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Audit of Contaminated and Unexploded Explosive Ordnance Legacy Site Liabilities



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Table of Contents

Acronyms and Abbreviations	ii
Glossary of Terms.....	iii
Results in Brief	iv
1.0 Introduction	1
1.1 Background	1
1.2 Rationale for Audit	3
1.3 Objective.....	3
1.4 Scope	3
1.5 Methodology	3
1.6 Audit Criteria	4
1.7 Statement of Conformance.....	4
2.0 Findings and Recommendations	5
2.1 Contaminated Sites	5
2.2 UXO Legacy Sites	10
2.3 Financial Statement Notes.....	14
3.0 General Conclusion	17
Annex A—Management Action Plan.....	A-1
Annex B—Audit Criteria	B-1
Annex C—CCME’s National Classification System for Contaminated Sites	C-1
Annex D—Contaminated and UXO Legacy Site Reported Liabilities	D-1

Acronyms and Abbreviations

ADM(Fin)/CFO	Assistant Deputy Minister (Finance)/Chief Financial Officer
ADM(IE)	Assistant Deputy Minister (Infrastructure and Environment)
ADM(RS)	Assistant Deputy Minister (Review Services)
CCME	Canadian Council of Ministers of the Environment
CRS	Chief Review Services
DCLSPD	Director Contaminated and Legacy Sites Project Delivery
DND	Department of National Defence
DRMIS	Defence Resource Management Information System
FCSAP	Federal Contaminated Sites Action Plan
FY	Fiscal Year
OPI	Office of Primary Interest
UXO	Unexploded Explosive Ordnance

Glossary of Terms

Contaminant: Any physical, chemical, biological, or radiological substance in air, soil, or water that has an adverse effect. Any chemical substance whose concentration exceeds background concentrations or that is not naturally occurring in the environment.

Contaminated Site: A site at which substances occur at concentrations: (1) above background levels and pose or are likely to pose an immediate or long-term hazard to human health or the environment; or (2) exceeding levels specified in policies and regulations.

Contamination: The introduction into soil, air, or water of a chemical, organic or radioactive material, or live organism that will adversely affect the quality of that medium.

Remediation: 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 removes, destroys, contains, or otherwise reduces the availability of contaminants to areas of concern.

Risk Assessment: The scientific examination of the nature and magnitude of risk to define the effects on both humans and the environment.

Risk Management: The selection and implementation of a risk control strategy followed by monitoring and evaluation of the effectiveness of that strategy. Risk management may include direct remedial actions or other strategies that reduce the probability, intensity, frequency, or duration of the exposure to contamination. Remedial actions may include institutional controls such as zoning designations, land use restrictions, or orders. The decision to select a particular strategy may involve considering the information obtained from a risk assessment. Implementation typically involves a commitment of resources and communication with affected parties.

Site Management/Remediation Strategy: The implementation of a strategy or measures to control or reduce the level of risk estimated by the risk assessment. (Note: Within this report the term “remediation strategies” is also used in reference to the improvement of a UXO legacy site to prevent, minimize, or mitigate damage to human health or the environment).

UXO: Unexploded explosive ordnance is military ordnance (bombs, grenades, etc.) that was dropped, fired, or otherwise used but that failed to function as designed.

UXO Legacy Site: UXO legacy sites can exist on property that was once owned, leased, or used by the Department of National Defence (DND) but no longer resides within DND’s inventory and for which there may exist a UXO risk associated with past departmental activities.

Results in Brief

The need for environmental and real property stewardship has been highlighted in Treasury Board Secretariat and DND policies since the 1990s.¹ Given the nature and extent of potential adverse effects to human health and safety and to the environment associated with contaminated and UXO legacy sites, DND has been making efforts to minimize impacts related to past and current activities. This audit report deals with the following two distinct activities that the Department manages using separate strategies:

1. Contaminated sites: property where contaminants exceed specified levels and pose or are likely to pose an immediate or long-term hazard to human health or the environment; and
2. UXO Legacy sites: property that was once owned, leased, or used by DND but no longer resides within DND's inventory and for which there may exist a UXO risk associated with past departmental activities. UXO legacy sites on their own are not considered contaminated sites.

Overall Assessment

The Department is taking action to address health and safety concerns at high priority contaminated sites and is improving supporting documentation retained for liability estimates. However, departmental policy and processes for contaminated and UXO legacy sites need improvement to ensure that authorities and responsibilities are clearly defined, and that there is an approved strategy for the management of UXO legacy sites and lower priority contaminated sites.

Given the severity of potential adverse impacts on human health and safety and on the environment, as well as the seriousness of previous audit findings, an audit of contaminated and UXO legacy sites was included in the Chief Review Service (CRS)² Risk-based Internal Audit Plan for fiscal years (FY) 2013/14 to 2015/16.

Organizational Structure

Assistant Deputy Minister (Infrastructure and Environment) (ADM(IE)) is responsible for both the contaminated and UXO legacy site management programs. The recent ADM(IE) organization restructuring created the Director Contaminated and Legacy Sites Project Delivery (DCLSPD) organization to provide advice for contaminated and UXO legacy site management. While DCLSPD is a new organization, contaminated site and UXO legacy site management have always been part of the ADM(IE) portfolio.

¹ In assessing and managing contaminated and UXO legacy sites, DND follows such policies as A Federal Approach to Contaminated Sites, Treasury Board policies such as Remediation Liabilities Related to Contaminated Sites, Future Asset Restoration Liability, and Reporting Standard on Real Property, the Public Sector Accounting Bureau's Section PS 3260 – Liability for Contaminated Sites, and the *Explosives Act*.

² CRS is the former designation of Assistant Deputy Minister (Review Services) (ADM(RS)). The new designation came into effect of May 13, 2015.

