



Aboriginal Affairs and
Northern Development Canada

Affaires autochtones et
Développement du Nord Canada

NORTHERN CONTAMINATED SITES PROGRAM

P E R F O R M A N C E R E P O R T

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Purpose

As part of its commitment to public reporting, Aboriginal Affairs and Northern Development Canada (AANDC)'s Northern Contaminated Sites Program (NCSP) issues an annual performance report on its progress in managing northern federal contaminated sites.

This is the ninth annual performance report published by the program. It reports on the NCSP's performance from April 2009 to March 2010 against the objectives established in its 2006-2010 Results-based Management and Accountability Framework (RMAF).

Additional information, including a breakdown of activities by each region (the Yukon, the Northwest Territories and Nunavut), is included in Appendix A. Case studies highlighting some of the sites under management have also been included to provide additional context on the NCSP's work.

Further information on the NCSP, its activities and previous annual performance reports can be found at:

<http://www.aadnc-aandc.gc.ca/eng/1100100035301/1100100035302>.

List of Acronyms

AANDC	Aboriginal Affairs and Northern Development Canada
CEAP	Canada's Economic Action Plan
DIAND	Department of Indian and Northern Development
DTA	Devolution Transfer Agreement
EHS	Environment, Health and Safety
FCSAP	Federal Contaminated Sites Action Plan
IEMS	Integrated Environmental Management System
LTA	Lost Time Accident
NAO	Northern Affairs Organization
NCS	National Classification System
NCSP	Northern Contaminated Sites Program
NWT	Northwest Territories
PWGSC	Public Works and Government Services Canada
RMAF	Results-Based Management Accountability Framework

Executive Summary

Through its Northern Contaminated Sites Program (NCSP), Aboriginal Affairs and Northern Development Canada manages contaminated sites across the Yukon, the Northwest Territories and Nunavut. Liabilities associated with these sites – which include some of the largest and most complex contaminated sites in the country – are currently estimated at \$1.5 billion.

The purpose of the program is to reduce and eliminate risks to human and environmental health as well as federal financial liabilities associated with these sites. This report presents NCSP's performance against its program objectives, which include the identification, assessment, and remediation of priority sites; the promotion of benefits for Northerners and Aboriginal peoples; meeting legal obligations; and ensuring that the program is run in a cost-effective and accountable manner.

The program has continued to make progress against its objectives throughout the course of 2009-10. The program met all relevant legal obligations and has continued to expand its efforts to improve environment, health and safety (EHS) performance, including the establishment of an EHS Working Group in 2009-10 to support implementation of its overall EHS management system, and continuing to conduct regular EHS audits at various sites.

In addition, the NCSP accelerated its site assessment efforts in 2009-10 as a result of new funding received under Canada's Economic Action Plan. The program has also moved a number of sites beyond site assessment and remediation planning to the active remediation stage with ten sites under active remediation in 2009-10.

Program liability figures – estimated at \$1.5 billion in March 2010 – continue to fluctuate as a result of ongoing site assessment and remediation planning work, particularly for large sites such as the Faro and Giant mines. However, it is anticipated that this variation will decrease as further site assessments are completed and will subsequently be further reduced as remediation efforts are implemented on some of the larger sites managed by the program.

The NCSP also continues to promote social and economic opportunities in the North by engaging First Nations, Inuit and Northerners in all aspects of the site management and remediation process. To that end, the program has established an overall target of ensuring that 60% of all project employment, training and contracts (by value) are provided to Northerners and northern Aboriginals. The program has made steady progress in achieving this objective, although additional work is required to achieve these goals for northern Aboriginals.

Program expenditures in 2009-10 approached \$116.5 million with almost \$110 million coming from the Federal Contaminated Sites Action Plan (FCSAP), including \$11 million from Canada's Economic Action Plan; the remaining \$6.5 million being funded by the Department. These expenditures reflect an increase over previous years, in part due to the growing number of priority sites moving into active remediation.

Moving forward, the program will continue to accelerate its activities on priority sites. At the same time, the NCSP will actively participate in the renewal of the FCSAP program, anticipated in 2010-11, to set the stage for even greater results over the next five years.

1.0 Program Overview

Aboriginal Affairs and Northern Development Canada (AANDC) is the custodian of most federal lands in the North. Pursuant to the *Department of Indian Affairs and Northern Development (DIAND) Act*, AANDC is responsible for the management of contaminated sites in the Yukon, the Northwest Territories and Nunavut. Liabilities associated with these sites are currently estimated at \$1.5 billion.

Contaminated sites in the North have not typically resulted from departmental operations. Rather, AANDC's portfolio of northern contaminated sites originate primarily from mining, petroleum and military activity dating back over half a century, long before the environmental impacts of these activities were adequately understood.

AANDC has the largest liability of all federal departments. These liabilities include some of the largest and most complex contaminated sites in the country. For example, the Faro mine, in the south-central Yukon, and the Giant mine, within Yellowknife City limits in the NWT, together represent liabilities of approximately \$1 billion.

The Northern Contaminated Sites Program (NCSP) was created within the Northern Affairs Organization (NAO) in 1991. However, the scale and complexity of AANDC's liability grew rapidly in the late 1990s as a result of a sudden increase in private sector bankruptcies associated with falling mineral prices. The Department has since developed and implemented a mine reclamation policy which limits its liability in current and future mining projects.

The number of people required to deliver the program has increased significantly since its inception due to the growing number of priority sites moving into active remediation. In the last four years, the Program has had its employee base grow both in the regions and at its Headquarters location. Table 1 outlines trends in total program employment since 2005-06.

Mandate and Objectives

The NCSP's goal is to 'reduce and eliminate, where possible, risk to human and environmental health and liability associated with contaminated sites'. Priority is placed on sites that have been classified according to the National Classification System (NCS) as Class 1 (high priority for action) or Class 2 (medium priority for action).

Implementation of the program is guided by the 2002 AANDC *Contaminated Sites Management Policy*, which outlines the following six objectives:

- to meet federal and departmental policy requirements and legal obligations regarding 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 provide a scientifically valid, risk management-based framework for setting priorities, planning, implementation and reporting on the management of contaminated sites;
- to remediate, based on approved resource levels, all NCS Class 1 contaminated sites in the North, 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 pay" principle.

Table 1 • Total NCSP Employment

Total Employment	2005-06	2006-07	2007-08	2008-09	2009-10
Headquarters	5	7.5	10.5	9.5	12
Nunavut	5	4.75	4.75	8	9
NWT	26	29	42.5	37	40
Yukon	6	7.5	7.5	11	11
Total	42	48.75	65.25	65.5	72

The NCSP is consistent with AANDC's Program Activity Architecture and other relevant policies and initiatives. The program also works closely with other relevant federal initiatives such as the Federal Contaminated Sites Action Plan (FCSAP). FCSAP was created in 2005 to protect both the human health and the environment from the impact of federal contaminated sites and to effectively eliminate federal financial liability associated with these sites. The NCSP receives significant funding support from the FCSAP program, and in return, makes a significant contribution to achieving FCSAP's long-term goals.

