



## **Government of the Northwest Territories Approach to Contaminated Sites Management**

**August 23, 2019**

The purpose of this document is to establish a consistent, uniform and cost-effective GNWT-wide approach to the management of contaminated sites for which the GNWT is responsible. This document is intended solely for use by Departments of the Government of the Northwest Territories.

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## **1.0 INTRODUCTION**

The Land Use and Sustainability Framework (LUSF) sets out a vision to guide its decisions about land use and land management. The vision embraces the spirit and intent of sustainability and stewardship. The concept of stewardship speaks to the need for everyone to take responsibility for lands, water and resources and to work collaboratively to safeguard what is important. With Devolution, the Government of the Northwest Territories (GNWT) became the steward of resources on public lands throughout the territory.

Contaminated sites are areas of land or water where chemical or physical hazards exist that pose, or are likely to pose, a risk to human health or the environment or where contamination exceeds specific levels under environmental standards or guidelines. A contaminant can include any substance which can adversely impact air, soil, and water. Contamination can result from commercial or industrial activity, improper waste disposal, improper chemical storage, or chemical leaks and spills. A physical hazard can include any inert physical feature which could pose a risk to the environment, and/or the health and safety of persons or animal life.

Contaminated sites may be found at locations throughout the Northwest Territories (NWT). Under the LUSF, the GNWT has indicated that we will support the sustainability of the land by ensuring that environmental conditions are known and impacts to the land are prevented, monitored and mitigated to maintain ecological integrity and biodiversity.

## **2.0 PURPOSE**

The purpose of this document is to establish a consistent, uniform and cost effective GNWT-wide approach to the management of contaminated sites for which the GNWT is responsible.

Each department within the GNWT is responsible for exercising their authorities in a way that prevents the creation of a contaminated site. A number of departments have a role in managing contaminated sites where they exist.

This document will guide the GNWT's approach to managing contaminated sites and will serve as a proactive management tool to ensure that the necessary steps are

taken towards investigating, managing and remediating contaminated sites. It is meant to complement existing acts, regulations, policies, directives, guidelines, frameworks and other documents and provide guidance for their use within the context of the GNWT's contaminated site management process.

### **3.0 SCOPE & APPLICATION**

The GNWT is committed to managing contaminated sites in a cost-effective and consistent manner, to reduce and eliminate, where possible, adverse effects on human health and the environment.

This document is intended for managers and personnel who are responsible for managing contaminated sites that are the responsibility of the GNWT which may include:

- Sites located on Public land that have been set apart for exclusive use by the GNWT to assist with the delivery of programs and services (known as a *reservation*) under section 19(b) of the *Northwest Territories Lands Act* and under section 4(b) of the *Commissioner's Land Act*.
- Sites located on Public Land as designated under the *Public Airports Act* and the Commissioner's Public Airport Lands Regulations.
- Sites located on Public Land owned in fee simple by the Northwest Territories Power Corporation and the Northwest Territories Housing Corporation.
- Sites created as a result of third party activity where the polluter cannot be identified or does not have the financial capacity.

### **4.0 CONTAMINATED SITES MANAGEMENT OBJECTIVES**

The following are the GNWT's contaminated site management objectives:

- GNWT departments, through their current and future policies and programs will strive to prevent future liabilities to the GNWT by reducing or eliminating new contaminated sites.

- Contaminated sites will be managed using a risk-based approach to ensure that resources are allocated to the most high-risk sites.
- The GNWT's contaminated sites management approaches will be planned and executed to optimize economies of scale, minimize costs, and maximize opportunities for reducing environmental and human health and safety risks.
- Contaminated sites will be managed in accordance with recommended territorial and national guidelines and standards, including those from the NWT's *Environmental Protection Act*, the GNWT's *Environmental Guideline for Contaminated Site Remediation*, the Canadian Council of Ministers of the Environment (CCME) and the Canadian Standards Association (CSA).
- The GNWT will allocate funds for the management of contaminated sites in accordance with Public Sector Accounting standards and be transparent, defensible, consistent and evidence-based system grounded in the concepts of the polluter pays principle and fairness.
- The GNWT will work with Indigenous governments and organizations in the planning, remediation and monitoring of contaminated sites.
- Contaminated sites will be managed using both Indigenous traditional knowledge and values, local and community knowledge and scientific knowledge, will follow industry best-practice, and will support and respect NWT cultural values, identity and uses.
- Contaminated sites management will strive to build local capacity and increase our knowledge base.
- The GNWT's approach to contaminated sites management will aim to maximize socio-economic benefits for NWT residents and businesses.

## **5.0 CONTAMINATED SITES GOVERNANCE**

In order to achieve the objectives described in Section 4.0, the GNWT's approach to contaminated sites governance must demonstrate accountability, transparency, responsiveness, effectiveness and efficiency, and be equitable and inclusive. The following sections outline how this would be attained.