Contaminated Sites

A 15-year Federal Contaminated Sites Action Plan (FCSAP) worth \$3.5 billion was established in 2005. This plan, in addition to integrated policies related to the management of contaminated sites, was implemented to assist departments in addressing contaminated sites posing the highest risks to human health and the environment. As of FY 2013/14, the Department has expended over \$466 million in FCSAP funding for contaminated site assessment, remediation, and monitoring.³

The Department has identified 863 active and 196 suspected contaminated sites (1059 in total) for which it has taken responsibility. Based on current and planned remediation activities, a liability of \$462 million has been reported for 242 of the active sites. While FCSAP funding has been successful in addressing many of the highest risk sites, the Department still has to address over 200 medium and low-risk active sites and an additional 196 sites that have not yet been assessed.⁴ Funding may be required in the future to perform remediation activities at these sites.

In 2009, a CRS audit of the contaminated sites liability identified issues regarding the accuracy and completeness of reported information. While recommendations regarding liability estimation techniques and supporting documentation were found to be satisfactorily addressed during the current audit, concerns were still observed with respect to the level of financial statement disclosure.

UXO Legacy Sites

UXO legacy sites are an issue unique to DND and do not meet the FCSAP definition of a contaminated site. As a result, the Department cannot receive FCSAP funding to address UXO legacy sites. Instead, departmental funds must be used for all site management activities. In FY 2012/13, the UXO legacy site program funding allocation was \$12 million. Considering the number of sites, the funding required to implement risk mitigation plans exceeds the program's current annual budget allocation.

The Department currently has 865 suspected UXO legacy sites. Ongoing assessment activities have confirmed a UXO presence at 63 sites. A liability of \$2 million was reported in FY 2013/14 for planned mitigation activities at 6 of the 63 sites. For the remaining 57 sites, if it is determined that future action is required, a remediation and risk mitigation plan containing cost estimates will be developed. At that time, in accordance with existing accounting policies, a liability will be created and reported in the Department's annual financial statements.

There are no federal or departmental assessment, prioritization, or management regulations in place to facilitate the management of UXO legacy sites. While UXOs that pose immediate threats are managed by the Department's Explosive Ordnance Disposal team, the Department

³ Values as reported in the FCSAP Annual Reports, Treasury Board Secretariat Horizontal Initiatives Annual Reports, and Report for Canada's Economic Action Plan.

⁴ The remaining active sites have been assessed as having a high probability that no remedial action will be required, or there is not enough information to classify the site.

must still manage its legacy sites where past activities could result in the future discovery of UXOs.

An examination of UXO legacy site liabilities was also performed in 2009. As a result of a lack of defined processes and documentation to substantiate reported values, the reported liability was found to be unauditably. This is no longer the case as FY 2012/13 reported liabilities were better supported. Formalized site management processes, however, could not be provided.

Findings and Recommendations

Management Framework

Responsibilities, accountabilities, and authorities regarding the development of contaminated and UXO legacy site management strategies and contaminated/UXO legacy site liabilities have been established in departmental guidance documents. However, these documents have not been approved, communicated, or adopted as standard operating procedures. As a result, risk, control, and financial activities related to contaminated and UXO legacy sites have been inconsistently performed.

Currently, there is no communication of site statistics and program summary information to senior management so as to provide a comprehensive understanding of the Department's contaminated and UXO legacy site portfolio. Therefore, it is difficult for senior management to assess whether site management risk decisions are made in a consistent manner and at an acceptable level.

It is recommended that ADM(IE) enhance existing contaminated and UXO legacy site management policy so as to ensure the establishment of clear authorities, responsibilities, and accountabilities related to contaminated and UXO legacy site management decisions and data quality controls and to ensure the communication of results to senior decision makers.

Site Management Processes

Contaminated sites that pose the highest risk to human health and the environment receive funding and are mitigated in accordance with defined site management and remediation processes. The remediation of identified medium and low-risk sites, however, is not consistently actioned as mitigation strategies depend upon factors such as funding, resource availability, timing, and opportunity.

A standard that is tailored to managing the unique aspects of UXO legacy sites has not been formally established. Remediation and risk management activities for these sites are therefore based on a combination of the site manager's professional judgement and knowledge of explosive/ammunition standards. As a result, DND's responsibilities with respect to UXO legacy sites are not effectively communicated or fully understood. The lack of UXO legacy site management standards, the lack of clear direction related to medium and low-risk contaminated sites, and the need for future resource allocations could result in potential health and safety, financial, and reputational risks to the Department.

It is recommended that ADM(IE) complete current initiatives to establish standards and strategies that can be consistently applied when making remediation and risk management decisions related to UXO legacy sites and Class 2 (medium risk) and Class 3 (low risk) contaminated sites (refer to [Annex C](#) for a detailed description of the contaminated site classification system).

It is also recommended that, given the inherent health and safety risks related to UXO legacy sites and Class 2 and 3 contaminated sites, ADM(IE) explore new program resourcing options to accelerate site mitigation activities.

Financial Statement Notes

The costs and liabilities associated with contaminated and UXO legacy site remediation activities are recorded in the Department's annual financial statements. Sites that reported a liability were found to have the appropriate supporting documentation. The notes to the departmental financial statements, however, need to provide more information to users so they can form a comprehensive and clear understanding of the potential liabilities that may occur from sites that do not have a remediation or risk management plan in place.

It is recommended that Assistant Deputy Minister (Finance)/Chief Financial Officer (ADM(Fin)/CFO) work with ADM(IE) to develop additional disclosures that provide a more comprehensive representation of the Department's potential contaminated and UXO legacy site financial liability.

Note: Please refer to [Annex A—Management Action Plan](#) for the management response to the ADM(RS) recommendations.

1.0 Introduction

1.1 Background

As a result of the potential adverse health, safety, and environmental impacts associated with some DND activities, it is important that the Department exercise a high level of environmental stewardship and demonstrate due diligence in its decision making. This includes ensuring that policies and processes are in place to manage and financially account for its contaminated and UXO legacy sites.

