# Chapter 10
# Identification and Management of Contaminated Sites

## 1.0 Main Points

Contamination can pose risks to public health and safety. Where the provincial government has caused contamination or has accepted responsibility for the cleanup of contaminants, it must assess the contamination to know and understand what public health and safety risks exist and decide on actions to address or mitigate those risks. This information takes time and resources to gather and analyze.

New Canadian public accounting standards, coming into effect April 1, 2014, will require the Government to account for and report the expected costs to clean up contaminated sites. Recording these costs will let the public know what future resources will be necessary for cleanup.

To assess the readiness of the Government in adopting this upcoming accounting standard, we audited whether the Government effectively identified and managed contaminated sites. We focused on ministries and Treasury Board Crown agencies (like school divisions) at risk of being responsible for cleaning up contaminated sites. Seventeen agencies indicated that they are at risk of being responsible for cleaning up contaminated sites (at-risk agencies). At March 2013, ten at-risk agencies had identified over 300 sites with suspected or known contamination with four ministries being responsible for most of those sites.

We concluded that, at March 2013, the Government had not effectively identified or managed contaminated sites. Overall, at March 2013, the provincial government is in the early stages of its work to identify and manage contaminated sites. Eleven of the 17 at-risk agencies acknowledged that they did not have a complete list of all suspected and known sites. For many of the sites they had identified, they had not yet completely assessed the degree of contamination and the public health and safety risks these sites pose. They have not made decisions on the cleanup of many identified sites.

Without a complete list of sites and confirmation of the degree of contamination at identified sites, the provincial government does not know what public health and safety risks the contamination poses and cannot determine what cleanup or risk-management activities (e.g., fencing sites to restrict access) are necessary. Also, it does not know what future resources will be necessary for cleanup.

The Ministry of Finance must ensure agencies gather the key information and make the necessary decisions in sufficient time so that it can record the costs that the provincial government expects to pay for cleanup costs in the Government's 2014-15 Budget and final year-end financial statements. Complete and accurate financial reporting of the Government's liabilities for contaminated sites is important to reflect the full amount of future public resources required for cleanup.

We make four new recommendations and note that two recommendations, previously addressed to the Ministry of Environment that relate to this audit, have not been fully implemented.

## 2.0 INTRODUCTION

Under *The Environmental Management and Protection Act, 2002* and related regulations, the Ministry of Environment (Environment) is responsible for regulating activities that impact the environment. Specifically, it is responsible for controlling how best to manage environmentally-impacted sites. Under *The Financial Administration Act, 1993*, Treasury Board is responsible for the provincial government's management practices and systems including accounting policies and the Ministry of Finance (Finance) is responsible for ensuring compliance with Treasury Board orders and directives.[1]

This chapter examines the readiness of government agencies to identify and manage contaminated sites. Canadian public sector accounting requirements that come into effect April 1, 2014 provide governments with guidance on accounting for and reporting their obligations related to the cleanup of contaminated sites. Government agencies must operate responsibly to protect the environment. Environmental laws make the provincial government responsible for managing contamination that it has caused or for which it has assumed responsibility. Where the existence of a government's obligation to clean up a site is known and determinable, a government must account for the associated costs in its financial statements.[2] Costs associated with cleaning up contamination could be significant.

Contamination can pose risks to public health and safety. Where the provincial government has caused contamination or has accepted responsibility for the cleanup of contaminants,[3] it must assess the contamination to know and understand what public health and safety risks exist and decide on actions to address or mitigate those risks. This information takes time and resources to gather and analyze.

Accounting for cleanup costs related to contaminated sites is dependent on the provincial government and agencies taking the necessary steps to gather key information and make decisions about what they will clean up and when. Only with systems to identify and manage contaminated sites can the provincial government successfully implement the new accounting requirements; only then will the public know the complete costs to clean up contaminated sites.

## 3.0 UNDERSTANDING LAWS RELATED TO CLEANING UP CONTAMINATION

Clean air to breathe, clean water to drink, and clean land to support the people of Saskatchewan are building blocks to a healthy province. Uncontaminated land and water are essential for human health and safe food production. Failure to identify and manage contaminated sites increases the likelihood of adverse effects occurring due to contamination. This could result in valuable Crown land being no longer productive and unnecessary future costs for taxpayers.

[1] Section 4 of *The Financial Administration Act, 1993.*
[2] Related public sector accounting standards include PS 3200 Liabilities, PS 3300 – Contingent Liabilities, and PS3270 – Solid Waste Landfill Closure and Post Closure Liability.
[3] Contaminants are any physical, chemical, biological, or radiological substance in air, soil, water, or sediment that is foreign to or in excess of the natural environment that is causing or may cause an adverse effect.

Environmental laws help protect our environment. Environmental laws also help guide individuals and companies to determine whether contamination has occurred and assign responsibility for cleanup. When the provincial government is the polluter, it is subject to the same environmental laws as individuals and private sector companies. Environmental laws related to contaminated sites address the following areas (see **Exhibit 7.1** for discussion of each of these areas):

- Who sets environmental standards?
- Who decides what a contaminant is?
- What is a contaminated site?
- What is the duty to report?
- When is an environmental site assessment required or used?
- When is cleanup (remediation) required by law?
- Who pays for the costs of cleanup?

## 4.0 Readiness for Upcoming Change to Accounting Requirements Needed

As previously noted, a new Canadian public sector accounting standard is coming into effect April 1, 2014 (less than a year away). This standard requires governments to account for liabilities for contaminated sites; that is, to record expected costs to clean up sites where contaminants exceed an environmental standard.[4] These would include costs to clean up petroleum spills on Crown land and leachate[5] that has contaminated ground water.

Under *The Financial Administration Act, 1993*, Finance is responsible for preparing the financial statements of the provincial government (Summary Financial Statements). These statements consolidate the financial activities of all government agencies (e.g., ministries, school divisions, regional health authorities, and Crown corporations).

Initially, we had intended to look at the entire readiness process (e.g., identification of sites, development of cleanup plans, and quantification of the related liabilities). However, in March 2013, officials from Finance advised us that Finance is working with ministries towards the implementation of the new accounting requirements. It noted that ministries were still developing processes to estimate and publicly report liabilities for contaminated sites. Also, Finance noted that it plans to remind the Treasury Board Crown agencies that will be impacted by this new standard (e.g., school divisions) of the new requirements. Based on this information, we agreed to defer the audit work on the quantification of the liability.

[4] The Public Sector Accounting Board issued a new accounting standard called *PS3260 – Liability for Contaminated Sites* in June 2010. Under this new standard, governments are required to recognize in their financial statements liabilities its planned remediation of contaminated sites when an environmental standard exists, contamination exceeds the environmental standard, the government is either directly responsible or accepts responsibility for the costs of remediation, it is expected future economic benefits will be given up, and a reasonable estimate of the amount can be made.

[5] Leachate is any liquid that, in passing through matter, extracts solutes, suspended solids or any other component of the material through which it has passed.

To quantify cleanup costs for contaminated sites, government agencies responsible for cleanup will need to gather information by completing the following steps:

- Identify sites with suspected or known contamination.
- Complete a preliminary assessment of the site (e.g., Phase 1 environmental site assessment [ESA]) to determine whether significant environmental concerns exist and whether a detailed site assessment (e.g., Phase 2 ESA) is needed.
- Based on results of the Phase 1 ESA, complete a Phase 2 ESA to confirm and quantify the degree of contamination.
- Using results of Phase 2 ESAs, develop a cleanup plan that sets out activities necessary to address the public health and safety risks. Activities may include bringing the site up to the related environmental standard, restricting access to the site, and/or changing the usage of the land, isolating the contaminants, etc. The plan would also identify necessary ongoing maintenance or monitoring activities, set out when the related activities are to occur, and how to complete the activities.
- Obtain the necessary approval of the cleanup plan from the relevant environmental authority.
- Estimate the costs of the activities set out in the cleanup plan. This estimate would be updated at each financial reporting date based on information available at that date (e.g., reflect changes in planned activities or in expected costs of those activities).