Consistent with the ten-step process developed by the federal Contaminated Sites Management Working Group, core activities undertaken by the NCSP include:

- **Care and maintenance**, or efforts to stabilize or avoid any potential risks or contaminant releases at key sites (such as the Faro and Giant mines) during remediation planning;
- **Investigation and assessment** of suspected sites to characterize the nature of site risks, determine which sites have the greatest liability to the federal government and which pose the greatest risk to human health and the environment, as well as the anticipated costs associated with addressing those risks;
- Development of site remediation/risk management plans which will guide subsequent site-specific actions;
- Undertaking various **consultation activities** to inform and engage affected First Nations and local communities in remediation planning efforts;
- **Securing regulatory approvals** (such as environmental assessments, water licences, land use permits, or fisheries authorizations) required to implement approved remediation or risk management plans;
- **Implementation of remediation and/or risk management activities**, which can include a range of activities such as civil works, construction of new facilities and infrastructure, and incineration; and
- **Ongoing monitoring** to ensure remediation and/or risk management efforts are successful.

Program Scale

The NCSP maintains a comprehensive electronic inventory of contaminated sites in the North. At the end of 2009-10, 1968 sites were included in this inventory, including 79 that are classified as Class 1 or Class 2. As indicated below, the number of NCSP sites has increased slightly over time as a result of further assessment and testing activities at these sites.

The program has continued to assess sites in its inventory to ensure that it has a complete picture of its contaminated sites liabilities in the North, and to confirm whether any additional Class 1 or 2 sites exist. It is not anticipated that major new liabilities will emerge, or that significant ongoing efforts will be required on any sites that are identified as a result of this process. This work was accelerated during 2009-10 as a result of new funds approved under Canada's Economic Action Plan (CEAP).

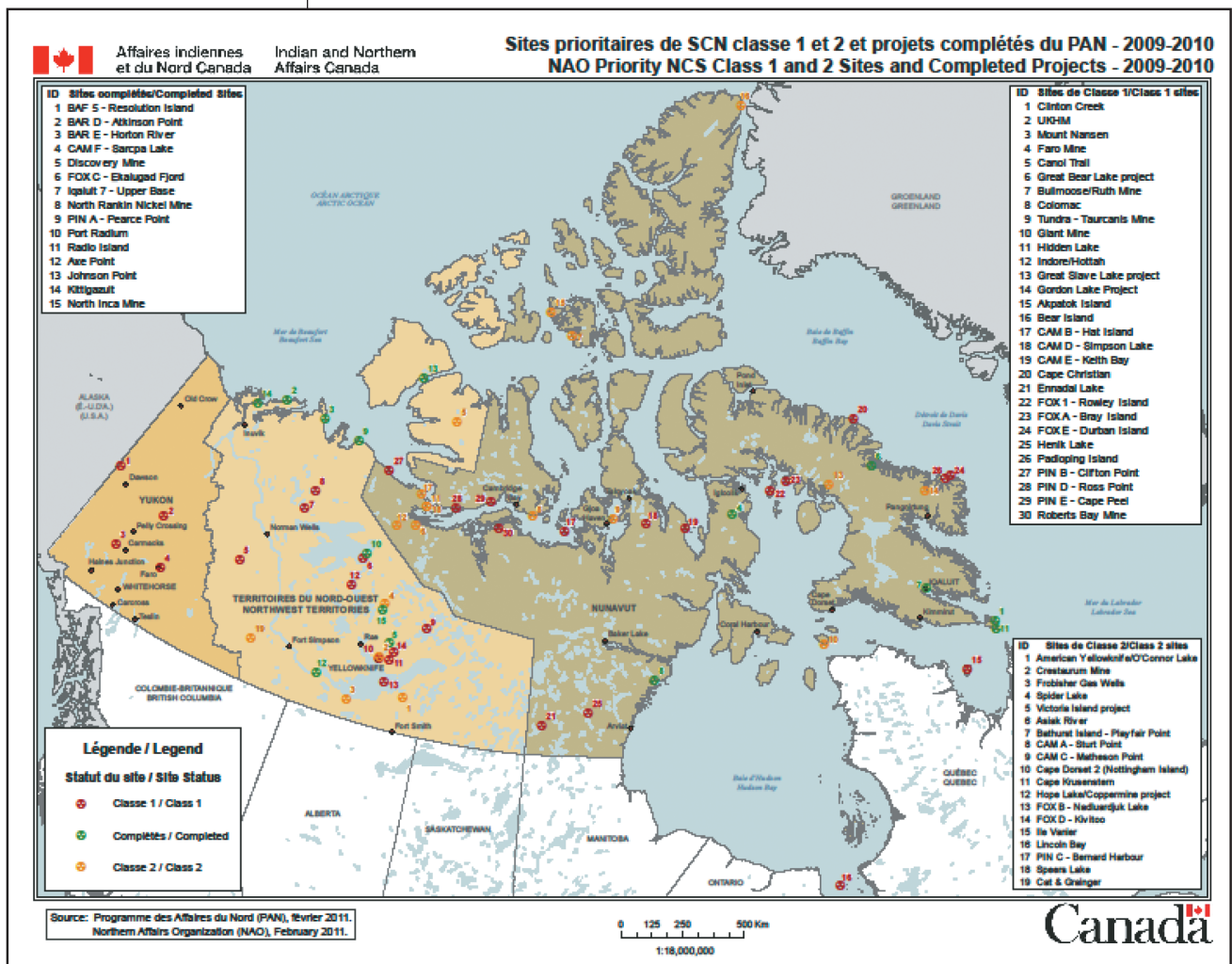
Sites under program management extend across the entire North. The geographic distribution and status of Class 1 and 2 sites managed by the NCSP is illustrated in the map below.

FCSAP has established clear mechanisms for comparing and ranking priority federal contaminated sites. Ranking is informed by expert advice from Health Canada, Environment Canada and the Department of Fisheries and Oceans, and finalized via a science-based scoring system and endorsement by an interdepartmental steering committee.

FCSAP funds are then allocated on a priority basis to sites which have the highest liability to the federal government, and which pose the greatest risk to human health and the environment. Prioritization also takes into consideration the increased risk of inaction, land claim obligations, and the feasibility of completing proposed remediation projects. NCSP sites are among those with the highest liability in the federal inventory, and as such, receive a large portion of available FCSAP funding.

Table 2 · NCSP Sites based on NCS Classifications, 2005-2010

Classe	2005-06	2006-07	2007-08	2008-09	2009-10
1	44	49	50	45	47
2	19	22	26	33	32
3	0	0	0	7	7
N	0	0	0	3	3
I	0	0	0	0	0
Total	63	71	76	85	86



Governance and Partnerships

The overall responsibility for the NCSP rests with the Assistant Deputy Minister of the Northern Affairs Organization. Within the program, a decentralized model has been adopted, with implementation efforts led primarily by the regions, and program management support, policy direction and operational support provided by Headquarters. Several governance and technical support committees such as the Project Management and Technical Advisory Committee and the Environment, Health and Safety Working Group have also been established to provide strategic direction and support to the program as a whole.