1.1.1 Organizational Structure

In 2013, ADM(IE) was delegated the full authority, responsibility, and accountability for the centralized management of real property within DND. Although this was a significant change to real property management in the Department, the responsibility for contaminated and UXO legacy sites has always been a part of the ADM(IE) portfolio. Director General Infrastructure and Environment Engineering managed large-scale contaminated site projects, and Director General Portfolio Requirements managed UXO legacy site programs. Within the newly restructured ADM(IE) group, the Director General of Infrastructure and Environment Engineering Services has established the DCLSPD organization to develop standards and guides and to provide advice for both contaminated and UXO legacy site project management processes and procedures.

1.1.2 Contaminated Sites

Definition. A site is contaminated once it has been determined that a potential contaminant exceeds a prescribed standard concentration level. Federal contaminated sites are located on land owned or leased by the federal government or on land where the federal government has accepted responsibility for the contamination. The size and scope of federal contaminated sites vary greatly.⁵

Remediation Strategies. Addressing contaminated sites does not necessarily involve clean up, but it generally ensures that risks at sites are managed to safeguard human health and the environment.⁶ Depending on the risks and specific site characteristics, various methods ranging from complete removal of the contaminant to restricting access to the site can be used to address contamination.⁷ The projected costs associated with implementing contaminated site remediation plans represent the Department's contaminated site remediation liability.

⁵ Federal Contaminated Sites Portal – Managing the Sites. <http://www.federalcontaminatedsites.gc.ca>. Last consulted on October 1, 2015.

⁶ The July 2014 CRS Evaluation of Environmental Protection and Stewardship concluded that DND and the Canadian Armed Forces have demonstrated effective remediation of contaminated sites.

⁷ Federal Contaminated Sites Portal – Managing the Sites.

Management Approach. The Department follows the common federal approach⁸ developed by the Contaminated Site Management Working Group to manage contaminated sites under federal custody. Additionally, the Department utilizes the Canadian Council of Ministers of the Environment's (CCME) National Classification System for Contaminated Sites to screen and prioritize sites based on the level of risk and action (e.g., characterization, risk assessment, and remediation) required to protect human health and the environment as outlined at Annex C.

Funding. In 2005, the federal government established the FCSAP, a \$3.5 billion, 15-year cost sharing program to assist federal departments in reducing environmental and human health risks from known federal contaminated sites. In Phase 1 (2005-2011), the Department made significant progress in assessing and remediating sites. Funding provided in the second (2011-2016) and third phases (2016-2020)⁹ of the program aims to remediate the highest priority sites identified in Phase 1.¹⁰ Since the plan's inception, the Department has spent \$466 million of FCSAP funding on contaminated site assessment, remediation, and monitoring.

1.1.3 UXO Legacy Sites

Definition. UXO legacy sites are an environmental issue that is unique to DND. The Department manages these sites under its established UXO legacy sites program. This program was designed to ensure that DND exercises due diligence and applies reasonable measures for mitigating the UXO risks related to former Defence sites where military ordnance (bombs, grenades, etc.) were dropped, fired, or otherwise used but that failed to function as designed. Clearance of UXO sites that is conducted as part of active Range and Training Area maintenance to ensure the continued operational usefulness is not a part of the Legacy Sites Program and is not included in the liability.

Remediation Strategies. UXO legacy site clearance and risk management decisions are based on the current or intended use of the affected land. UXO risk mitigation strategies range from the removal or detonation of the UXO to the installation of fences and signs warning of the dangers and/or providing public information sessions. The costs associated with risk reduction activities are also recorded as a liability if they are included in the implementation of UXO legacy site risk management plan.¹¹

Management Approach. UXO legacy site risk analysis follows a process developed by DND that classifies sites as high, medium, or low risk. Unlike the case of contaminated sites, there is no nationally accepted classification system for UXO legacy sites that is based on defined levels of measurable contamination. As a result, UXO legacy site project managers must rely on their professional judgement and knowledge to categorize sites when performing assessment activities.

⁸ A horizontal program currently involving 16 custodian federal departments, agencies, and consolidated crown corporations, including DND and the Canadian Armed Forces. Custodians work closely with consultants, contractors, and trades people in the remediation and risk management of contaminated sites.

⁹ The 2015 Federal Budget's Economic Action Plan 2015 announced funding for the FSCAP program through to FY 2020.

¹⁰ Phase 2 FCSAP eligible sites must be Class 1 or Class 2 with FCSAP remediation/risk management expenditures that occurred before April 1, 2011.

¹¹ As detailed in Annex A of Account Regulation 7000-1 Direction on Estimating UXO Liabilities March 2013.

Funding. UXOs are not considered contaminants and therefore UXO legacy site management activities are not covered by the FCSAP. Thus, funding for this program is provided through the regular departmental budget allocation process. In FY 2012/13 the Department's UXO legacy site budget, which is administered by ADM(IE), was approximately \$12 million.

1.1.4 Liability Reporting

As depicted in [Annex D](#), over the past two years, the contaminated site remediation liability has increased from \$407 million to \$462.4 million. While annual expenditures have remained fairly consistent, there has been a slight increase in the liability due to adjustments in estimated remediation costs and the identification of new sites. The UXO legacy site future asset restoration liability has decreased from \$3 million in FY 2012/13 to \$2 million in FY 2013/14 due to FY 2012/13 expenditures.

1.2 Rationale for Audit

The Audit of Contaminated and UXO Legacy Site Liabilities was included in the CRS Risk-based Internal Audit Plan for FY 2013/14 to 2015/16 as a result of a 2009 CRS audit of the same subject area. The 2009 audit identified issues regarding the accuracy and completeness of information reported in the departmental financial statements. Given the severity of potential adverse impacts associated with contaminated and UXO legacy sites, the current audit also considered the impact of departmental site management strategies on stakeholders' health and safety.

