and will present the approach of the CSP for the next five years. This plan will be reviewed and updated annually.

These are only some of the initiatives that will take place over the next year. It is anticipated that the new Federal Contaminated Sites Accelerated Action Fund will assist the program and allow us to continue to make progress at our priority sites and to undertake a number of assessment and remediation projects that not only protect human health and environment, but also bring socio-economic benefits to the people in the North. CSP is committed to continual improvement and meeting its responsibilities of managing contaminated sites in the North according to the principles of sustainable development.

⁸ Mine site reclamation policies available at: http://www.ainc-inac.gc.ca/ps/nap/recpol_e.html

If you have any questions or comments about this report or require further information, please contact Joanna Ankersmit, Manager, Contaminated Sites Program at (819) 997-7247 or ankersmitj@inac.gc.ca.

APPENDIX: LIST OF ACRONYMS

ADM	Assistant Deputy Minister
CCME	Canadian Council of Ministers of the Environment
CSMSC	Contaminated Sites Management Steering Committee
CSMWG	Contaminated Sites Management Working Group
CSMWT	Contaminated Sites Management Working Team
CSP	Contaminated Sites Program
C&M	Care & Maintenance
DDT	Dichloro-diphenyl-trichloroethane
DEW	Distant Early Warning
DTA	Devolution Transfer Agreement
FA	Fisheries Act
FCSAAF	Federal Contaminated Sites Accelerated Action Fund
FCSAI	Federal Contaminated Sites Assessment Initiative
HAZWOPER	Hazardous Waste Operations and Emergency Response
HQ	Headquarters
INAC	Indian and Northern Affairs Canada
MAP	Mono-ammonium phosphate
MC	Management Committee
NAP	Northern Affairs Program
NCS	National Classification System
NMC	Northern Management Committee
NWT	Northwest Territories
OAG	Office of the Auditor General
PCB	Polychlorinated Biphenyls
TBS	Treasury Board Secretariat
TCA	Tailings Containment Area
UW	Urgent Works
WHMIS	Workplace Hazardous Material Information System
YASRC	Yellowknife Arsenic Soil Remediation Committee
YTG	Yukon Territorial Government