To record the provincial government's liability for contaminated sites, Finance will need to know that all agencies have gathered the information necessary to quantify cleanup costs of contaminated sites or have plans to do so before April 1, 2014. Given the new standard comes into effect within less than a year, agencies need to factor the costs of implementing this new standard into their current budgets. This would include the costs associated with completing the necessary steps. Unless agencies complete the steps, Finance will not have the information to prepare accurate Summary Financial Statements and the public will not know the complete cleanup costs of contaminated sites for which the provincial government is responsible.

The Financial Administration Manual (FAM) sets out Treasury Board policies and related guidance that Treasury Board Crown agencies[6] must follow. At March 2013, FAM does not yet provide agencies with guidance on recording liabilities for contaminated sites.

**1. We recommend that the Ministry of Finance set out guidance in the Financial Administration Manual for recording liabilities of contaminated sites to enable complete reporting in the Government's 2014-15 Budget and Summary Financial Statements.**

[6] Treasury Board Crown agencies are those agencies responsible to Treasury Board.

# 5.0 AUDIT OBJECTIVE, SCOPE, CRITERIA, SURVEY APPROACH, AND CONCLUSION

## 5.1 Audit Objective, Scope, and Criteria

The objective of this audit was to assess whether, as of March 31, 2013, the provincial government of Saskatchewan effectively identifies and manages contaminated sites.

For the purposes of this audit, a contaminated site is an area of land or water that contains a substance that may cause or is causing an adverse effect in a concentration that exceeds an environmental standard.[7] A contaminated site may not include a site requiring reclamation[8] or decommissioning[9] (e.g., abandoned oil wells).

We focused our audit work on the ministries and Treasury Board Crown agencies (collectively referred to as government agencies in this report) with known or suspected contaminated sites. Treasury Board Crown agencies are those agencies responsible to Treasury Board (i.e., school divisions, regional health authorities, and other Crown agencies such as Saskatchewan Housing Corporation and Saskatchewan Water Security Agency).

This audit excluded sites and cleanup costs that are the responsibility of Crown Investments Corporation of Saskatchewan (e.g., SaskPower).

In March 2013, we surveyed selected government agencies to gain an understanding of their identification and management of contaminated sites. We examined policies and procedures, manuals, reports, and environmental site assessments of agencies, and interviewed officials of those agencies. To further corroborate information, we looked for consistency with information obtained from our annual integrated audits of those agencies. We further supplemented our audit work by examining certain policies and agreements of agencies that did not respond to our survey and which we had assessed as having some risk of being responsible for contaminated sites.

To conduct this audit, we followed the *Standards for Assurance Engagements* published in the *CICA Handbook - Assurance*. To evaluate the provincial government's processes, we used criteria based on the work of other auditors and current literature listed in the selected references. The Government, as represented by the Ministry of Environment, agreed with the criteria (see **Figure 1**).

[7] *The Environmental Management and Protection Act, 2002*, section 11.
[8] Reclamation is the act of restoring lands to their original state or agreed-upon alternate state includes actions or activities undertaken to stop or reverse damage to the environment.
[9] Decommissioning is the act of shutting down a facility or removing it from service or use.

**Figure 1—Audit Criteria**

Effectively identifying and managing contaminated sites includes:

1. **Identifying contaminated sites**
   - 1.1 Assigning responsibility for identifying and managing the cleanup of sites to qualified and appropriately-trained staff
   - 1.2 Maintaining written government-wide policies and related procedures (e.g., identify sites, prioritize cleanup activities, and account for future cleanup costs)
   - 1.3 Systematically identifying potentially contaminated sites including the determination of the Government's responsibility for site cleanup

2. **Maintaining appropriate information to develop site cleanup plans**
   - 2.1 Tracking all sites at risk of contamination
   - 2.2 Routinely assessing environmental damage at potential sites
   - 2.3 Developing and maintaining site cleanup action plans and strategies
   - 2.4 Maintaining reliable information about site (e.g., contamination, status of cleanup activities)

## 5.2 Survey Approach

We surveyed 73 government agencies with a risk of being responsible for cleaning up contaminated sites. We aligned our survey questions with our criteria in **Figure 1**. See **Exhibit 7.5** for the survey questions. In the survey, we asked government agencies to indicate whether there was more than a negligible risk of their being responsible for environmental cleanup costs. If they indicated yes, we asked them additional questions, in Parts II to IV, about the processes they used to identify and assess contaminated sites, develop and document cleanup plans, and estimate and account for cleanup costs.

**Exhibit 7.3** lists the agencies that we surveyed and indicates which agencies responded. As shown in **Figure 2,** 44 government agencies responded to our survey (i.e., 60% response rate).

**Figure 2—Survey Response Rate and Number of Government Agencies at Risk of Being Responsible for Cleanup Costs**

| | Survey Distributed/ Completed | Number of Agencies that Identified Risk of Being Responsible for Cleanup Costs |
|---|---|---|
| Number of Surveys Distributed | 73 | - |
| Number of Surveys Completed | 44 | 17 |
| Rate | 60% | 39% |

Source: Compiled from Provincial Auditor of Saskatchewan Survey Results (March 2013)

As shown in **Figure 3**, seventeen agencies identified that they were at risk of being responsible for cleanup costs because of suspected or known contamination (i.e., 39%). In this report, we refer to these 17 agencies as "at-risk agencies." Seven of the 17 at-risk agencies, while they were at risk of having contaminated sites, had not yet identified such sites at March 2013 or had cleaned up previously identified sites. The remaining ten at-risk agencies identified 309 sites with either suspected or known contamination. Contamination included asbestos,[10] fuel, excessive salt, creosote, and contaminants resulting from mining activities. Four at-risk agencies are responsible for 227 of the 309 sites; these four agencies are the ministries of Central Services (seven sites), Economy

[10] Buildings or facilities with asbestos do not classify as "contaminated sites" under environmental laws.

(37 sites), Environment (four sites), and Highways and Infrastructure (Highways) (179 sites).

**Figure 3—Survey Results – At-risk Agencies, Completeness of their Listing of Sites, Number of Sites They Identified, and Their Progress on Obtaining Detailed ESAs**

| Agencies with Risk of Contamination (At-risk Agencies) | Completeness of Agency's Listing of Sites | Number of Sites with Suspected or Known Contamination | Estimated Percentage of Site Assessments Completed for Identified Sites |
|---|---|---|---|
| **Ministries** | | | |
| Ministry of Central Services | Partially complete | 7 | 80% |
| Ministry of Economy | Partially complete | 37 | 50% |
| Ministry of Environment | Partially complete | 4 | 10% |
| Ministry of Highways and Infrastructure | **Complete** | 179 | 96% |
| Ministry of Justice | Not complete | - | n/a |
| Ministry of Social Services (including Saskatchewan Housing Corporation) | **Complete** | 1 | **100%** |
| **Other Crown Agencies** | | | |
| Saskatchewan Institute of Applied Science and Technology | **Complete** | 5 | **100%** |
| Saskatchewan Liquor and Gaming Authority | Partially complete | 68* | 86% |
| Water Security Agency | **Complete** | - | n/a |
| **School Divisions** | | | |
| Chinook | **Complete** | 2 | 80% |
| Ile-a-la Crosse | Partially complete | 2 | 1% |
| Living Sky | Not complete | - | n/a |
| NorthEast | Not complete | - | n/a |
| NorthWest | Partially complete | - | n/a |
| Prairie Spirit | Not complete | 4 | 5% |
| Prairie Valley | Not complete | - | n/a |
| **Regional Health Authorities** | | | |
| Heartland | **Complete** | - | n/a |
| **Total # of At-risk Agencies: 17** | | **309** | |

Source: Compiled from Provincial Auditor of Saskatchewan Survey Results (March 2013)
* These sites would not meet the definition of "contaminated sites".

## 5.3 Audit Conclusion

**We concluded that, as of March 31, 2013, the provincial government has not effectively identified and managed all contaminated sites under the responsibility of ministries and Treasury Board Crown agencies.**

Normally, changes to accounting requirements do not necessitate significant improvements in operations. However, so that the provincial government is ready to meet the upcoming accounting requirement to record its liabilities for contaminated sites, changes in operations are needed.