1.3 Objective

The audit objective was to determine whether departmental policies and processes facilitate the implementation of site management strategies that take into account health and safety concerns and the development of accurate and complete contaminated site and UXO legacy site liabilities.

1.4 Scope

- The scope of the audit included the methods used to develop the FY 2012/13 contaminated and UXO legacy site liability estimates and the appropriateness of the supporting documentation. FY 2013/14 contaminated and UXO legacy site liability estimates were not established until after the planning phase of the audit was complete.
- FY 2013/14 supporting documentation, liability estimation processes, and management strategies were examined when FY 2012/13 information was not available.
- The audit scope did not include an assessment of engineering methods or technical decisions.

1.5 Methodology

The audit results are based on the following:

- interviews with project managers and environmental officers along with other key personnel within ADM(IE), DND, and other government departments;
- review of key DND, Treasury Board, and Public Sector Accounting Board guidance, policies, directives, and relevant benchmarking information;
- review and examination of supporting documentation for a sample of site liabilities, as follows:
 - 42 contaminated sites at three locations – representing \$112.2 million in accrued liability and \$149.3 million in contingent liability in FY 2012/13, and
 - 15 UXO legacy sites, representing all 8 sites with a reported liability of \$3 million in FY 2012/13;
- review of FY 2013/14 DND's Consolidated Departmental Financial Statements;
- examination and analysis of the contaminated and UXO legacy site data from the Defence Resource Management Information System (DRMIS) contaminated site and UXO legacy site module; and
- visits to two environmental offices (Esquimalt and Trenton).

1.6 Audit Criteria

The audit criteria can be found at [Annex B](#).

1.7 Statement of Conformance

The audit findings and conclusions contained in this report are based on sufficient and appropriate audit evidence gathered in accordance with procedures that meet the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*. The audit thus conforms to the Internal Auditing Standards for the Government of Canada as supported by the results of the quality assurance and improvement program. The opinions expressed in this report are based on conditions as they existed at the time of the audit and apply only to the entity examined.

2.0 Findings and Recommendations

2.1 Contaminated Sites

2.1.1 Management Framework

Responsibilities, authorities, accountabilities, and corresponding procedures related to contaminated site management decisions, communication of site information to senior decision makers, and liability data quality control are not clearly established in departmental policy.

Site Management Decisions. Contaminated site management processes are outlined in the DND course, *Managing Contaminated Sites, UXO Legacy Sites and Solid Waste Landfills*.¹² The processes require conducting an evaluation and/or assessment of the site, developing an option analysis, implementing a remediation and/or risk management strategy, and then monitoring the site.

The decisions made during each of these stages should be made in a consistent manner that ensures an appropriate level of risk acceptance, as these decisions impact the Department's contaminated site health and safety risk exposure, priorities for remediation, and financial and future contractual obligations. Remediation efforts on major sites include the following:

- Containment: barriers are constructed to prevent off-site migration of impacted groundwater.
- Excavation: impacted soils are excavated and disposed of at a landfill licensed to accept contaminated material (usually in conjunction with additional soil sampling to confirm removal of contaminants).
- Groundwater treatment: a temporary treatment system is used or contaminants are removed using a vacuum truck and disposed off-site.
- Soil treatment: the contaminated material is mixed with fertilizers, mechanical aeration is done periodically, as well as sampling to monitor the treatment progress.
- Isolation and encapsulation: the contaminated area is capped with an impermeable cover to prevent infiltration.

Currently, there is no formally approved direction regarding decision-making authority and oversight responsibilities related to the management of the Department's contaminated sites. As a result, there was inconsistent supporting evidence to demonstrate that formal departmental review, challenge, and approval of key site management decisions and activities had been performed. ADM(IE) and base/wing-level staff stated that there is a lack of formally approved direction indicating who has the authority to make site management decisions. Although accountability and authority activities documented in the DND course indicate that the contaminated site manager selects the remediation and/or risk management strategy, this document is not formally approved and was not used at the sites visited.

¹² The course is designed to provide the Defence Environment community with an overall understanding of how to effectively manage, document, and report on contaminated sites, UXO legacy sites, and solid waste landfills using DRMIS in accordance with departmental requirements and federal legislation.

Many of the higher-risk Class 1 remediation projects are considered major capital projects and are managed centrally by ADM(IE) staff. Once projects reach the stage at which they are considered major capital projects, they receive increased levels of oversight through compliance with validation processes established in the Department's Project Approval Directive.¹³ For less complex projects managed at the base and wing level, however, there was little evidence to demonstrate that the decisions made had been reviewed to ensure the appropriate level of risk acceptance had been assumed and approved.

Evidence of formal departmental staff approval, review, and sign-off for key contaminated site management activities was not observed for over 90 percent of the sample sites reviewed. Key activities in the contaminated site management process, such as review of site priority scoring, consideration of remediation or risk management options, and selection of a site remediation strategy, were not signed off by DND staff. Additionally, justification of the selected strategy was not maintained on file. Key decisions were often made by the local DND environmental office with input from contractors, usually Defence Construction Canada or Public Works and Government Services Canada.

Communication to Senior Management. There is no departmental direction related to the communication of contaminated site information to senior management. No standard reporting of risk and financial information related to the Department's contaminated site inventory takes place. The absence of such reports leaves senior managers without a complete representation and understanding of potential future financial and health and safety risks that the Department may face.

The contaminated site module within DRMIS contains risk-related information, such as site class, priority level, assessment status, and the current site management step¹⁴ that could be used to provide key information related to the Department's contaminated sites portfolio. Standardized reports with this information could be generated and would serve as an indicator of potential health, safety, and financial risks.¹⁵

Liability Data Quality Control. Director Infrastructure and Environment Comptrollership issued year-end instructions that require senior managers to attest that their DRMIS records related to contaminated sites are reasonable and complete. Senior managers may elect to sign the attestation on behalf of their organization or delegate the responsibility to lower-level management that would attest to their respective unit's contaminated sites portfolio. The attested

¹³ Major capital projects are generally greater than \$5 million or select projects greater than \$1 million and require a corporate submission to the Programme Management Board for endorsement.