In the Northwest Territories and Nunavut, the NCSP is directly responsible for care and maintenance, assessment, and remediation

of identified contaminated sites. In the Yukon Territory, the administration and control over lands, waters, and resources was transferred to the Government of Yukon in 2003 under the terms of the Canada-Yukon Devolution Transfer Agreement (DTA). As such, while the federal government is responsible for funding to address sites identified in the DTA, implementation of ongoing care, maintenance, assessment and remediation activities is being undertaken by the Government of Yukon.

Key program partners include territorial governments, Aboriginal land claim beneficiaries, First Nations affected by contaminated sites for which the program is responsible, local communities adjacent to or downstream from these sites, and non-governmental organizations with an interest in these sites.

Other key external partners and players include:

- The Government of Yukon's *Type II Mines Office*, which is responsible for fulfilling the Government of Yukon's obligations under the DTA with respect to contaminated sites;
- The Government of Northwest Territories for the Giant Mine Project;
- The *Federal Contaminated Sites Steering Committee*, co-chaired by Environment Canada and Treasury Board, which holds responsibility for overseeing the FCSAP program;
- The *Contaminated Sites Management Working Group*, co-chaired by Environment Canada and National Defence, which works to develop a coordinated and consistent federal approach to the development and implementation of the FCSAP program across custodial departments;
- Environment Canada, Health Canada, Fisheries and Oceans Canada, and Public Works and Government Services Canada (PWGSC) are designated under FCSAP as Expert Support Departments and have been resourced to provide AANDC and other custodial departments with scientifically sound, nationally consistent advice on addressing the risks associated with contaminated sites;
- PWGSC, which provides procurement and other contractual service support to the NCSP through a Service Level Agreement with AANDC; and
- Interim receivers, who hold ongoing responsibilities for care and maintenance of particular (court-specified) sites.

Challenges

In addressing contaminated sites in the North, the NCSP faces a number of unique challenges compared to other regions of Canada. These factors include:

- **The remoteness of many NCSP sites** and the significant logistical challenges associated with accessing them. Typical mobilization and demobilization costs

per project are in the order of millions of dollars and represent the highest risk to project success. Equipment must often be leased or contracted for an entire year even if it is only required for a few months. At times, winter roads need to be constructed and used to bring in equipment for use in the summer months. The uniqueness of the northern environment including its ecology, extreme temperatures, and the existence of permafrost soils must also be taken into consideration when designing remediation plans.

- **The complexity and size of many sites** under NCSP management. NCSP's liability is a significant proportion of total federal liability. In addition, the requirement for a continued long-term presence at certain large sites will continue to present an ongoing challenge and risk to the Government of Canada as a whole.
- **Climate change**, which has impacted the program in many ways. In particular, climate change has had a significant impact on the quality and reliability of winter roads. An increasingly unpredictable northern climate, which affects both summer and winter seasons, increases weather-related risks and associated costs. Consideration of climate change-related risks is now incorporated into the remediation planning process.
- **The scarcity of human resource in the North** that have both technical expertise and project management skills. To address this challenge, the NCSP has developed a Human Resource Strategy, which aims to address these issues and guide development of a training strategy to promote training and skills development for Aboriginals and Northerners.
- **The changing land governance** emerging across the North, as a result of new requirements and considerations associated with land claims.

FARO MINE, Yukon Territory

The **Faro Mine** is one of the largest and most complex contaminated sites in the country. Located in the south-central Yukon close to the Town of Faro, it was an open-pit lead-zinc mine from 1969 until it went into interim receivership in 1998. The site covers approximately 2500 hectares and includes 70 million tonnes of tailings and 320 million tonnes of waste rock. Both the tailings and waste rock contain high levels of heavy metals that could leach into the environment in the absence of remediation. As such, there are significant long-term environmental risks associated with the site. A care and maintenance regime, including collection and treatment of contaminated water and general maintenance and site security, is currently in place.

The Faro Mine is one of seven Type II sites identified under the 2003 Canada Yukon DTA. As such, the Governments of Canada and the Yukon, along with affected First Nations have worked cooperatively through a joint Oversight Committee to develop a site closure and remediation plan. Development of this plan was led by a multi-disciplinary team of engineers, scientists and First Nations, and informed by hundreds of technical studies, as well as consultations with community members of affected First Nations and the Town of Faro. An Independent Peer Review Panel also performed a comprehensive review of remediation options identified. The project reached a major milestone in early 2009 when the closure plan was confirmed by the Oversight Committee.

The plan emphasizes stabilizing contaminants, rather than removing them from the site. Key features include upgrading dams to ensure tailings stay in place, re-sloping waste rock, installing engineered soil covers over approximately 320 million tonnes of tailings and waste rock, upgrading stream diversions, and installing state-of-the-art water collection and treatment systems.

2.0 Summary of Progress

This report presents NCSP's performance against the goals of the 2002 AANDC *Contaminated Sites Management Policy* as well as the six objectives of the NCSP 2006-2010 *Results-based Management Accountability Framework* (RMAF). These objectives are:

1. Meeting legal obligations;
2. Identifying and assessing contaminated sites;
3. Remediating NCS Class 1 Sites;
4. Promoting benefits to Northerners and Aboriginal suppliers;
5. Promoting the 'polluter pays' principle; and
6. Implementing a consistent, cost-effective and accountable Program.

2.1 Legal Obligations

Objective 1:

The Program is obligated to maintain a list of program regulatory and policy requirements and to adhere to these requirements.

Program requirements

The NCSP has developed a number of corporate procedures and tools to guide and enhance program delivery since 2002. These procedures and tools identify the applicable regulatory and policy requirements for this program and facilitate their communication and adherence across the program. Examples of applicable regulatory and policy requirements included in the corporate procedures and tools include but are not limited to the requirements of the *Financial Administration Act*, the *Treasury Board Policy on the Management of Real Property*, and the AANDC *Environment, Health and Safety Policy – Contaminated Sites Program*. A comprehensive list of these

materials, which relate to program planning, implementation, monitoring, reporting and review, and continuous improvement, are included in Appendix B.

The program has also established robust information collection and reporting systems, including an Integrated Environmental Management System (IEMS) database. The IEMS database facilitates the input of contaminated sites information to the Federal Contaminated Sites Inventory, which is a requirement of the *Treasury Board Policy on the Management of Real Property*. This database, along with site-specific Detailed Work Plans and quarterly site reports, inform both planning and reporting processes.

In 2009-10, the program initiated the development of a Performance Measurement Strategy (PM Strategy) in response to new Treasury Board requirements. Once completed, this PM Strategy will replace the current program RMAF, which expires in 2010.

Environment, Health and Safety

Northern contaminated sites pose risks to public health and the environment, and present significant hazards to those working on site assessment and remediation projects. The NCSP has taken a proactive role in addressing EHS issues related to sites under its management.