Overall, at March 2013, the provincial government is in the early stages of its work to identify and manage contaminated sites. Many government agencies did not have a complete list of all suspected and known sites, did not fully know what public health and safety risks these sites pose, and had not made decisions on the cleanup of all identified sites. The Ministry of Finance needs this key information so that it can appropriately determine the amounts that the provincial government expects to pay for cleanup costs and record these costs in the provincial government's 2014-15 Budget and final year-end financial statements. Complete and accurate financial reporting of the provincial government's liabilities for contaminated sites is important to reflect the full amount of future public resources required for cleanup.

**Sections 4.0** and **6.0** include four new recommendations for operational improvements and an update on the status of two related recommendations that we made to the Ministry of Environment in 2008.

# 6.0 Key Findings and Recommendations

In this section, we describe our expectations (in italics), key findings, and recommendations related to the audit criteria in **Figure 1**.

## 6.1 Identifying Contaminated Sites

### 6.1.1 Responsibility Assigned to Qualified Personnel but Agency Policies Incomplete

**Qualified Personnel in Place**

*We expected that at-risk agencies would assign responsibility for identifying and managing contaminated sites to qualified and appropriately trained staff. Assigned persons would have at least basic knowledge of environmental laws with a background and training that would provide at least basic related technical expertise (e.g.,*

*professional engineer or professional geoscientist, licensed agrologist, licensed biologists, licenced chemist).*[11]

In our survey, 17 government agencies indicated that they had a risk of being responsible for contaminated sites (at-risk agencies). Ten of these at-risk agencies indicated they had assigned specific personnel to be responsible for managing contaminated or potentially-contaminated sites. Agencies with specific assigned personnel were those with many known or suspected contaminated sites (e.g., ministries of Highways and Central Services). We found these agencies assigned responsibility to staff with appropriate qualifications (e.g., an engineer). The remaining seven agencies engaged outside experts (e.g., environmental engineers) to help them assess suspected or known contamination. In most cases, the contamination at those seven agencies was the result of fuel spills. All agencies engaged outside experts to carry out detailed environmental site assessments (Phase 2 ESAs) and to make recommendations on cleanup activities.

**Government Agencies Lack Policies for Prioritizing the Completion of Detailed ESAs**

*We expected at-risk agencies would have policies and procedures for identifying and managing contaminated sites on government-owned lands specific to the nature of their operations. Agency policies and procedures would align with environmental policies and relevant legislation.*

In our survey, 7 of the 17 at-risk agencies (i.e., 41%) indicated that their agency had documented policies and procedures to guide the identification of sites potentially exposed to contaminants. Six agencies said they had policies and processes to manage sites; one agency said it had an environmental liability accounting policy.

We found these policies and procedures focused on human safety. The policies and procedures of some agencies provided good linkage to relevant legislation and set competency requirements for individuals used to carry out ESAs. In one case, the guidance included when a Phase 1 ESA should be completed. Also, two agencies that manage a significant number of buildings had policies to actively inspect their buildings for contamination. These two agencies also had policies to ensure properties purchased/sold were not contaminated.

Government agencies used their normal purchasing policies when hiring experts to complete ESAs or to make recommendations on cleanup activities.

The policies of at-risk agencies did not include guidance on when to carry out Phase 2 ESAs on sites with potential public health and safety concerns or when to clean up such sites. Also, their policies did not include guidance on managing sites where the contamination did not impose an immediate health or safety risk but where future cleanup may be required. Agencies noted that they relied on direction from Environment as to when to clean up sites with public health and safety concerns.

[11] In January 2012, the Government released the Saskatchewan Environmental Code (draft Code) for public comment. The draft Code sets out required qualifications for persons involved in the delivery of environmental protection and related services (i.e., qualified persons). The draft Code notes that the use of qualified persons helps streamline low-risk activities and leads to enhanced environmental protection. While these draft requirements are not yet directly relevant to those assigned to administer the identification and management of contaminated sites within government agencies, they provide a useful source of reference.

See **Section 6.1.3** for discussion of proposed environmental laws that will help ensure government agencies take consistent actions on all contaminated sites for which the provincial government is responsible for cleanup.

## 6.1.2 Not All Suspected Contaminated Sites Identified and Contamination Not Always Confirmed Promptly

*We expected at-risk agencies would have processes to track when staff or other individuals report suspected contamination or events that may lead to contamination. Agencies would report to the appropriate authority suspected or known contamination as required by law and take steps to assess the nature and degree of suspected contamination and determine the extent of the provincial government's responsibility for site cleanup.*

**Not All Suspected Contaminated Sites Identified**

In our survey, 13 of the 17 at-risk agencies indicated that they considered the risk of contamination on property used, leased, or owned on an ongoing basis as an integral part of their operations. Since the risk of contamination only resulted from specific events (e.g., fuel spills) for the remaining four agencies, they did not actively consider risk of contamination. Our additional work corroborated the survey results.

At-risk agencies relied on staff to report known or suspected contamination (e.g., reports from inspections of buildings or facilities). We found agency staff were knowledgeable about how to identify a contaminated site and seemed alert to situations that may cause potential contamination. Agency staff were also aware of when and how to report contamination to the appropriate authority (e.g., Ministry of Environment). We found that agency staff appropriately reported suspected or known contamination to Environment.

Five agencies that administer significant amounts of Crown land considered both the risk of Crown land being contaminated, as well as the potential liability resulting from contamination of adjacent land.

Two agencies that leased Crown land to petroleum producers recognized that the operations of petroleum producers posed an increased risk of contamination (e.g., oil contamination). Their written agreements with producers (lessees) were consistent with the "polluter pays" principle. These agreements included provisions where the lessees are to take responsibility for all claims or demands resulting from their occupancy and use of the property including cleanup costs. These two agencies were aware lessees were responsible, under law, for reporting to them any discharge of substances that has caused or may cause damage to the environment. They relied on this reporting to become aware of suspected or known contamination on leased Crown lands. Neither agency was aware of any instances where they have had to pay for cleanup costs for damage caused by their lessees.

At March 2013, most of the 17 at-risk agencies had not identified **all** suspected sites (see **Figure 3**).

- Six agencies indicated that they had a complete list of suspected and known contaminated sites (35%)

- Six agencies indicated they had a partial list (35%)
- Five agencies either did not have a list or were unsure (Not complete) (30%)

Those agencies with partial or incomplete lists generally knew what they needed to do to identify sites with contamination but for varying reasons had not yet done so. Some indicated that they were awaiting up-to-date information from their staff (e.g., results of inspections of sites) or from other ministries using the Crown lands; others cited lack of resources to carry out the site assessments.

To facilitate the quantification of the provincial government's liability for contaminated sites, these agencies need to identify **all** suspected contaminated sites and assess them before Finance prepares the provincial government's financial statements. Finance needs to set deadlines for when agencies must complete this work. See **Recommendation 1**.

**Degree of Suspected Contamination Not Always Confirmed Promptly**

ESAs are done to determine the degree of contamination and the extent of risks to public health and safety. ESAs determine the site condition including assessing whether contamination has occurred. They identify specific environmental risks that the identified contamination poses, and recommend cleanup activities.

13 of the 17 at-risk agencies indicated that they had not yet obtained or completed ESAs on identified sites with suspected or known contamination (see **Figure 3**).

- Three agencies (including one agency with no sites identified at the time of the survey) indicated that all sites had been assessed
- Eight agencies indicated some sites were assessed (the extent of percentage of sites assessed ranged from 5% to 96%, and four of the agencies in this category each had a significant number of sites)
- One agency indicated that its completed assessments were based on a sample of similar sites (leakage from heating fuel tanks)
- Five agencies indicated either no sites had been assessed or they were unsure (these agencies had not identified any sites at the time of the survey)

As shown in **Figure 4**, at March 2013, at-risk agencies had classified only 13 out of the 309 sites as requiring cleanup plans (i.e., classified as Class 1 or 2) based on the national classification system (NCS); NCS conveys the degree of contamination. To confirm the accuracy of the survey responses, we compared the classification of sites classed as Class 1 or 2 to the supporting documents (e.g., phase 2 ESAs or information in Environment's files).