¹⁴ In 1999, the Contaminated Site Management Working Group developed a 10-step process for addressing contaminated sites. This 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.

¹⁵ A report of contaminated sites with no reported financial liability by Class 1, 2, or 3 would make users aware of the extent and costs associated with sites yet to be assessed. In FY 2012/13, 228 of 401 Class 1, 2, and 3 sites did not have a reported liability and thus no documented determination of the potential risk exposure (data obtained from the DRMIS database).

DRMIS values serve as the remediation liability reported in the Department's financial statements.

The audit did not observe any evidence of a formal challenge process by environmental officers and/or ADM(IE) staff to ensure that sampled organizations' reported liability amounts were reasonable. The organizations did not perform consistent and comprehensive reviews of reported information.

ADM(IE) staff could not provide supporting documentation, checklists, or other validation tools demonstrating that a detailed review had been performed. As a result, ADM(IE) reviews were often based on its staff's professional experience and general knowledge of site activities and were limited to cursory assessments. Site managers at both the organizational headquarters and local levels, however, are becoming more aware of the financial reporting requirements and have begun to maintain individual spreadsheets to record financial adjustments. ADM(IE) staff did not complete formal validation activities except for major capital projects. In these cases, the project manager followed a detailed validation process for the sites as described in the Project Approval Directive.

Good Practice

As local staff and senior management became more aware of reporting requirements and more familiar with DRMIS, more oversight occurred. Detailed spreadsheets were developed and maintained to track adjustments to site liability data.

ADM(RS) Recommendation

1. It is recommended that ADM(IE) enhance existing contaminated site management policy so as to ensure the establishment of clear authorities, responsibilities, and accountabilities related to contaminated site management decisions and data quality controls and to ensure the communication of results to senior decision makers.

Key considerations for Management Action Plan development should include the following:

- confirming that proper responsibilities and authorities have been observed and that identified risks have been mitigated and accepted. Processes and guidance should ensure that appropriate management challenge and formal approval controls are established for key activities, management decisions, and financial reporting; and
- improving communication by providing senior management with ongoing and frequent updates regarding the status of contaminated sites, including site classification, progress and prioritization, financial and health risks, and remediation and risk management decisions.

OPI: ADM(IE)

2.1.2 Contaminated Site Management Processes

Departmental processes and current funding allocations do not facilitate the development of consistent and clearly defined contaminated site management strategies and risk acceptance practices related to Class 2 and 3 contaminated sites (medium and low priority).

Departmental Processes. The accounting for remediation liabilities related to contaminated sites is governed by the accounting policies of the Government of Canada, which are based on the accounting standards set by the Public Sector Accounting Board. The Board's section 3200 criteria for recognizing a financial liability requires that a contaminated site liability be established when conditions such as the following exist:

- contamination occurs;
- there is a federal obligation or likely obligation to incur remediation costs;
- it is expected that future economic benefits will be given up; and
- a reasonable estimate can be made of the amount involved.

Confirmation of contamination is determined using the assessment processes detailed in A Federal Approach to Contaminated Sites, a guidance document issued by the interdepartmental Contaminated Site Management Working Group, and categorized using the CCME's National Classification System for Contaminated Sites. Funding must then be obtained to develop and implement remediation plans that aim to address the identified sites.

Site remediation and liability cost estimates for identified contaminated sites are not normally established until a remediation plan has been developed and accepted. With FCSAP funding currently focused on Class 1 sites, remediation plans and associated cost estimates are not routinely developed for Class 2 and 3 sites where, by definition, action is likely required or may be required to address risks to human health and the environment. As a result, the Department's identified contaminated site financial liability is limited to those sites (mainly Class 1) that have been funded and have developed remediation plans.

Good Practice

The majority of contaminated sites that pose the highest risk to human health and the environment have been identified and remediation action has occurred or is occurring.

The Department, therefore, may not have the information it needs to develop a complete representation of the financial liability related to its identified contaminated sites. While current liability estimation practices are compliant with accounting standards, they do not provide senior management with sufficient information to make informed decisions related to future contaminated site funding requirements.

Funding. In the short to medium term, the Department's primary source of funding for the remediation of high-priority contaminated sites is the FCSAP program (currently in place until 2020). The current phase of FCSAP funding is primarily focused on Class 1 sites, select Class 2 sites, and those sites that had previously received funding prior to April 1, 2011. As FCSAP is

focused on remediating the highest priority sites, those sites newly classified as Class 2 and 3 are not eligible for FCSAP funds.

In addition, due mostly to the program's maturity, FCSAP funding is increasingly focused on remediating higher-risk sites identified in Phase 1 of the program, and less on those sites that have yet to be assessed or prioritized for action. Financial resources for assessing and remediating suspected Class 2 and 3 sites often come from funds that become available within the applicable headquarters organization. This is not a reliable and sufficient ongoing funding source given current funding pressures.

Environmental staff advised that the lack of access to funding has prevented the remediation of Class 2 and 3 sites from advancing, and that this is impacting progress on the assessment of newly identified sites. For now, most Class 2 and 3 sites are not remediated unless an opportunity exists to incorporate these activities with local construction or renovation projects. There is limited guidance in place to ensure these sites are managed in a consistent manner. As a result, site managers have had to follow more of a risk management and monitoring approach, even with Class 2 sites which, by definition, pose a medium risk to human health and the environment and will likely require action.

2.1.3 Summary

Through material presented in the DND course, efforts have been made to better define responsibilities, authorities, and accountabilities related to contaminated site activities, decision making, and project oversight. Although additional guidance and process documentation has been created, it has not been communicated or approved as policy.