In particular, the NCSP has developed a program-wide EHS management system, which includes the *Environment, Health and Safety Policy* and accompanying standard operating procedures manual. The *Environment, Health and Safety Policy* provides direction in order to meet the requirements of the Canada Labour Code, applicable environmental regulations and policies, and related policies of the Treasury Board in the implementation of the Northern Affairs Organization's Northern Contaminated Sites Program. EHS Coordinators are now in place at AANDC and PWGSC to support implementation of the EHS system.

To further enhance and support these measures, an EHS Working Group was established in 2009-10. This committee aims to ensure that program activities consistently meet all relevant requirements, and to ensure that staff, contractors, visitors, and local communities are not adversely impacted by environmental, health, and/or safety risks associated with contaminated sites.

Given the priority the EHS policy places on both the health and safety of employees and the protection of the environment, the NCSP conducts regular EHS audits at sites under program management. These audits play a vital role in helping assess operational compliance with the requirements of the EHS system. A summary of these audits and their associated findings in recent years is outlined in Table 3, below.

Table 3 shows the number of audits performed and the number of non-compliances resulting from both AANDC and contractor's actions. Non-compliance issues were of legal and political nature and impacted both the health and safety and the environment. As indicated in Table 3, the number of identified non-compliance events increased dramatically in 2009-10 over previous years. In part, this was the result of one particular EHS audit that found 54 instances of non-compliance.

These findings, and the Corrective and Preventative Actions identified to address them, are being used to improve the EHS performance of this particular site and are also being examined to identify potential lessons for the program as a whole.

Safety Performance

As noted earlier, there are numerous safety risks at NCSP sites, experienced prior to and during remediation activities. These include hazardous materials and physical hazards associated with open pits, quarries, waste rock piles, buildings and other infrastructure, wildlife encounters, working near water and on ice, and exposure to extreme cold conditions.

As such, one key indicator of safety performance for the program is the number of lost-time accidents (LTAs) and near misses sustained. Table 4 below outlines information on these two indicators for 2009-10 and the preceding three years. Overall, both the number of LTAs and the amount of time lost (as measured in person-hours) have decreased dramatically in recent years. Near misses also continue to decline, although they did increase slightly between 2008-09 and 2009-10.

A near miss (also known as a close call or dangerous occurrence) is an unexpected event that did not cause injury or damage, but had the potential to do so.

Table 3 · EHS Audits performed

Audits	2005-06	2006-07	2007-08	2008-09	2009-10
Number of audits performed	2	9	10	8	8
Number of non-compliances	20	20	10	0	56

Table 4 · Safety Performance

Safety		2005-06	2006-07	2007-08	2008-09	2009-10
Lost-time accidents (LTA)	Number	1	19	8	3	2
	Time lost (person-hours)	15	331	672	324	73
Near misses	Number	3	82	84	17	24

As part of its commitment to improving safety performance, the NCSP continues to address issues related to a 2008-09 fatality at the Colomac site. On March 1, 2009, while working alone in the area of Tailings Lake, a contractor's employee fell through the ice of the lake resulting in his death. Subsequent investigations identified the principal causes of the incident as lack of consistent integrity in the Tailings Lake ice, combined with a lack of adequate access restrictions and warning of the relative location of the shoreline and the employee's distance from shore. The severity of the incident may have been increased due to the delayed response. In response to the incident, in 2009-10, warning signs and a physical barrier were erected and more frequent check-ins were instituted for workers at locations removed from camp.

Incidents, Inspections and Audits

In addition to safety performance, the NCSP tracks, through quarterly reporting, the number of environmental incidents, outstanding compliance issues, and inspections/audits conducted each year. Table 5 below outlines progress in this area over the past four years.

Incidents occurring in 2009-10 included two spills at the Johnson Point, NWT site totalling approximately 27,000 litres (10,000-15,000L of hydrocarbons and 12,000L of camp greywater with chlorine). In addition, there was an arsenic trioxide release at the Giant site, which was cleaned up in December 2009. Site procedures were subsequently reviewed and as a result, drilling methodology was changed to reduce the possibility of future releases in the region.

EHS Training

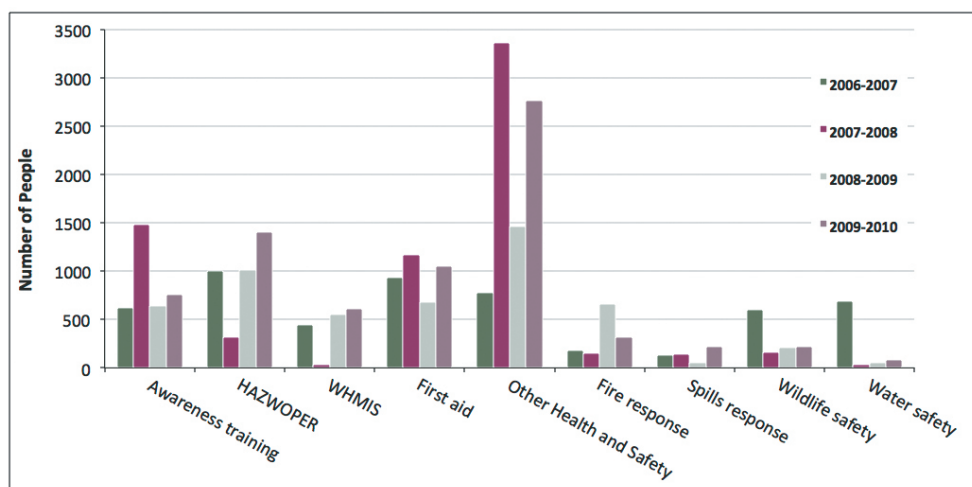
As part of its commitment to EHS management, the NCSP strives to provide its staff and contractors with access to the most up-to-date knowledge and training available. As a result of these efforts, broad EHS awareness has grown across the program in recent years.

More recent efforts have focused on specific skills such as Hazardous Waste Operations and Emergency Response (HAZWOPER), first aid, and spills response capability. This shift, as well as other trends related to EHS training, is outlined in Figure 1.

Table 5 • **Incidents, Inspections and Audits**

Incidents, Inspections and Audits		2005-06	2006-07	2007-08	2008-09	2009-10
Significant environmental incidents	Number	0	5	5	7	9
Outstanding compliance	Volume spilled or released (L)	0	1,442	1,112	150,420	27,450
	Number	1	0	7	4	4
Inspections	Number Performed	9	29	78	180	213
	Number of non-compliances	22	1	20	0	4
Audits	Number Performed	2	9	10	8	8
	Number of non-compliances	20	20	10	0	56

Figure 1. Types of EHS Training



The type and volume of training activities offered by the program will continue to shift over the coming years, particularly as the number of sites under active remediation continues to increase and capacity needs evolve accordingly.