At-risk agencies classified 51 of the 309 sites as not having high concerns for public health or safety although cleanup action may be required (16%). They classified the remaining sites as probably not having significant environmental impacts (79%).

**Figure 4—Survey Results for Site by Category Based on Site Assessment[12]**

| Nature of Site | Number of Sites Identified | Percentage of Total Sites Identified (%) |
|---|---|---|
| Class 1 – ESA indicated action is required to address existing concerns for public health and safety | 9 | 3 |
| Class 2 – ESA indicated that action is likely required to address existing concerns for public health | 4 | 2 |
| Class 3 – ESA indicated that site is not a high concern, but action may be required | 51 | 16 |
| Class N – ESA indicated that there is probably no significant environmental impact nor human health threats | 244 | 79 |
| Class INS – ESA has been performed but there is insufficient information to classify the site | 1 | - |
| **Total** | **309** | **100** |

Source: Compiled from Provincial Auditor of Saskatchewan Survey Results (March 2013)

When we looked to see if at-risk agencies obtained Phase 2 ESAs identified as necessary in their preliminary site assessments, we found that many agencies had not obtained all of the Phase 2 ESAs or the Phase 2 ESAs were incomplete.

Phase 2 ESAs are necessary to determine whether suspected or identified contaminated sites pose a public health and safety risk. Delays in completion of Phase 2 ESAs may result in the provincial government not addressing unidentified public health and safety risk within a reasonable time. See **Section 6.2.2** for further discussion on the need for timely detailed site assessments.

### 6.1.3 Proposed Provincial Environmental Laws is Intended to Provide Greater Direction for Assessing Contamination and Managing Sites

*We expected the provincial government would maintain policies and related procedures in the following areas: identifying sites, prioritizing detailed site assessments classifying sites, deciding on cleanup activities, and tracking and accounting for costs associated with cleanup.*

Although under *The Environmental Management and Protection Act, 2002* (Act), the provincial Minister of Environment may coordinate policies and programs of government agencies respecting the management, protection and use of the environment, it did not. Rather, Environment treated government agencies the same as other entities that it regulates. It expected government agencies to use environmental legislation and

[12]Even though we had indicated that asbestos within buildings was not in the scope of the survey, some survey respondents included buildings with asbestos as contaminated sites.

guidance available on its website.[13] It also expected government agencies to seek the advice of its Environmental Protection Branch staff who enforce the legislation.[14]

We found the provincial environmental laws and Environment's related guidance about identification of suspected or known contamination useful and relevant to government agencies. However, provincial environmental laws and/or related guidance did not clearly:

- Set out the appropriateness of a sampling site assessment approach used by a government agency[15]
- Require the use of a consistent system to classify the degree of contamination (e.g., NCS)
- Set expected timeframes for developing cleanup plans where action is needed to address public health and/or safety concerns
- Define what information about the contaminated site should be tracked

We note that the unproclaimed *The Environmental Management and Protection Act, 2010*[16] and the draft Environmental Code (proposed environmental laws) include requirements to address each of the above areas. At March 2013, *The Environmental Management and Protection Act, 2010* was not yet proclaimed and the Code was not yet in effect. For example, the proposed environmental laws will require site assessments of all suspected or known contaminated sites, the use of NCS, the reporting of the sites' NCS ratings within 30 days of the completion of site assessments, and the preparation of cleanup plans within six months after site assessments.[17]

As the regulator, Environment has a vested interest in making certain that at-risk agencies understand their responsibilities and obligations under the proposed environmental laws so that they can fulfill them.

**2. We recommend that the Ministry of Environment take steps to make government agencies fully aware of their responsibilities under the proposed *The Environmental Management and Protection Act, 2010* and the related Environmental Code.**

Assessment of the degree of contamination and the subsequent development of cleanup plans takes time and resources often requiring the hiring of expertise outside of the Government. Under the proposed environmental laws, at-risk agencies will be required to classify their sites using the NSC classification. Use of the NSC classification would facilitate consistent ranking, across the Government, of public health and safety

[13] www.saskspills.ca and www.environment.gov.sk.ca (14 April 2013).
[14] The Ministry of Environment website provides factsheets that outline the legislation in place. It includes information that explains environmental assessment processes, sets out what may constitute a contamination event (e.g., spills), and explains how to report spills.
[15] We noted that one school division had assessed a sample of sites suspected of heating fuel contamination instead of assessing each site individually. Ministries with multiple sites expressed interest in using a similar sampling approach citing such an approach would result in cost-effective site assessments.
[16] This legislation received royal assent on May 20, 2010, but has not yet been proclaimed.
[17] Also, *The Environmental Management and Protection Act, 2010* will require the submission of corrective action plans within six months of the completed site assessment or period set by the Minister of Environment (section 14).

risks posed by sites for which the provincial government is responsible for cleanup. Treasury Board in its budget allocation process must decide which sites to clean up. Use of consistent cross-government ranking is essential so that the provincial government focuses its attention and resources on the sites that pose higher risks.

3. **We recommend that Treasury Board require government agencies, when requesting funds for cleanup activities, to use the National Classification System endorsed by the Canadian Council of Ministers of Environment to prioritize cleanup activities where the provincial government is responsible for cleaning up contaminated sites.**

Also, government-wide policies would identify information necessary for budgeting and recording the costs associated with cleanup. Without this information, the provincial government is at risk of not being able to manage the risks associated with contamination and of significantly understating its financial obligations related to cleaning up these sites.

4. **We recommend that the Ministry of Finance set out its information requirements for accounting for costs (budget and actual) associated with the cleanup of contaminated sites.**

## 6.2 Cleanup Plans Not Yet Developed

### 6.2.1 Site Classification Information Not Always Tracked

*We expected that at-risk agencies would track key information about sites with suspected and/or known contamination and ensure tracked information is complete and accurate. Tracked information would include at least the following: location of the site, general condition of the site, nature of contamination, degree of contamination (based on formal ESAs), phase and date of last site visit/assessment, and linkage to information submitted to regulatory authorities (e.g., indication as to whether site was designated as contaminated, status of cleanup plans). Agencies would use the NCS endorsed by the CCME to describe the degree of contamination (site classification, see* ***Exhibit 7.4)****.*

At March 2013, at-risk agencies need to have their own tracking systems. As noted in **Section 6.2.4**, Environment does not maintain a comprehensive listing of contaminated sites.[18] Because current provincial legislation does not require detailed site assessments to be submitted to Environment unless they are in relation to a spill or storage facility decommissioning, Environment is not aware of all identified contaminated sites for which the provincial government is responsible for cleanup. However, the proposed environmental laws require more reporting to Environment. For example, *The*

[18] Provincial Auditor Saskatchewan *2011 Report - Volume 2*, Chapter 8 (p. 89). This matter was initially reported in our *2008 Report – Volume 1*.

*Environmental Management and Protection Act, 2010*, once proclaimed, will require notification to Environment where an ESA indicates levels of contamination.[19]

As shown in **Figure 3**, by March 2013 ten at-risk government agencies had identified 309 sites with suspected or known contamination. As previously noted, the ministries of Central Services, Economy, Environment, and Highways were each responsible for multiple sites.

Most government agencies used spreadsheets to track some information about their sites with suspected or known contamination. The nature of the information tracked in spreadsheets varied depending on the number of sites for which the agency was responsible. In general, agencies responsible for fewer sites kept more information in manual files as opposed to within spreadsheets.

Typically, at-risk agencies with multiple sites tracked only some of the information we expected, such as the location of the site, the phase of the ESA, and the year of the most recent ESA. These agencies did not track all key information (e.g., the site classification, information submitted to regulatory authorities, cleanup plans, and approvals from regulatory authorities).