Oversight activities related to validating key contaminated site management decisions and reported information are not fully established in policy to ensure that departmental staff make consistent mitigation decisions that result in the acceptance of an appropriate and approved level of risk. Furthermore, project staff do not report key contaminated site portfolio and risk information to senior managers.

The Department currently has processes in place to manage contaminated sites with an aim to remediate or risk manage those sites with the highest risks to human health and the environment. However, the Department and the various organizations responsible are not addressing in a consistent manner the remediation and risk management activities related to the medium and low risk (Class 2 and 3) contaminated sites, which may still have a high risk potential. Factors such as funding, opportunity, and resources influence the Department's ability to remediate these sites.

ADM(RS) Recommendation

2. It is recommended that ADM(IE) complete current initiatives to establish standards and strategies that can be consistently applied when making remediation and risk management decisions related to Class 2 (medium risk) and Class 3 (low risk) contaminated sites.

A key consideration for Management Action Plan development should include the following:

- ensuring the residual risk associated with implementing contaminated site remediation and risk management strategies remains at an acceptable level.

OPI: ADM(IE)

ADM(RS) Recommendation

3. It is recommended that, given the inherent health and safety risks related to Class 2 (medium risk) and Class 3 (low risk) contaminated sites, ADM(IE) explore new program resourcing options to accelerate site remediation activities.

OPI: ADM(IE)

2.2 UXO Legacy Sites

2.2.1 Management Framework

Responsibilities, authorities, accountabilities, and corresponding procedures related to UXO legacy site management decisions, communication of site information to senior decision makers, and liability data quality control are not clearly established in departmental policy.

Site Management Decisions. UXO legacy sites are different from contaminated sites by definition, but the goal of effective and efficient risk management that address health and safety concerns is the same for both programs. As a result, the key processes for managing the sites are similar for both programs. UXO legacy site risk mitigation and management strategies include the following:

- UXO clearance through controlled detonation or removal;
- installation of signage warning of potential danger;
- installation of fences to prevent access to suspected or confirmed sites; and
- public information sessions and school education programs.

Currently, the ADM(IE) UXO legacy site manager is responsible for determining the best mitigation approach by considering such factors as the level of risk to human health and the environment, legal obligations, stakeholder concerns, the existence of appropriate technology, and cost. Policy and guidance documenting these authorities, responsibilities and accountabilities have not yet been fully established, approved, and communicated.

As a result of the recent ADM(IE) restructuring, new site managers have been assigned to UXO legacy site projects. When a site is transferred to a new site manager, a file review takes place and plans are updated. Differing opinions regarding risk may result in adjustments to the selected mitigation strategy and the estimated financial liability. While ADM(IE) staff did not provide complete documentation supporting liability and risk assessments for the selected sample sites, sign-offs regarding site mitigation decisions were observed on documents maintained in the UXO legacy site database.

Communication to Senior Management. Currently, senior management is not provided with regular reports that summarize key data collected on UXO legacy sites. The Department maintains a UXO legacy site database to track information collected during historic review and assessment activities, however standardized reports are not regularly generated for senior management review. Using available information, reports providing an overview of UXO legacy site status could be produced to provide senior management a comprehensive understanding of the legacy site portfolio and to highlight potential areas of health, safety, and financial concerns.

Liability Data Quality Control. UXO legacy site financial liabilities are created and adjusted as a result of the identification of new sites, technological advances, progress on clearance of current sites, and inflation. In order to prepare UXO legacy site liability information for the Department's financial statements and the Public Accounts, year-end instructions issued by Director Infrastructure and Environment Comptrollership require senior management to attest to the accuracy and completeness of accrued UXO legacy site liability estimates.

The submitted liability values are recorded in the financial statements as the Department's future asset restoration liability. While documentation for the source and basis of adjustments related to the 6 sites reported in the FY 2013/14 financial statements were on file, no evidence of managerial review was observed for the financial information submitted.

ADM(RS) Recommendation

4. It is recommended that ADM(IE) enhance existing UXO legacy site management policy so as to ensure the establishment of clear authorities, responsibilities, and accountabilities related to UXO legacy site management decisions and data quality controls and to ensure the communication of results to senior decision makers.

Key considerations for Management Action Plan development should include the following:

- confirming that proper responsibilities and authorities have been observed and that identified risks have been mitigated and accepted. Processes and guidance should ensure that appropriate management challenge and formal approval controls are established for key activities, management decisions, and financial reporting; and
- improving communication by providing senior management with ongoing and frequent updates regarding the status of UXO legacy sites, including site classification, progress and prioritization, financial and health risks, and remediation and risk management decisions.

OPI: ADM(IE)

2.2.2 UXO Legacy Site Management Processes

Departmental processes and current funding allocations do not facilitate the development of consistent and clearly defined UXO legacy site management strategies and risk acceptance practices for UXO legacy sites with differing characteristics and priority levels.

Departmental Processes. There is no federal government UXO legacy site management strategy or federally funded program such as FCSAP. With contaminated sites, the Government is obligated to reduce the contamination below a set level as dictated by policy and regulations. This is not the case with UXO legacy sites. UXO legacy sites have no federal standard, threshold, or generally accepted criteria to use as a remediation target. Depending on the level of risk assessed by the site manager, UXO legacy site mitigation strategies may vary anywhere from the installation of warning signs to a full site excavation.

Explosive ordnance disposal personnel immediately address instances in which UXOs have been discovered and are a direct threat to public health and safety. For UXO legacy sites with identified UXOs that pose no perceived immediate and/or significant threat to human health and safety, site risk and mitigation strategy implementation is based on the ADM(IE) UXO legacy site manager's professional judgement and knowledge of explosive/ammunition standards.

ADM(IE) staff and stakeholders interviewed during the audit process expressed concerns regarding the ambiguity of UXO legacy site remediation and risk management obligations and about the lack of direction available when deciding which course of action to take to address legacy sites. Staff provided the audit team with the results of a UXO legacy site risk assessment and prioritization exercise. However, staff did not provide documentation outlining how the Department establishes risk mitigation strategies, who can make the risk assumption decision, and who should be advised of the risk being assumed.