2.2 Identifying and assessing contaminated sites

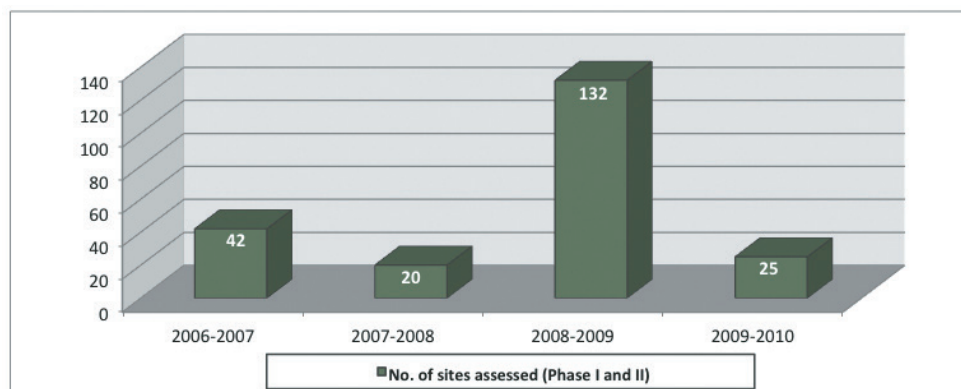
Objective 2:

The Program is required to assess potential contaminated sites and accurately report the liability associated with these sites to the Crown.

With new site assessment funding provided by Canada's Economic Action Plan, 25 sites had undergone Phase I (historic review) and/or Phase II (confirmation of contamination) assessments by the end of 2009-10. In addition, reconnaissance work took place at 184 sites in the NWT region.

Figure 2 outlines initial site assessment activities (i.e. Phase I and/or Phase II assessments) performed by the NCSP over the past four years. The NCSP currently aims to complete all outstanding site assessments by 2012, although the precise timing will depend in part on the renewal of the FCSAP program.

Figure 2. Phase I and II NCSP Site Assessments



Site Assessments

A site assessment is a critical early step in a contaminated site's management. Site assessments involves confirming the nature and extent of contamination on both suspected and confirmed contaminated sites, and then classifying the site according to the NCS system outlined in Section 1.

It is unlikely that priority action will be required on the vast majority of sites still requiring assessment. Historically, only 16% of all sites assessed become a new liability and those that do emerge tend to be small projects that can be completed within a single season.

For sites classified as Class 1 or 2, a Phase III assessment is then conducted, prior to the initiation of remediation planning. A Phase III assessment is a detailed environmental site assessment to determine the extent and nature of contamination on a given site. This in turn allows the program to understand the level and type of remediation or risk management activity that will be required, as well as the associated liability.

Phase III assessments represent Steps 5 and 6 of the ten-step national contaminated site management process. Sixteen Phase III assessments were completed in 2009-10.

Contaminated Sites Liability

AANDC is responsible for ensuring that all potential and known costs related to the management and remediation of contaminated sites – also known as a liability – are accounted for and reported in accordance with Treasury Board policy.

New liability estimates are developed on an annual basis as site assessments are completed. For sites undergoing remediation, ongoing adjustments are made based on the completion of remediation work or due to any change in site conditions.

In March 2010, NCSP liabilities were estimated at \$1.5 billion. This represents a slight increase from 2008-09 when program liabilities were estimated at \$1.43 billion. Approximately 85% of the program's total liability is attributable to ten large sites including: Faro, Giant, Clinton Creek, UKHM, Mt Nansen, Colomac, Great Bear Lake, Tundra, CAM-D Simpson Lake, and Sawmill Bay. The Faro and Giant sites alone represent 70% of the total NCSP liability.

While liability numbers for the NCSP continue to increase year-over-year, this increase should lessen as further site assessments are completed. Program liability should begin to decrease as remediation efforts are implemented on some of the larger NCSP sites, including those listed above.

Figure 3 below outlines liability trends over the past four years. This figure highlights the significance of Giant and Faro as factors influencing both the overall level of and trends in program liabilities. It also underscores the fact that, notwithstanding these two sites, increases in program liability have been much more modest in scale and scope.

Figure 3. Trends in NCSP Liability



Contingent Liability

In addition to reporting on contaminated site liabilities, the NCSP is also required to report on its contingent liabilities. Contingent liabilities are possible obligations that may result in the future sacrifice of economic benefits arising from existing conditions or situations involving uncertainty. That uncertainty will ultimately be resolved when one or more future events, not wholly within the government's control, occurs or fails to occur. Resolution of the uncertainty will confirm the incurrence or non-incurrence of a liability.

2.3 Remediating NCS Class 1 sites

Objective 3:

The Program is required to remediate all Class 1 sites by 2021.

Once sites are classified as Class 1 or 2 and have undergone a Phase III assessment, they move into the remediation planning stage. Remediation planning (Step 7 of the 10-step contaminated sites management process)

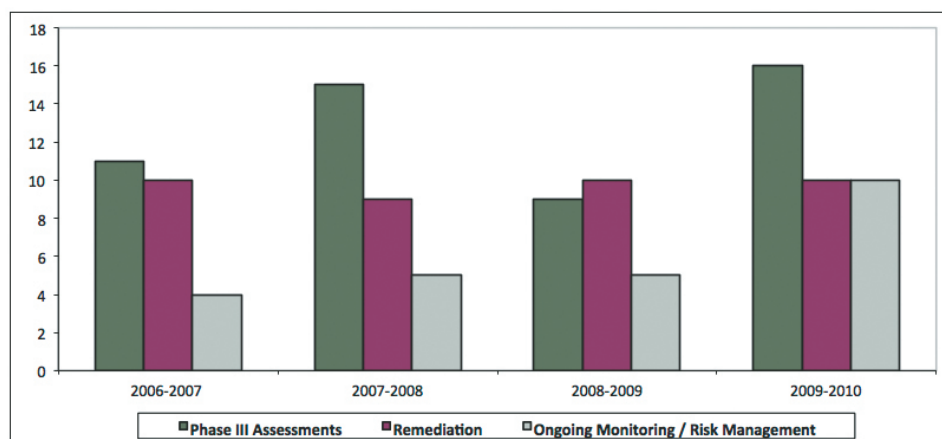
involves the development of potential remediation and/or risk management options, consultations with local communities and affected First Nations, and efforts to secure regulatory approvals under applicable federal and territorial statutes (as appropriate). This stage can often take a number of years to complete, particularly for some of the larger sites under program management.

Active Remediation

Active remediation refers to sites that have reached Step 8 of the 10-step contaminated sites management process. Ten sites were under active remediation in 2009-10. Remediation activities were completed on one of these sites by March 2010. Trends in the number of sites under Steps 5-10 are outlined in Figure 4.

As remediation efforts at active sites are completed, the number of sites in Step 8 will go down significantly. At the same time, the number of sites under ongoing monitoring and/or risk management will go up.

Figure 4. NCSP Progress in Site Management



JOHNSON POINT, Northwest Territories

Johnson Point is an abandoned oil and gas exploration support and staging area located on Banks Island, NWT. The site was used from the early 1960s until the early 1980s, when responsibility reverted to the Crown.

Remediation activities undertaken in 2009-10 were slowed by above-normal rainfall. Nevertheless, the contractor was able to successfully treat approximately 23,000 m³ of hydrocarbon-impacted soils, consolidate debris, and dismantle remaining tanks and buildings at the site.