The reporting requirements in the proposed environmental laws differ from existing provincial environmental laws; they set out what key information must be kept and provided to Environment. Because government agencies are subject to the same environmental laws as individuals and companies, they will also be required to maintain and provide this information. See Recommendation 2 in **Section 6.1.3** about the need for at-risk agencies to be fully aware of their responsibilities and obligations under the proposed environmental laws.

Also as noted in **Section 6.2.4**, Environment is currently developing a database to track key information on contaminated sites. When this database is complete, it will provide a complete and accurate inventory of contaminated sites including sites for which the provincial government is responsible for cleanup.

### 6.2.2 Timely Phase 2 ESAs Needed

*We expected that at-risk agencies would use Environment's guidance to decide which types of sites should be given priority for detailed site assessments, which types of sites could be assessed as a group, and on how and how often to monitor the condition of the sites where cleanup may be required. Where preliminary site assessments identified potential significant environmental concerns, at-risk agencies would undertake more detailed site assessments (i.e., Phase 2 ESAs) within a reasonable timeframe. At-risk agencies would rank the risks that sites presented using information from site assessments.*

Current provincial environmental laws and Environment's guidance did not provide at-risk agencies with specific guidance for the timely completion of Phase 2 ESAs. At March 2013, only a few government agencies had completed all of their Phase 2 ESAs where their preliminary assessments had identified the need. None of the four ministries with multiple contaminated sites had completed all of their Phase 2 ESAs (see **Figure 3**).

[19] This legislation received royal assent on May 20, 2010, but was not yet proclaimed at May 8, 2013.

For the agencies with multiple sites, Highways was the most advanced in obtaining or seeking Phase 2 ESAs. For example, in 2005, Highways completed Phase 1 ESAs of all of its maintenance yards[20] for possible salt and/or petroleum hydrocarbon damage and determined 34 sites needed Phase 2 ESAs. By March 2013, Highways had obtained 88% of the necessary Phase 2 ESAs for its maintenance yards (30 of the 34). It hired external experts to complete them. Ministries like Central Services had recently sought Phase 2 ESAs on various sites. Central Services obtained three ESAs at three different sites during 2012.

We had expected that all of the 13 sites classified as Class 1 or 2 would have had Phase 2 ESAs. As shown in **Figure 5**, seven different at-risk agencies are responsible for those sites. These agencies could not tell us when the provincial government had first suspected or identified contamination at these sites. They indicated that most contamination had existed before there was a legal requirement for reporting and/or before the responsibility for the site had been reassigned to them from another government agency.

As noted in **Figure 5**, the Phase 2 ESAs of 2 of 13 class 1 or 2 sites with contaminants were not complete at March 2013. At-risk agencies indicated that the timeliness of their completion of Phase 2 ESAs was driven by the availability of resources and their preliminary assessment of the potential environmental concerns.

**Figure 5—Survey Results for Sites Where Cleanup is Required to Address Concerns for Public Health and Safety, Listed by Government Agency**

| Agency | Site | Location | Contaminants / Environmental Damage | Last Site Assessment (Phase) | Was Cleanup Plan Finalized at March 2013? |
|---|---|---|---|---|---|
| **Class 1 Sites** – ESA indicated action is required to address existing concerns for public health and safety | | | | | |
| Ministry of the Economy | Gunnar Uranium Mine and Mill Site | Lake Athabasca near Uranium City | Uranium | 2013 (Phase 2) | No* |
| Ministry of the Economy | Lorado Uranium Mill Site | Nero Lake near Uranium City | Uranium | 2012 (Phase 2) | No* |
| Ministry of Environment | Western Nuclear Mine Site | Hanson Lake, near Creighton | Various | 2007 (Phase 2) | No |
| Ministry of Environment | Mouse Meadows Copper Wire Burn Site | East of Prince Albert and North of Hwy 55 | Various | No formal assessment complete | No |
| Ministry of Environment | Southend Firebase | Near Southend | Fuel | 2012 (Phase 2) | Yes |
| Prairie Spirit School Division | Two buildings containing asbestos | Clavet Asquith | Asbestos** | 2013 (Phase 2) | Na |
| Saskatchewan Institute of Applied Science and Technology | Two buildings containing asbestos | Saskatoon | Asbestos** Lead paint | 2012 (Phase 2) | Yes |

[20] The Ministry of Central Services is responsible for some of the Crown lands upon which these yards are located.

| Agency | Site | Location | Contaminants / Environmental Damage | Last Site Assessment (Phase) | Was Cleanup Plan Finalized at March 2013? |
|---|---|---|---|---|---|
| **Class 2 Sites** – ESA indicated that action is likely required to address existing concerns for public health | | | | | |
| Chinook School Division | Schoolyard | Maple Creek | Fuel | 2005 (Phase 2) | Yes |
| Ministry of Central Services | Highways Maintenance Yard | Kamsack | Salt and fuel | 2013 (Phase 2) | No |
| Ministry of Highways and Infrastructure | Highways Maintenance Yard | Neilburg | Salt and fuel | 2010 (Phase 2) | No |
| Ministry of Environment | Treatment cell for Southend Firebase | Near Southend | Fuel | No formal assessment complete | No |

Source: Compiled from Provincial Auditor of Saskatchewan Survey Results (March 2013)
* The Ministry of Economy requires a license from the Canadian Nuclear Safety Commission (a federal agency) before it can develop a cleanup plan.
** Buildings or facilities with asbestos do not classify as "contaminated sites" under environmental laws and are subject to different regulatory requirements.

Until all Phase 2 ESAs are complete, our Office cannot determine if all high-priority sites have been identified. Preliminary assessments of sites with suspected or known contaminants had identified that these sites have the risk of posing significant environmental concerns and as a result need a Phase 2 ESA (i.e., a higher-risk site). Without timely Phase 2 ESAs of higher-risk sites that confirm the degree of contamination, the provincial government does not know what public health and safety risks are posed by the contamination and cannot determine what cleanup or risk management activities (e.g., fencing sites to restrict access) are necessary. Delays in cleaning up sites or completing risk management activities may pose public health and safety risks and may cause the provincial government to be held responsible for resulting adverse impacts.

Also as shown in **Figure 5**, some of the Phase 2 ESAs are older. While it is possible for contamination to remain unchanged over time, sometimes contamination in sites migrates, intensifies, or changes. Sites with such risks should be assessed on an ongoing basis. Furthermore, sites classified as Class 1 and 2 that are not yet cleaned up should undergo increased scrutiny. Even if an approved cleanup plan for a site exists, it is possible that the cleanup may not be complete. If the site is not monitored and re-evaluated, there is increased risk that the contamination will cause further damage. Also, estimating environmental liabilities with outdated site information increases the likelihood of recording inaccurate financial information.

*The Environmental Management and Protection Act, 2010*, once proclaimed, and the related draft Code (once in effect) will require agencies to take actions, as soon as possible, to repair or remedy undue risks to public safety (section 10). The Act will require site assessments, and Environment will be able to set deadlines as to when these site assessments must be completed. Agencies will also be required to actively monitor risks related to changes in site condition and advise Environment of changes in site condition. See Recommendation 2 in **Section 6.1.3.**

## 6.2.3 Prioritization of Contaminated Sites Needed

*We expected that Environment would develop a risk-based overall remediation strategy setting out which types of sites should be given priority for cleanup. It would include strategies to reduce risk of further contamination occurring and provide at-risk agencies with general timelines for completing site cleanup plans. Priority would be given to clean up sites classified as Class 1 or 2 because these sites either pose or are likely to pose concerns to public health and/or safety. At-risk agencies would develop cleanup plans consistent with the Environment's direction and the results of ESAs.*

As noted earlier, agencies had not obtained all of the Phase 2 ESAs for sites identified as needing one. Cleanup plans can only be developed once detailed site assessments (i.e., phase 2 ESAs) are complete.

We found that at-risk agencies made it a priority to complete Phase 2 ESAs and cleanup sites where government activities resulted in environmental damage to adjacent privately-owned sites. On occasion, at-risk agencies considered acquiring adjacent property as a part of its cleanup strategy where it had caused the contamination. Also, agencies cleaned up sites with spills as required.