Funding. Risk management plans containing reasonable cost estimates are developed for UXO legacy sites that have been deemed to require action by DCLSPD staff. Liability estimates are based on the costs associated with the implementation of an approved UXO legacy site risk management plan that is directly related to removing/detonating the UXOs or reducing the risk associated with a UXO legacy site. If a risk management plan is not developed and approved, no liability is created. In FY 2012/13 the UXO legacy site budget was approximately \$12 million.

The Department has identified approximately 865 suspected UXO legacy sites for which clearance action may be necessary. Based on past resource allocations, DCLSPD has been able to execute approximately 40 risk assessments annually, after which a risk rating of high, medium, or low is assigned to the sites. Through its ongoing assessment work, DCLSPD has identified 63 sites with a confirmed UXO presence. An accrued liability of \$2 million has been established for future mitigation work at 6 of these sites.¹⁶ For the remaining 57 sites, risk management plans containing cost estimates have not yet been created, and therefore a liability has not been established for these sites.

¹⁶ FY 2012/13 financial statements identified 50 sites with a confirmed UXO presence and an accrued liability of \$3 million related to 8 of these sites.

FY 2013/14 financial statements highlight three confirmed UXO legacy sites at which the Department has a potential obligation to perform mitigation activities.¹⁷ A liability, however, is not reported for these sites due to uncertainty regarding the scope and cost of the UXO legacy site risk mitigation strategy. This uncertainty regarding scope and cost should be resolved once UXO mitigation and clearance options for these sites have been further developed. However, with initial rough order magnitude costs of \$180 million to \$524 million for the Lac Saint-Pierre site, the Department's current annual budget of \$12 million will not be sufficient to implement mitigation strategies in a reasonable timeframe.

2.2.3 Summary

As is the case with contaminated site management, DND has improved course materials to better define responsibilities, authorities, and accountabilities related to UXO legacy site management. Although, UXO legacy site project managers follow a risk-based approach to determine mitigation strategies, this approach has not been formally documented, approved, or communicated.

In the absence of defined federal UXO legacy site risk management standards, UXO legacy site project managers rely on professional judgement and the application of relevant explosive/ammunition standards. As reporting and prioritization processes have not been fully established, it was difficult for the audit team to determine if sufficient oversight is in place to ensure that risk mitigation decisions are made in a consistent manner and result in the acceptance of an appropriate and approved level of risk.

UXO legacy sites are not considered contaminated sites, and are not eligible to receive FCSAP funding. Funding must be in place to perform the due diligence required to identify and mitigate potential health and safety issues associated with UXO legacy sites within a reasonable amount of time. Given the magnitude of potential future UXO legacy site obligations reported in the departmental financial statement notes, the current UXO funding level will not adequately address the future need.

ADM(RS) Recommendation

5. It is recommended that ADM(IE) complete current initiatives to establish standards and strategies that can be consistently applied when making remediation and risk management decisions related to UXO legacy sites.

Key considerations for Management Action Plan development should include the following:

¹⁷ The three sites listed are at Lac Saint-Pierre, near Trois-Rivières, Québec, the former Sarcee Training Area in Southwest Calgary, Alberta, and former military properties in Vernon, British Columbia. A rough order of magnitude estimate of \$180 million to \$524 million was provided for Lac Saint-Pierre. Estimates were not included for the other sites.

- developing and obtaining departmental approval for standardized remediation and risk management criteria and strategies for UXO legacy sites based on site characteristics, conditions, and planned use; and
- ensuring the residual risk associated with implementing UXO legacy site remediation and risk mitigation strategies remains at an acceptable level.

OPI: ADM(IE)

ADM(RS) Recommendation

6. It is recommended that, given the inherent health and safety risks related to UXO legacy sites, ADM(IE) explore new program resourcing options to accelerate site mitigation activities.

OPI: ADM(IE)

2.3 Financial Statement Notes

Notes to the Department's financial statements do not provide sufficient information to develop a comprehensive understanding of the level of risk and financial exposure associated with contaminated and UXO legacy sites.

2.3.1 Disclosure of Aggregate Site-related Information in the Notes to the Departmental Financial Statements

Treasury Board Accounting Standard 1.2 – Departmental and Agency Financial Statements¹⁸ states that departments should include notes to the financial statements that allow readers to better understand the estimate of the liability and interpret the information presented in the departmental financial statements. Additionally, Treasury Board of Canada Secretariat policy on Remediation Liabilities Related to Contaminated Sites¹⁹ states that financial statements should disclose information on an aggregate basis about such items as the nature of the liability, the basis for the estimate of the liability, and the reasons for non-disclosure of a liability.

Current departmental financial statements show that liability estimates are based on information known at a given point in time, and that estimates are subject to variability due to reasons such as professional judgment or new developments. For both contaminated sites and UXO legacy sites, the notes provide the number of confirmed sites where there is, or will likely be, an obligation to incur costs related to the management and remediation of those sites, the associated accrued liability, and an estimated contingent liability. The notes also provide the number of sites that are being assessed and that may thus have an associated future liability.

¹⁸ Treasury Board Accounting Standard 1.2 – Departmental and Agency Financial Statements, Section 3.5.11, October 10, 2012.

¹⁹ Treasury Board of Canada Secretariat. Remediation Liabilities Related to Contaminated Sites: A Supplement to the Financial Information Strategy Manual, December 15, 2010.