As such, remediation of the site is largely complete. All non-hazardous materials have been removed, all landfills have been capped, and all surface-contaminated soil has been treated. The remaining containerized hazardous materials will be barged out in August 2010. Inspection of the stability of completed earthworks will be completed in July 2010, with final demobilization from the site anticipated in August 2010.

Although remediation activities are complete and water usage will no longer be a concern, the Water Licence for this site is still in effect until full demobilization of the contractor's equipment is complete.

GIANT MINE, Northwest Territories

Giant Mine covers 949 hectares within the city limits of Yellowknife, NWT. The site lies along the western shore of Yellowknife Bay, an arm of Great Slave Lake. This gold mine operated nearly continuously from 1948 until its closure in July 1999.

The site includes 237,000 tonnes of arsenic trioxide stored underground, as well as various buildings and surface areas contaminated with arsenic. If not managed properly, these site risks represent significant hazards to human health and the environment.

A remediation plan for the site was completed following extensive site characterization and community consultations. The plan has now entered the environmental assessment process, pursuant to terms of reference issued by the Mackenzie Valley Environmental Impact Review Board in March 2009.

Care and maintenance is ongoing and a Freeze Optimization Study (FOS) has been initiated. The FOS has been funded by Canada's Economic Action Plan (CEAP) to inform the regulatory review process and assist in the final design of the remediation project. The study is enabling the program to test, on a small-scale, the frozen block method that has been proposed as a core element of the Giant remediation plan. This method, which involves freezing underground chambers containing contaminants as well as their immediate surroundings using a super-cooled liquid, will create an impenetrable barrier between these contaminants and the external environment. Completion of the freeze optimization study will provide critical information such as ongoing power requirements, the rate of freezing, as well as costs associated with this work over the long term. Once the Environmental Assessment process has been completed, remediation activities are expected to take approximately eight years.

2.4 Promoting benefits to Northerners and Aboriginal suppliers

Objective 4:

Benefits accrue to Aboriginal and Northern People

As part of its mandate, the NCSP is committed to promoting social and economic opportunities in the North by engaging First Nations, Inuit and other Northerners in all aspects of the management of contaminated sites.

Strategies employed by the program to create socio-economic benefits include procurement of goods and services from northern Aboriginal and non-Aboriginal businesses and the employment of local people at all stages of the site management process (e.g. site assessments, remediation, risk management, and monitoring). AANDC also supports training programs that help Northerners and northern Aboriginals gain the skills required to take advantage of future work opportunities.

The NCSP has established an overall target of ensuring that 60% of all NCSP project employment, training and contracts be provided by Northerners and northern Aboriginals. Progress towards these goals is tracked through quarterly site performance reports and is outlined in Table 6 below.

Community consultations

The remediation planning phase offers the NCSP an important opportunity to invite the participation of First Nations, Inuit and other Northerners in program activities. This includes community consultations, workshops, and site tours, as well as more traditional communications activities such as media events and the issuance of press reports. A summary of these activities in recent years is provided below.

As indicated above, the program has made progress in engaging community members and project stakeholders in these activities. Both the number and level of participation in community meetings and site tours increased significantly in 2009-10 over previous years.

Table 6 • Community Consultations

Consultation Performance Measures		2005-06	2006-07	2007-08	2008-09	2009-10
Community tours and meetings	Number	61	44	62	48	74
	Audience (# of persons)	377	453	1,146	919	874
Workshops	Number	6	6	2	4	3
	Audience (# of persons)	372	63	63	40	66
Site tours	Number	21	31	23	34	53
	Audience (# of persons)	150	225	279	279	672
Media (TV, radio) events	Number	15	28	14	15	14
	Audience (# of persons)	23	15	12	24	9
Press reports		23	15	12	24	9

Employment

Direct employment is a key measure of the socio-economic benefits provided by the program. In 2009-10, the NCSP provided 721 individuals with employment. Of these, 517 were Northerners and 329 were northern Aboriginals.

As noted in Section 2.3, CEAP funds provided \$21 million over two years (2009-10 and 2010-11) to undertake a freeze optimization study, stabilization work and feasibility assessments at the Giant site. This work has created an estimated 14 direct jobs in the Yellowknife region in addition to numerous indirect jobs.

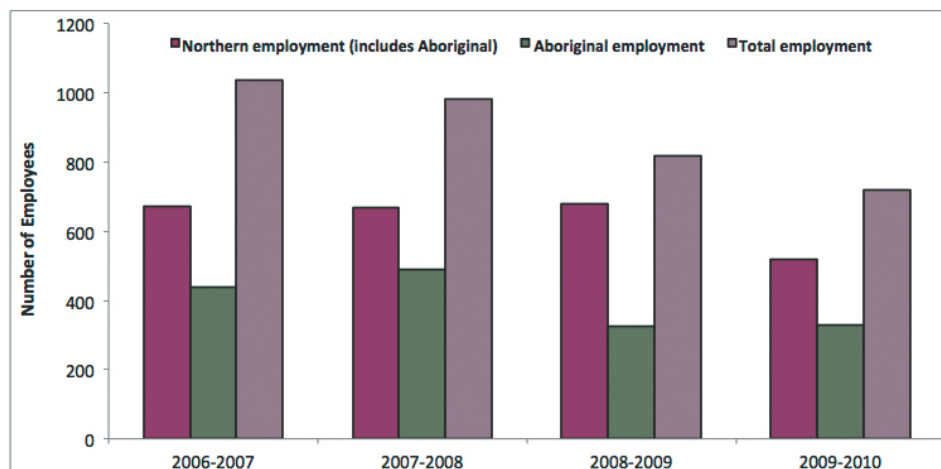
While the NCSP did exceed its 60% employment target for Northerners, only 35% of those employed were northern Aboriginals. The program will continue its efforts to meet its overall target of providing 60% of all NCSP project employment, training and contracts to Northerners and northern Aboriginals. Trends in northern and Aboriginal employment are outlined in Figure 5.

Workforce Training

Training is an important prerequisite for Northerners and northern Aboriginals to benefit from program activities. As such, the NCSP continues to place priority on developing and delivering workforce training programs across the North.

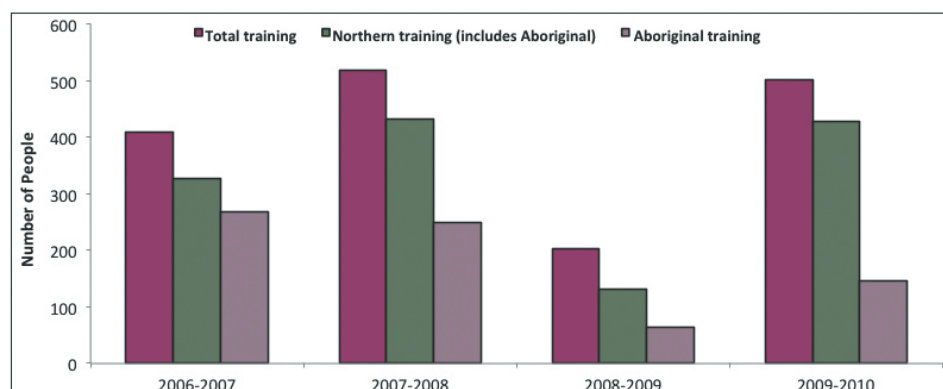
These training efforts increased significantly in 2009-10, although not to the levels previously attained in 2007-08. The program did exceed its target of ensuring that 60% of those trained in 2009-10 were Northerners (86%) and 79% of those trained were northern Aboriginals.