Depending upon federal or provincial jurisdiction and the nature of contamination, the related environmental authority reviews and approves cleanup plans for sites with known contamination posing public health and/or safety concerns. In our survey, five at-risk agencies had indicated they had individual cleanup plans for sites that pose or may pose a threat to public health and safety. This was inconsistent with our findings that showed finalized cleanup plans did not yet exist at some of these agencies (Highways, Central Services). Rather, at March 2013, these ministries were seeking Phase 2 ESAs or analyzing the results of recently completed Phase 2 ESAs.

Also, as noted in **Figure 5**, cleanup plans were not in place for most of the 13 sites identified as class 1 or 2 at March 2013. All at-risk agencies indicated that they planned to develop cleanup plans based on recommendations from the Phase 2 ESAs.

Current provincial legislation requires at-risk agencies to develop cleanup plans for sites reported to Environment that pose existing or potential concerns to public health and safety. However, as noted in **Section 6.2.1**, current provincial legislation does not require submission of all site assessments; the proposed environmental laws will. If a site assessment discloses that the site is a contaminated site, the proposed environmental laws will also require the preparation and submission of a corrective action plan that is acceptable to Environment.

The provincial government does not use a coordinated approach to manage contaminated sites where it is responsible for cleanup. Currently Environment, in its regulatory role, handles reported contamination on Crown lands in the same manner as for that on privately-held land. As previously noted, in its role as regulator, it collects key information about sites for which the provincial government or its agencies are responsible for cleanup. Proposed environmental laws will expand the information that it collects and tracks.

As a part of this audit, we followed up the status of the following recommendation that we made in 2008.[21] As previously reported by our Office,[22] Environment does not assess the risks of identified sites or establish the priority for cleanup of contaminated sites. While, as noted in **Section 6.2.4**, Environment is developing a database to enable it to assess and prioritize sites, at March 2013, it had not done so. This may result in high-risk sites not being given sufficient attention and not being cleaned up within an appropriate timeframe. Delays in cleanup may cause unnecessary damage to public health and safety.

We recommended that the Ministry of Environment complete its risk assessments for identified contaminated sites and rank them in terms of priorities. (2008 Report – Volume 1; Public Accounts Committee agreement June 6, 2008)

**Status** – Partially Implemented[23]

## 6.2.4 Key Information on Contamination Not Tracked in Accessible Way

*We expected at-risk agencies to maintain reliable information about identified sites with suspected or known contamination (e.g., site location, site classification, risks, cost estimates, site monitoring activities, and cleanup plans). Also, at-risk agencies would base the method for maintaining information on the volume of sites and information expected by regulators (e.g., government agencies with a large number of sites would have a more formalized [e.g., electronic] tracking system).*

The Government does not have a formalized system to track key information about contaminated sites at individual agencies or at Environment. As previously noted, at-risk agencies did not track all key information regarding their contaminated sites and used manual files that resided in varying locations (e.g., related region or area of the agency where site was located).

As previously reported by our Office, Environment did not have an adequate system to track contaminated sites or to rank the priority of these sites. As a part of this audit, we followed up the status of the following recommendation that we made in 2008.[23]

We recommended that the Ministry of Environment establish an adequate system for tracking contaminated sites. (2008 Report – Volume 1; Public Accounts Committee agreement June 16, 2008)

**Status** – Partially Implemented

[21] *2008 Report – Volume 1* (Chapter 4 – Environment), p. 55.
[22] See *2008 Report – Volume 1* (Chapter 4 – Environment) for details about our audit of the Ministry of Environment's processes to regulate contaminated sites. In this Chapter, we made four recommendations related to the Environment's processes for assessing, monitoring, tracking, and reporting on the status of contaminated sites.
[23] *2008 Report – Volume 1* (Chapter 4 – Environment), p. 53.

At March 2013, Environment relied on its manual files to carry out its regulatory role.[24] As such, Environment did not readily know which sites with reported contaminants were the responsibility of the provincial government (as the polluter or having had accepted responsibility for cleanup).

At March 2013, Environment was in the process of developing a database to track contaminated sites called the Impacted Sites Information System (ISIS). ISIS will track such items as the condition of a contaminated site, the contaminants found at the site, their toxicity levels, health and human safety issues, and will identify risks that require remedial action. ISIS is expected to assist Environment in assessing and ranking risks of identified contaminated sites. Environment expects the bulk of the capabilities of ISIS to be available by mid-June 2013. This includes its ability to track the geographic location of the incidents and to provide future mapping/reporting capabilities. Environment indicated that it will consider the timing of implementing subsequent phases of the system in mid-June 2013.

Once operational, the provincial government could use this system to have Environment identify sites where the provincial government is responsible for cleanup of contamination and to help set priorities in managing and remediating those sites. ISIS may be able to provide Finance and government agencies with key information necessary to help quantify government liabilities for contaminated sites.

## 7.0 EXHIBITS

**Exhibit 7.1—Questions and Answers to Understand Environmental Laws**

| |
|---|
| **Who sets environmental standards?**<br><br>The Governments of Canada (Canada) and Saskatchewan share jurisdiction over environmental matters in Saskatchewan. Canada works with Saskatchewan to develop policies and programs, undertake research, and provide information on environmental issues of national and regional importance. The relationship is fostered through agreements, the Canadian Council of Ministers of the Environment (CCME), and joint work on specific issues such as water and environmental protection.[25]<br><br>The Government of Saskatchewan is responsible for natural resources and provincially-owned land. It shares the responsibility for the regulation of the uranium industry with the Canadian Nuclear Safety Commission (CNSC), a federal agency. In Saskatchewan, the Ministry of Environment (Environment) sets environmental standards pursuant to *The Environmental Management and Protection Act, 2002* (Act). This Act and related regulations set the environmental laws and standards for Saskatchewan. Under this Act, Environment is specifically responsible for controlling and directing how to manage contaminated sites. |
| **Who decides what a contaminant is?**<br><br>A contaminant is any physical, chemical, biological or radiological substance in air, soil, water or sediment that is foreign to or in excess of the natural environment that is causing or may cause an adverse effect.<br><br>Federal laws set what a contaminant is for areas subject to federal jurisdiction, such as oceans and fisheries, railways, inter-provincial transport, and grain elevators. Provincial laws define contaminants for areas subject to provincial jurisdiction, such as provincial lands and natural resources.[26] Where conflict between federal and provincial laws arises in relation to the same matter, federal law prevails; however, conflicts are rare.[27] |

[24] Ministry of Environment manual files include applications, drawings, consultant reports, work completed on site, and letters of acceptance/approval from Ministry of Environment noting whether remediation plans and work are acceptable.
[25] www.ec.gc.ca/default.asp?lang=En&n=BD3CE17D-1#govts (18 April 2013).
[26] *The Environmental Spill Control Regulations* provide guidance as to what substances cause adverse effects including the quantities of spills that are to be reported to the Ministry of Environment.
[27] www.envirolaw.com/quick-intro-canadian-environmental-law/ (19 April 2013).

**What is a contaminated site?**

The Act defines a contaminated site as a site that has contaminants at a level that may cause or has caused an impairment or damage to the environment and/or human health (i.e., quantity exceeds an environmental standard).[28] Environment can designate a site as contaminated.

**What is the duty to report?**

By law, every individual, company or government agency has a duty to report to the Minister of Environment and, if not the landowner, to the landowner any discharge into the environment that is causing or may cause an adverse effect on the environment. This includes reporting of suspected contamination, through spill or operations, when the suspected contamination is in an amount or concentration that may cause or is causing an adverse effect.

**When is an environmental site assessment required or used?**

An environmental site assessment (ESA) is a study of a property's past use, the environmental conditions at the site and adjoining sites, and the likely presence of contaminant(s). ESAs are used to identify the nature and degree of suspected or known contamination and are carried out voluntarily or as required by law.

The Canadian Standards Association (CSA) has standards for carrying out site assessments.[29] It has set out two phases which move from a preliminary (phase 1) to a detailed and in-depth (phase 2) assessment.