### **5.1 Legislative Framework**

Acts, regulations, policies, directives, guidelines and frameworks and other documents are designed to protect the public interest in terms of the prevention of contaminated sites, and, if required, the remediation of abandoned contaminated sites to specified standards. The GNWT is accountable for carrying out its regulatory roles and management of environmental assurances in a way that holds third party operators financially responsible through the polluter pays principle for meeting their environmental obligations in order to protect the environment and prevent contaminated sites.

Where contaminated sites exist, the GNWT is accountable for following legislation and guidelines that apply to its operations to remediate sites. Lessons learned from the management of contaminated sites will be applied on an ongoing basis to continually improve the legislative and policy framework for land and water management, in order to reduce the risk of the occurrence of contaminated sites in the future.

### **5.2 GNWT Oversight and Direction**

The GNWT establishes Committees of Cabinet, supported by Deputy Minister Committees, to consider issues that involve the mandates of multiple ministers and departments. In turn, Deputy Minister Committees have the authority to establish committees of Assistant Deputy Ministers to focus on specific subjects and issues.

An Assistant Deputy Ministers' Committee (Committee) for Contaminated Sites was created to assist with the development of a GNWT-wide comprehensive approach to the management of contaminated sites. Departments on the ADM Committee on Contaminated Sites include Environment and Natural Resources; Lands; Infrastructure; Municipal and Community Affairs; Industry, Tourism and Investment; Finance; Education, Culture and Employment; Executive and Indigenous

Affairs; and, Health and Social Services. The Committee falls under the Deputy Ministers' Committee of Economy and Environment and meets approximately ten (10) times a year. The Assistant Deputy Minister of Environment and Climate Change of ENR is the Chair of the Committee.

The GNWT Approach to Contaminated Sites Management document is a high level document that will guide how contaminated sites are addressed. This document will be revisited by the Committee every five years following implementation to review effectiveness and incorporate any amendments or efficiencies where required. Subsequent to implementation of this guiding document, specific operational documents will be identified and developed as required.

GNWT proponent departments and their contractors are responsible for planning and executing their projects in compliance with all relevant authorizations to ensure that spills and contamination are avoided. The ADM Committee will determine lead departments and support departments where necessary. Under the polluter pays principle, GNWT projects are fully costed by the responsible department to ensure that there is no residual liability post-project closeout. Departments may work together and many departments may be involved in contaminated sites efforts. Regulatory departments such as ENR and Lands are responsible for ensuring private sector proponent adhere to the terms and conditions of their authorizations, including posting securities, to ensure that lands are protected, and fully secured in the event the private sector proponent cannot or will not pay for site remediation.

## **6.0 APPROACH TO MANAGING CONTAMINATED SITES**

The GNWT determines remediation approaches based on land use, the feasibility of remedial technologies, cost, and public and regulatory acceptance. Remediation is guided by the applicable environmental standards and legislative requirements.

The GNWT has adopted a risk-based approach to the management of contaminated sites. The objectives of a risk-based environmental management approach are to assess risks to human health and the environment and to implement risk management solutions considered to be protective of those risks. This involves identifying the contaminants of concern, identifying potential receptors, determining potential exposure pathways, and estimating the level of risk based on

the pathways. In addition, the risk-based approach implies a prioritized allocation of resources within the GNWT.

The risk-based approach incorporates several components including site identification and characterization, detailed site investigations and risk assessment, evaluation of different risk management strategies, implementation of a selected management strategy, assessment and monitoring. These components are realized through a nine-step process known as the “Steps for Managing a Contaminated Site”, which are briefly described in the following sections. These steps identify scientific tools and documents that are available for use in the management of GNWT contaminated sites, of which, only the initial assessment steps may be required in the event a risk management option takes priority over further remedial activity. Risk management of a contaminated site may still be subject to a monitoring requirement.

### **6.1 Steps for Managing Contaminated Sites**

The steps to manage contaminated sites consist of the following:

- 1. Identification of a Site** – A site is identified as a potential contaminated site.
- 2. Phase I Environmental Site Assessment (ESA)** - The process, as outlined in CSA Standard Z768-01, by which a qualified person determines whether a property is, or may be, contaminated. This is most often completed through a records review and site visit. Phase I ESA reports must be submitted to the applicable regulatory authority.
- 3. Phase II ESA** - The process, as outlined in the CSA Standard Z769-00, by which a qualified person characterizes, determines concentrations, delineates and quantifies contaminants on a site. The Phase II ESA reports must be submitted to the appropriate regulatory authority.
- 4. Human Health and Ecological Risk Assessment (HHERA)** – HHERAs are typically required when removal of a contaminant of concern is deemed extremely difficult and/or cost prohibitive. If required, an assessment by a qualified person determines the nature and probability of adverse health effects



on humans and the ecosystem if exposed to contaminants identified by the ESAs. HHERA reports must be submitted to the applicable regulatory authority.