Figure 5. NCSP Employment



In part, the trends outlined in Figure 6 reflect the cyclical nature of training programs and the fact that greater numbers of Northerners and Aboriginals are receiving training and subsequently securing employment with NCSP-managed sites, which in turn can lessen demand for additional training over time.

Figure 6. Workforce Training



Purchase of Goods and Services

Another important measure of economic benefit is the total value of program business with northern suppliers. The NCSP made significant progress in this area in 2009-10, in part as a result of contracts related to the Giant Mine site. Figure 7 outlines progress in this area over the past four years.

2.5 Promoting 'polluter pays' principle

Objective 5:

Polluter Pay Principle

As part of the site assessment process, the NCSP conducts historical research in order to determine whether sites have a liable operator. When liable operators are identified, the program makes every effort to ensure that the polluter pay principle is implemented.

2.6 Implementing a consistent, cost-effective and accountable Program

Objective 6:

Implementing a consistent, cost-effective and accountable Program

As noted in Section 2.1, the NCSP has developed a rigorous program management framework which includes corporate procedures, planning and information collection systems. In addition, the program has implemented a comprehensive reporting strategy which includes:

- Annual updates to the Contaminated Sites Management Plan;
- Liability reports;
- Annual Performance Reports;
- Regional and overall NCSP Expenditure Variance Reports; and
- Project and Regional Quarterly Progress Reports.

Progress towards the NCSP's goals is also reported in departmental reports including the Departmental Report on Plans and Priorities and the Departmental Performance Report.

Figure 7. Purchase of Goods and Services

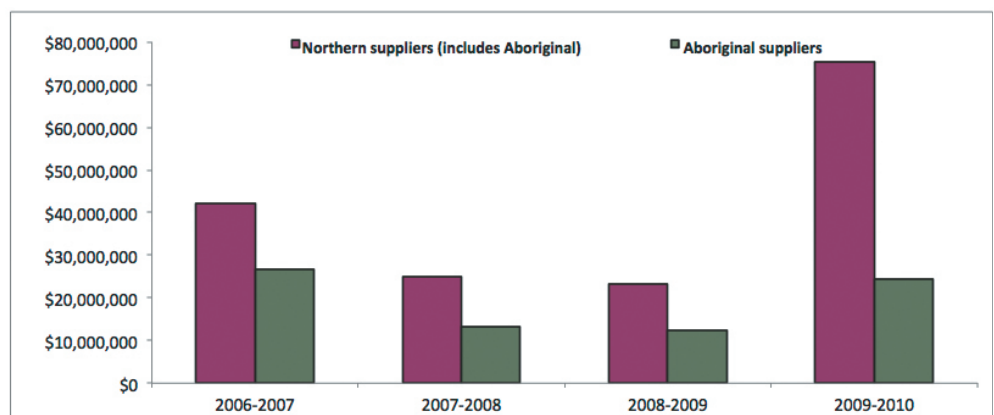


Table 7 · Expenditures by Funding Source

Source of Funds	2005-06	2006-07	2007-08	2008-09	2009-10
AANDC	\$ 18,499,924	\$ 18,500,000	\$ 13,510,605	\$ 12,422,928	\$ 6,603,372
FCSAP	\$ 72,073,651	\$ 92,441,194	\$ 101,703,175	\$ 99,923,367	\$ 109,912,363
Total	\$ 90,573,575	\$ 110,941,194	\$ 115,213,780	\$ 112,346,295	\$ 116,515,735

Expenditures

In 2009-10, NCSP expenditures were \$116,515,735. This included FCSAP funding of \$109,912,363, of which \$11,100,000 was provided under Canada's Economic Action Plan, and AANDC funding of \$6,609,372.

Expenditures for 2009-10 were 4% higher than the previous year. This increase reflected a number of factors, including the growing number of Class 1 and 2 sites moving from assessment to active remediation; a significant increase in site assessments, particularly in the NWT, as a result of additional funding made available through the CEAP; and the CEAP-funded Giant freeze optimization study described in Section 2.3.

Contracting and Procurement

Procurement for contaminated sites work in the North continues to be challenged by the need to simultaneously meet the requirements of all relevant trade agreements, comprehensive land claims agreements, and other government procurement policies and directives.

During 2009-10, NCSP helped organize a workshop among relevant staff to review, confirm or modify current approaches to procurement, and to develop an action plan for developing policy in areas that are not clear. It was agreed upon to continue using the current Aboriginal Opportunity Considerations approach to achieve Aboriginal socio-economic benefits in open, competitive contracting and in set-asides under the Procurement Strategy for Aboriginal Business. This approach will also be used in cases where overlapping land claims exist, but on a case-by-case basis.

Since 2005 the NCSP has awarded 31 contracts with a value of over \$243 million. Of the 31 contracts awarded, 87% – or over \$212 million – was awarded to Aboriginal-owned companies.

3.0 Moving Forward

The NCSP made significant progress in 2009-10, with respect to site assessments, remediation planning and implementation of remediation activities on priority sites. The program now has more sites in active remediation than at any time in its history, and continues to make strides in planning for remediation of the largest and most complex sites under its management.

In addition to the work ahead in terms of site remediation and management, the program will be actively involved in the renewal of the FCSAP program in 2010-11. Successful renewal will set the stage for even greater gains over the next five years, leading to tangible reductions in both environmental and human health risks, and in program liabilities.

Appendix A: Activities by Region

Table 8 · Regional Summary for Northwest Territories, 2007-2010

NWT KEY PERFORMANCE MEASURES		2007-08	2008-09	2009-10
Financial				
Total Liability	\$	623,537,014	618,594,821	716,970,595
Contingency Liability	\$	90,521,751	56,884,535	242,867,267
Expenditures	\$	46,155,769	43,184,684	64,694,939
Classifications				
NCS 1	Number	22	16	23
NCS 2	Number	13	13	12
Risk Management/Monitoring	Number	4	8	4
Contingent Liabilities	Number	13	13	1
Environment, Health & Safety				
Safety				
Lost-time Accidents (LTAs)	total	0	1	1
LTA Time Lost (person - h)	person-h	0	0	20
Incidents, Inspections and Audits				
Inspections	# performed	75	92	57
	non-compliances	15	0	4
Audits	# performed	8	8	6
	non-compliances	0	0	2
EHS Training				
Awareness Training (EHS Policy & Procedures)	person-h	1,180	597	309
HAZWOPER	person-h	0	503	405
WHMIS	person-h	10	551	402
First Aid	person-h	538	540	760
Wildlife Safety	person-h	129	179	192
Water Safety	person-h	15	54	62
Fire Response	person-h	100	663	113
Spills Response	person-h	114	37	128