**When is cleanup (remediation) required by law?**

Depending on the contaminant involved, either the federal or the provincial Ministry of Environment or both can be involved in the assessment of the nature and degree of reported contamination (e.g., through reviews of environmental site assessments) and in decisions on when and how to clean up contamination (i.e., remediation process). Both can issue environmental protection orders. For example, the Federal Government may make environmental protection orders related to toxic substances (e.g., benzene[30]).

**Who pays for the costs of cleanup (remediation)?**

Federal and provincial environmental laws are based on the principle that the "polluter pays". For example, the Act requires the polluter that caused the contamination to take all reasonable measures to remedy the contamination and restore the environment to a condition satisfactory to Environment.[31] This includes paying for costs associated with cleanup (remediation).

### Exhibit 7.2—Phases of Environmental Site Assessments

| Phase | Description |
|---|---|
| Phase 1 | -A preliminary investigation conducted to reveal any potential significant environmental concerns<br>-Determines if there is sufficient risk to necessitate further assessment work<br>-Commonly includes procedures such as researching the site's history and past records, surface and perimeter inspection (e.g., soil samples), and on-site interviews |
| Phase 2 | -A detailed site investigation to confirm and quantify the contamination as identified in phase 1<br>-Commonly includes drilling holes to sample soil and ground water and detailed laboratory analysis |

Source: Phase 1 Environmental Site Assessment - CAN/CSA-Z768-01 and Phase 2 Environmental Site Assessment – CAN/CSA-Z769-00

[28] The *Environmental Management and Protection Act, 2002*, section 11.
[29] Phase 1 Environmental Site Assessment - CAN/CSA-Z768-01 and Phase 2 Environmental Site Assessment – CAN/CSA-Z769-00.
[30] Benzene is a natural constituent of crude oil.
[31] *The Environmental Management and* Protection *Act, 2002,* section 7.

### Exhibit 7.3—List of Government Agencies Surveyed with Respondents Denoted by (✓)

**Ministries:**
Advanced Education ✓
Agriculture
Central Services ✓
Economy ✓
Education
Environment ✓
Finance ✓
Government Relations
Health
Highways and Infrastructure ✓
Justice ✓
Labour Relations & Workplace Safety
Parks, Culture, Sport ✓
Social Services ✓
Office of the Executive Council ✓

**Other Crown Agencies:**
Saskatchewan Cancer Agency ✓
Saskatchewan Crop Insurance Corporation
Water Security Agency of Saskatchewan ✓
Workers' Compensation Board (Saskatchewan) ✓
Northern Municipal Trust Account
Saskatchewan Housing Corporation ✓
Saskatchewan Grain Car Corporation
Agricultural Credit Corporation of Saskatchewan ✓
Global Transportation Hub Authority
Prairie Agricultural Machinery Institute ✓
Saskatchewan Archives Board ✓
Saskatchewan Arts Board
Saskatchewan Centre of the Arts ✓
Saskatchewan Liquor and Gaming Authority ✓
Saskatchewan Institute of Applied Science and Technology ✓
North Sask. Laundry and Support Services Ltd. ✓
Saskatchewan Research Council ✓
Saskatchewan Western Development Museum

**School Divisions:**
Chinook #211 ✓
Christ the Teacher Roman Catholic #212
Conseil des écoles fransaskoises #310
Creighton SD #111 ✓
Englefeld Protestant Separate #132
Good Spirit #204 ✓
Holy Family Roman Catholic #140 ✓
Holy Trinity RC Separate #22 ✓
Horizon SD #205 ✓
Ile a la Crosse #112 ✓
Light of Christ Roman Catholic Separate #16 ✓
Living Sky #202 ✓
Lloydminster Roman Catholic Separate #89 ✓
Lloydminster Public #99
North East #200 ✓
Northern Lights #113
Northwest #203 ✓
Prairie South #210
Prairie Spirit #206 ✓
Prairie Valley #208 ✓
Prince Albert Roman Catholic Separate #6
Regina Roman Catholic Separate #81 ✓
Regina #4 ✓
Saskatchewan Rivers #119
Saskatoon #13
South East Cornerstone #209 ✓
St. Paul's Roman Catholic Separate #20
Sun West #207 ✓

**Regional Health Authorities:**
Keewatin Yatthé
Mamawetan Churchill River
Cypress
Five Hills ✓
Heartland ✓
Kelsey Trail ✓
PA Parkland
Prairie North ✓
Regina Qu'Appelle
Saskatoon
Sun Country
Sunrise

Source: Provincial Auditor of Saskatchewan Survey (March 2013)

### Exhibit 7.4—National Classification System for Determining Degree of Contamination

| Class | Description |
|---|---|
| Class 1 | An environmental site assessment has indicated that action is required to address existing concerns for public health and safety |
| Class 2 | An environmental site assessment has indicated that action is likely required to address existing concerns for public health |
| Class 3 | An assessment has indicated that the site is not a high concern but action may be required |
| Class N | An assessment has indicated that there is probably no significant environmental impact nor any human health threats, and there is likely no remedial action required |
| Class INS | An assessment has been performed but there is insufficient information to classify the site |

Source: National Classification System endorsed by Canadian Council of Ministers of Environment

**Exhibit 7.5—Provincial Auditor March 2013 Contaminated Sites Survey Questions**

| | Question | Response options |
|---|---|---|
| 1. | Please fill in accordingly before starting the survey<br>Name<br>Company<br>Email address<br>Phone number | |
| **PART I: Applicability** | | |
| 2. | Does your entity use, lease or own any land, buildings or sites that have been or may have been exposed to contaminants (e.g., exposure to hazardous waste, chemicals, dangerous goods, petroleum products)? | Yes / No |
| 3. | Does your entity provide any funding for remediation costs associated with contaminated sites not owned or operated by your organization? | Yes / No |
| 4. | Does your entity have a negligible risk of being responsible for environmental remediation costs? | Yes / No |
| 5. | If the answers to all of these questions are "no", STOP completing this survey. Otherwise please continue. | Stop / Continue |
| **PART II: Identification of Sites** | | |
| 6. | Does your entity own, operate, or have responsibility for funding any remediation costs associated with any contaminated sites? | Yes / No / Do not know |
| 7. | Which of the following best describes the listing of all your entity's sites that have been exposed to contaminants: | -Do not have a list<br>-Have a complete list<br>-Have a partial list that will be Completed before March 31 2013<br>-Have a partial list<br>-Unsure |
| 8. | How many sites has your entity identified as contaminated or potentially contaminated? | -None<br>-Between 1 to 3<br>-Between 4 to 10<br>-More than 10 |
| 9. | Has your entity assigned specific personnel to be responsible for potential and known contaminated sites? (e.g., identifying, tracking, coordinating remediation, etc.) | Yes / No/ Do not know |
| 10. | Does your entity have documented policies and procedures in place to guide the identification of sites that may have been exposed to contaminants? | Yes / No / Do not know |
| 11. | Has your entity ever received any central guidance in terms of identifying, managing, or reporting information on contaminated sites? | Yes / No |
| 12. | If Yes, please list who provided the guidance. | Provided by: |
| 13. | Does your entity have documented policies and procedures in place to manage sites that have been exposed to contaminants? | Yes / No / Do not know |
| 14. | Does your entity actively consider the risk of contamination on property you use, lease, or own? | Yes / No / Do not know |
| 15. | Are high-risk sites identified for early attention? | Yes / No / Do not know |
| 16. | Please provide any comments you may have relating to this part of the survey. | |
| **PART III: Site Assessments** | | |
| 17. | Has your entity performed assessments on all of its contaminated or potentially contaminated sites, land, and buildings? | -All have been assessed (CONTINUE)<br>-Some have been assessed (SKIP TO Question 14)<br>-None have been assessed (SKIP TO Question 16)<br>-Unsure (SKIP TO Question 16) |