5. **Risk Management Plan (RMP)** – A RMP would follow the assessment phases supported by an HHERA. This would also allow for a tailored approach, considering remediation and/or monitoring requirements.
6. **Remedial Action Plan (RAP)** - A RAP is a plan that identifies site specific remedial objectives and options for a contaminated site; outlines their feasibility; describes a preferred conceptual remediation plan and monitoring plan; and, if appropriate, requirements for on-going site management. The RAP needs to be submitted to the applicable regulatory authority for review and approval.
7. **Remediation** – Includes performance of the site remediation works carried out by consultants and contractors in accordance with the approved RAP, engineered designs, and specifications. A remediation report detailing activities completed must be submitted to the appropriate regulatory authority for final clearance.
8. **Monitoring** – Includes any post-remediation inspections, monitoring and/or maintenance activities that may be required. Monitoring reports generated need to be submitted to the appropriate regulatory authority.
9. **Site Closure** – Upon completion of both remediation and monitoring, or if post-remediation monitoring is not required, a site closure report must be completed and submitted to the appropriate authority for site closure approval. This will need to be completed for all regulatory authorizations.

## 6.2 Prioritization of Sites

The Canadian Council of Ministers of the Environment (CCME) established the National Classification System (NCS) for risk assessment of contaminated sites. In the interim, the GNWT will utilize the NCS tool for prioritization purposes. The GNWT may, in the future, modify the NCS risk tool or develop a separate risk tool to better reflect the considerations needed to evaluate risk levels of contaminated sites in the NWT.

Sites that are the responsibility of the GNWT are annually prioritized for action based on the NCS approach and will also acknowledge and consider the following criteria:

- Human health and safety;
- Financial and legal obligations;
- Imminent threat to the environment;
- Impacts on the environment; and
- Concerns of Indigenous peoples, northern residents and stakeholders.

Action on high risk sites will take precedent over medium and low risk sites. However, in situations where there are multiple projects at one location, the GNWT may bundle projects of different risk levels together to maximize efficiencies.

### **6.3 Engagement**

Governance of contaminated sites' management relies heavily on an inclusive approach. The Waste Sites Management Committee (WSMC) is an intergovernmental committee created under the Northwest Territories Lands and Resources Devolution Agreement to review, discuss and consider, and provide advice and recommendations to Canada on the management of federal waste sites.

The Contaminated Sites Council (CSC) is an advisory body to the GNWT that provides:

- Input on the application of traditional knowledge, and
- Advice on issues that could enhance effective management of contaminated sites in the NWT.

Members of the CSC include the members of the WSMC, as well as any other representatives necessary to ensure territorial representation.

Advice from the CSC and information from the WSMC are shared, as appropriate, through the ADM Committee.

Once a site is selected for remediation, site-specific engagement and consultation with the NWT communities and stakeholders would occur throughout project

design and implementation, and through permitting processes carried out by land and water boards and other relevant regulators.

## **7.0 CONTAMINATED SITES - CENTRAL INVENTORY**

The GNWT currently maintains an internal central inventory and performance measurement system to track and report on progress in reducing the government's liabilities related to contaminated sites held by the GNWT.

Based on information from the internal central inventory, the GNWT will develop a searchable online database, accessible to the public, to provide information on active, suspected and closed GNWT contaminated sites. Information about each site which will be made available include the classification and location of the site, available details about site conditions (including contaminant levels), along with information describing any activities undertaken at the sites, such as environmental site assessments and/or remedial efforts. The inventory will be updated annually to reflect current conditions.

## **8.0 ACCOUNTING FOR CONTAMINATED SITES**

The GNWT has implemented the Public Sector Accounting Board's Standard on Liability for Contaminated Sites (PS 3260) through the GNWT's Financial Administration Manual Policy 745 – Environmental Liabilities. The policy ensures the GNWT records and quantifies environmental liabilities in accordance with Canadian generally accepted accounting principles.

Costs associated with remediation as a result of GNWT operations, are listed as environmental liabilities and recorded in the Public Accounts. Funding for environmental site assessments, remediation activities, and environmental monitoring is provided through the Environmental Liabilities Fund.

In addition to the GNWT's sites on the environmental liabilities listing, the list also includes sites where the GNWT has assumed responsibility as a result of the default of a third party. In some of these cases, security deposits collected through the GNWT's financial securities system help to fund costs associated with any risk management or remediation activities required at these sites.

The environmental liability listing is maintained internally within the GNWT's Department of Finance and is updated annually to satisfy the requirements of the Office of the Auditor General of Canada.

## **9.0 ECONOMIC BENEFITS**

In order to manage contaminated sites, the GNWT often procures technical services to assess the sites, and to develop and implement remediation plans. Remediation projects can leverage significant economic opportunities. The GNWT follows the procurement practices laid out in the Department of Infrastructures' Procurement Guidelines to ensure that procurement of services for contaminated sites management is transparent and equitable. Economic measures of settled land claim agreements, alongside GNWT policies such as the Business Incentive Policy provide guidance to procurement so that local, regional and northern business opportunities can be maximized.

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- Various CCME Soil and Water Quality Guidelines. See:  
<http://cegg-rcqe.ccme.ca/en/index.html>