Socio-Economic				
Employment				
Total Employment	Number	690	482	499
	# person-h	162,446	201,763	197,829
Northern Employment (includes Aboriginal)	Number	402	333	332
	# person-h	140,288	148,469	152,741
Northern Aboriginal Employment	Number	286	143	194
	# person-h	104,780	101,888	61,546
Southern Aboriginal Employment	Number	0	1	2
	# person-h	0	10	1,495
Workforce Training				
Total Training	# persons	354	121	425
	duration (h)	25,348	5,861	8,490
Northern Training	# persons	311	106	353
	duration (h)	23,850	5,738	7,081
Northern Aboriginal Training	# persons	159	46	78
	duration (h)	22,715	1,839	6,563
Purchase of Goods and Services				
Northern Suppliers (includes Aboriginal)	Number	595	288	487
	\$	11,849,639	9,971,912	59,373,788
Northern Aboriginal Suppliers	Number	73	55	71
	\$	8,133,944	6,249,305	11,905,000
Consultation				
Community tours and meeting	Number	50	31	50
	Audience (#)	918	733	624
Workshops	Number	1	3	1
	Audience (#)	29	34	20
Site Tours	Number	17	25	38
	Audience (#)	209	230	615

Table 9 • Regional Summary for Yukon, 2007-2010

YUKON KEY PERFORMANCE MEASURES		2007-08	2008-09	2009-10
Financial				
Total Liability	\$	611,707,916	617,822,431	659,775,565
Contingency Liability	\$	525,052,174	217,614,374	219,786,753
Expenditures	\$	22,228,154	21,567,121	28,397,465
Classifications				
NCS 1	Number	8	5	6
NCS 2	Number	1	0	0
Risk Management/Monitoring	Number	4	4	0
Contingent Liabilities	Number	1	1	0
Environment, Health & Safety				
Safety				
Lost-time Accidents (LTAs)	Total	4	0	0
LTA Time Lost (person-h)	person-h	600	0	0
Incidents, Inspections and Audits				
Inspections	# performed	0	0	16
	non-compliances	0	0	0
Audits	# performed	0	0	1
	non-compliances	0	0	0
EHS Training				
Awareness Training (EHS Policy & Procedures)	person-h	118	24	244
HAZWOPER	person-h	0	0	0
WHMIS	person-h	0	0	41
First Aid	person-h	400	0	206
Wildlife Safety	person-h	6	16	26
Water Safety	person-h	0	0	16
Fire Response	person-h	20	0	90
Spills Response	person-h	0	0	0

Socio-Economic				
Employment				
Total Employment	Number	125	223	37
	# person-h	93,770	54,510	15,530
Northern Employment (includes Aboriginal)	Number	125	217	29
	# person-h	93,770	12,986	15,530
Northern Aboriginal Employment	Number	35	58	9
	# person-h	23,075	1,835	6,220
Southern Aboriginal Employment	Number	0	0	2
	# person-h	0	0	3,680
Workforce Training				
Total Training	# persons	31	53	8
	duration (h)	628	1,430	654
Northern Training	# persons	30	3	8
	duration (h)	436	38	654
Northern Aboriginal Training	# persons	1	0	4
	duration (h)	192	0	485
Purchase of Goods and Services				
Northern Suppliers (includes Aboriginal)	Number	64	70	32
	\$	8,344,982	5,857,784	1,113,790
Northern Aboriginal Suppliers	Number	8	2	6
	\$	1,234,076	676,000	442,840
Consultation				
Community tours and meeting	Number	3	3	20
	Audience (#)	23	4	62
Workshops	Number	0	0	2
	Audience (#)	0	0	46
Site Tours	Number	3	2	7
	Audience (#)	9	8	25

Table 10 · Regional Report for Nunavut, 2007-2010

NUNAVUT KEY PERFORMANCE MEASURES		2007-08	2008-09	2009-10
Financial				
Total Liability	\$	163,866,827	192,259,134	212,866,917
Contingency Liability	\$	3,006,249	354,900	10,180,894
Expenditures	\$	18,175,977	18,195,913	17,757,476
Classifications				
NCS 1	Number	20	15	15
NCS 2	Number	12	20	20
Risk Management / Monitoring	Number	3	6	3
Contingent Liabilities	Number	6	8	4
Environment, Health & Safety				
Safety				
Lost-time Accidents (LTAs)	total	4	2	1
LTA Time Lost (person-h)	person-h	72	324	53
Incidents, Inspections and Audits				
Inspections	# performed	3	0	58
	non-compliances	5	0	0
Audits	# performed	2	0	1
	non-compliances	10	0	54
EHS Training				
Awareness Training (EHS Policy & Procedures)	person-h	180	24	205
HAZWOPER	person-h	320	510	1,000
WHMIS	person-h	27	0	192
First Aid	person-h	233	144	88
Wildlife Safety	person-h	26	12	0
Water Safety	person-h	14	0	0
Fire Response	person-h	30	0	112
Spills Response	person-h	23	12	96

Socio-Economic				
Employment				
Total Employment	Number	168	112	185
	# person-h	54,289	2,864	25,762
Northern Employment (includes Aboriginal)	Number	140	128	156
	# person-h	46,760	2,479	18,258
Northern Aboriginal Employment	Number	169	124	126
	# person-h	45,540	2,431	17,527
Southern Aboriginal Employment	Number	0	0	8
	# person-h	0	0	2,140
Workforce Training				
Total Training	# persons	132	29	69
	duration (h)	1,078	828	992
Northern Training	# persons	91	23	66
	duration (h)	1,053	828	980
Northern Aboriginal Training	# persons	88	19	65
	duration (h)	1,061	828	976
Purchase of Goods and Services				
Northern Suppliers (includes Aboriginal)	Number	111	79	65
	\$	4,790,601	7,436,178	14,867,392
Northern Aboriginal Suppliers	Number	75	45	39
	\$	3,901,672	5,487,274	12,020,832
Consultation				
Community tours and meeting	Number	9	14	4
	Audience (#)	205	182	188
Workshops	Number	0	1	0
	Audience (#)	0	6	0
Site Tours	Number	3	7	8
	Audience (#)	9	41	32

Appendix B: List of Program Requirements

Program requirements include the following procedures, tools and reports:

Part 1 – PLANNING

- NCSP Governance
- Development of the Contaminated Sites Management Plan
- Project Initiation
- Preparing the Detailed Work Plan (DWP)
- Project Planning Support and Project Review
- Human Resource Strategy (new 2009-2010)

Part 2 – IMPLEMENTATION

- Risk Management
- Training
- Communications
- Consultation
- Financial Management
- Information Management
- Treasury Board Download
- Procurement
- Abandoned Military Sites Protocol
- Analysis and Selection of Closure Methods for Complex Sites
- Environmental Health and Safety (EH&S) Protocol

Part 3 – MONITORING, REPORTING AND REVIEW

- Quarterly Reporting
- Annual Performance Reporting
- FCSAP Reporting (via IDEA database)
- Accounting for Costs and Liabilities
- EH&S Audits and Internal Program Reviews