| | Question | Response options |
|---|---|---|
| 18. | For each site, indicate which years the most recent assessments were performed and by whom. | |
| 19. | What is the estimated percentage of site assessments completed, not complete, or unknown as compared to the total number of known or potential contaminated sites? | __% completed<br>__% not completed<br>__Unknown |
| 20. | For sites with a completed environmental site assessment, who performed individual site assessments? | (Check all that apply)<br>-Qualified professional environmental consultant<br>-Internal professional or qualified staff<br>-Other internal staff |
| 21. | Please indicate why you have not assessed your sites, land, or buildings for known or potential contaminated sites. | |
| 22. | How many sites do you have where an environmental site assessment has indicated that action is required to address existing concerns for public health and safety? | __# sites |
| 23. | How many sites do you have where an environmental site assessment has indicated that action is likely required because there is a high risk of adverse off-site impacts, although threat to human health and the environment is generally not imminent? | __# sites |
| 24. | How many sites do you have where an assessment has indicated that the site is not a high concern but action may be required? | __# sites |
| 25. | How many sites do you have where an assessment has indicated that the site poses no significant risks and likely no action is required? | __# sites |
| 26. | How many sites do you have where an assessment has been performed but there is insufficient information to classify the site? | __# sites |
| 27. | Please provide any comments you may have relating to this part of the survey. | |
| **PART IV: Remediation Activities and Plans** | | |
| 28. | Does your entity have a documented overall remediation strategy that considers all of your site assessments? | Yes / No / Not applicable |
| 29. | Has your entity developed individual remediation plans for those sites that pose or may pose either a threat to human health or safety? | Yes / No |
| 30. | Are there any contaminated or potentially contaminated sites that have undergone remediation in the past 12 months? | Yes- ____ # of sites<br>No |
| 31. | How many contaminated or potentially contaminated sites does your entity plan to remediate in the future? | Yes- ____ # of sites<br>Not applicable |
| 32. | Of the sites you plan to remediate in the future, how many currently have remediation plans in place? | Yes- ____ # of sites<br>None<br>Not applicable |
| 33. | What factors do you consider when prioritizing which sites to remediate first? Please list your top 5 factors considered. | |
| 34. | Please provide any comments you may have relating to this part of the survey. | |
| **PART V: Reporting Liabilities for Contaminated Sites and Other Key Information** | | |
| 35. | Does your entity use environmental site assessments and remediation plans as the basis for determining its estimated liability for contaminated sites? | Yes / No / Plans to do so upon adoption of PS3260 (if PSAB followed) |
| 36. | Please describe how you estimate the liability for contaminated sites (if applicable) and who is involved. | |

| | Question | Response options |
|---|---|---|
| 37. | Does your entity have a documented environmental liabilities accounting policy?<br>If so, please include the policy. | Yes (f yes, please include the policy in the text box at the end of Part V)/ No/ Plan to do so upon adoption of PS3260 |
| 38. | Has your entity recorded all of its liabilities for contaminated sites in its financial records? | Yes / No / Most but not all/ Plan to record upon adoption of PS3260 |
| 39. | How do you reflect your liability for contaminated sites in your most recent financial statements? | Recorded as a liability/ Note disclosure only/ Combination liability and disclosure/ Expense remediation costs as incurred |
| 40. | Do you plan to change how you report the liability for contaminated sites in the future? (If no, continue to next question) | If yes:<br>-Record a liability<br>-Note disclosure only<br>-Combination liability and Disclosure<br>-Expense remediation costs as Incurred |
| 41. | When your entity cannot reasonably estimate its liability of contaminated sites, has your entity disclosed its existence in its financial statements or in schedules prepared for the Ministry of Finance (for GRF/SFS)? | Yes / No |
| 42. | Describe why it was concluded that a reasonable estimate could not be made. | |
| 43. | We may contact someone at your entity to seek further information about your response. Please identify who you would prefer we contact. | |
| 44. | Please provide any comments you may have relating to this part of the survey. | |
| **Part VI: General Questions** | | |
| 45. | Does your entity report sites exposed to contaminates to the Ministry of Environment (i.e., the regulator) as soon as they are identified? | Yes / No |
| 46. | Does your entity regularly submit progress reports to the Ministry of Environment regarding management of potential or known contaminated sites? | Yes / No / Do not know<br>If yes, how often: _____ |
| 47. | Are estimates of environmental costs and liabilities compared to actual costs for similar sites annually? | Yes / No / Do not know |
| 48. | Are all sites and cost estimates periodically re-evaluated? | Yes / No<br>If yes, how often: _____ |
| 49. | Does your entity have processes to systematically track information on potential or known contaminated sites using an electronic information system (e.g., database, excel spreadsheet)? | Yes / No |
| 50. | Is the system is updated as changes occur to the sites? | Yes / No / Do not know |
| 51. | Does the information system include classifications of the known and potential contamination? | Yes / No / Do not know |
| 52. | Does the information system include remediation plans? | Yes / No / Do not know |
| 53. | Does the information system include cost estimates of remediation plans? | Yes / No / Do not know |
| 54. | Does the information system include information on remediation related activities? | Yes / No / Do not know |
| 55. | Does the information system include the recording of site monitoring activities? | Yes / No / Do not know |
| 56. | At the entities last year end, approximately how much did the entity spend on site assessments, remediation plans, and actual remediation work? | $_____ |

| | Question | Response options |
|---|---|---|
| 57. | In the current fiscal year, approximately how much does the entity plan to spend on site assessments, remediation plans, and actual remediation work? | $_____ |
| 58. | To what extent is your entity satisfied with the guidance it has received from the Ministry of Environment to properly assess or remediate current potential or known contaminated sites? | -Not satisfied<br>-Somewhat dissatisfied<br>-Somewhat satisfied<br>-Very satisfied<br>-Not applicable |
| 59. | What information does your entity report publicly other than financial information relating to contaminated sites (e.g., environmental, social, governance measures). | -None<br>-Some<br>-Significant other info |
| 60. | Please provide any comments you may have relating to this part of the survey. | |

Source: Adapted from Office of the Auditor General of Manitoba 2007 Survey of Contaminated Sites and Landfills

## 8.0 GLOSSARY

**Cleanup (Remediation)**—Cleanup is the improvement of a contaminated site to prevent, minimize or mitigate damage to human health or the environment. Remediation involves the development and application of a planned approach that monitors, removes, destroys, contains, or otherwise reduces availability of contaminants to receptors of concern. Examples of active remediation include removal and disposal of contamination in appropriate landfill, use of pumping and treatment systems to address groundwater contamination, and bioremediation (i.e., introduction of nutrients and microorganisms to break down the contamination).

**Cleanup Plan**—A detailed written proposal for site remedial work based on a documented risk assessment. The plan typically describes various remediation alternatives under consideration and identifies the preferred option to reduce the risks to public health, safety, and the environment. The chosen remediation method is usually designed to address the unique conditions at the site where it will be implemented. A cleanup plan may include decisions to manage the risks through approaches such as restricting access to the site, changing the usage of the land, isolating the contaminants, etc.

**Contaminant**—Any physical, chemical, biological, or radiological substance in air, soil, water, or sediment that is foreign to or in excess of the natural environment that is causing or may cause an adverse effect.

**Contamination**—The introduction of a contaminant(s) into air, soil, water, or sediment.

**Contaminated Site**—An area of land or water that contains a contaminant in a concentration that exceeds the maximum acceptable amounts under an environmental standard.

**Corrective Action Plan**—A plan that details the methods employed to prevent, minimize, mitigate, remedy or reclaim impairment of or damage to the environment or harm to human health, caused by any chemical, physical or biological alteration or any combination of any chemical, physical or biological alteration.

**Environment**—All or any part or combination of the air, soil, water or sediment, and includes plant and animal life.

**Environmental Assessment**—A comprehensive report detailing the nature, degree of severity, and extent of site contamination; report is prepared as a result of an environmental site assessment.

**Environmental Site Assessment (ESA)**—A study of a property's past use, the environmental conditions at the site and adjoining sites, and the likely presence of contaminant(s).

**Site Assessment**—Any activity to determine the cause, nature, or extent of a potential or existing adverse effect that satisfies any requirements set out in environmental laws.

## 9.0 SELECTED REFERENCES

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