2.3.2 Contaminated Sites – Remediation Liabilities

The Department currently has identified 1059²⁰ suspected or active contaminated sites for which it is responsible. A remediation liability of \$462.4 million has been established in FY 2013/14 for 242 of these sites. The remaining sites are comprised of suspected sites that have yet to be assessed (196) and sites that would be classified using the CCME's classification system as medium, low, not a priority for action, or sites with insufficient information to be classified (621). The financial statements do not provide the classification or status related to these remaining sites, nor do they disclose the reasons for not determining liabilities for these sites. While these sites do not currently have a liability associated with them, they may require future remediation or risk management activity. Therefore, this type of information could be used as an indication of potential future liabilities.

In the 2014 report on Federal Contaminated Sites Cost,²¹ the Parliamentary Budget Officer raised concerns regarding the potential increase in future contaminated site liability due to sites that have not yet been assessed and for sites that are currently being remediated. The 2012 Spring Report of the Commissioner of the Environment and Sustainable Development²² had similar findings but stressed that the full extent of risk that federal contaminated sites pose to the environment and human health remains unknown. The report also stated that while information can be found in various places, Parliament and Canadians do not receive a clear picture of the status of federal contaminated sites, the progress made to address them, or the cost involved.

2.3.3 UXO Legacy Sites – Future Asset Restoration

A similar lack of financial statement disclosure exists for UXO legacy sites. The Department has identified 865 suspected UXO legacy sites for which clearance action may be necessary. Through annual assessments, 63 of these sites have been identified as having a likely UXO presence. A liability of \$2 million has been recorded for 6 of the sites where clearance action is likely. Financial statements do not disclose the number of sites that remain to be assessed (over 700) or provide reasoning as to why a liability has not been established for the remaining 57 confirmed sites. Disclosure of this information would allow users of the financial statements to have a better understanding of potential future liabilities.

2.3.4 Summary

Financial statement notes lack the detail required to fully understand the extent of the Department's financial liabilities related to contaminated sites and UXO legacy sites and its potential risk exposure. The notes do not disclose key information, such as total number of sites, number of sites being actioned, risk classification level for all sites, or number of sites not being actioned. Disclosure of this information may assist users in estimating potential future liabilities associated with these sites.

²⁰ As detailed in the Federal Contaminated Site Inventory reporting by organization. <http://www.tbs-sct.gc.ca/fcsi-rscf>. Last consulted on October 1, 2015.

²¹ Office of the Parliamentary Budget Officer. Report on Federal Contaminated Sites Cost, April 10, 2014.

²² 2012 Spring Report of the Commissioner of the Environment and Sustainable Development, Chapter 3, May 8, 2012.

ADM(RS) Recommendation

7. It is recommended that ADM(Fin)/CFO work with ADM(IE) to develop additional disclosures that provide a more comprehensive representation of the Department's potential contaminated and UXO legacy site financial liability.

A key consideration for Management Action Plan development should include the following:

- reporting key contaminated site and UXO legacy site inventory statistics and risk classification levels to provide financial statement users with a better understanding of the Department's environmental liability.

OPI: ADM(Fin)/CFO

3.0 General Conclusion

The Department is taking action to address health and safety concerns at high priority contaminated sites and is improving supporting documentation retained for liability estimates. However, departmental policy and processes for contaminated and UXO legacy sites need improvement to ensure that authorities and responsibilities are clearly defined, and that there is an approved strategy for the management of UXO legacy sites and lower priority contaminated sites.

In particular, policies and processes related to UXO legacy sites and Class 2 and 3 contaminated sites need improvement to ensure that such sites are managed in a consistent manner. To improve management oversight and to ensure that risk mitigation strategies result in the acceptance of an appropriate and approved level of risk, a formal review and approval of site management decisions should be implemented. Furthermore, given the health and safety risks posed by UXO legacy sites and Class 2 and 3 contaminated sites, additional program resources may need to be obtained in order to implement timely mitigation strategies.

From a financial reporting perspective, notes to the financial statements require more detail so as to provide sufficient information to develop an understanding of the complete contaminated site and UXO legacy site inventory.

Annex A—Management Action Plan

ADM(RS) uses recommendation significance criteria as follows:

Very High—Controls are not in place. Important issues have been identified and will have a significant negative impact on operations.

High—Controls are inadequate. Important issues are identified that could negatively impact the achievement of program/operational objectives.

Moderate—Controls are in place but are not being sufficiently complied with. Issues are identified that could negatively impact the efficiency and effectiveness of operations.

Low—Controls are in place but the level of compliance varies.

Very Low—Controls are in place with no level of variance.

Contaminated Site Management Framework

ADM(RS) Recommendation (Moderate Significance)

1. It is recommended that ADM(IE) enhance existing contaminated site management policy so as to ensure the establishment of clear authorities, responsibilities, and accountabilities related to contaminated site management decisions and data quality controls and to ensure the communication of results to senior decision makers.

Key considerations for Management Action Plan development should include the following:

- confirming that proper responsibilities and authorities have been observed and that identified risks have been mitigated and accepted. Processes and guidance should ensure that appropriate management challenge and formal approval controls are established for key activities, management decisions, and financial reporting; and
- improving communication by providing senior management with ongoing and frequent updates regarding the status of contaminated sites, including site classification, progress and prioritization, financial and health risks, and remediation and risk management decisions.

Management Actions

Agreed. ADM(IE) will review and, if required, enhance its policy instruments, as well as enhance senior management awareness of the contaminated sites program. The key actions are noted in Table A-1.

Action	Timeframe
1. Review ADM(IE)'s current documentation, processes, and guidance associated with DND's contaminated sites projects to confirm, clarify and, where required, amend or establish appropriate documentation including the following: (a) authorities, responsibilities, and accountabilities of all relevant parties and stakeholders; (b) management controls and approvals; and (c) financial reporting for each contaminated site.	Spring 2016
2. Consult with stakeholders on amended or new documentation, processes, guidance, and training.	Fall 2016
3. Promulgate final process, documentation, and training materials.	Spring 2017
4. To improve communication and enhance ADM(IE) senior management awareness of the contaminated sites program, quarterly dashboards will be further refined in FY 2015/16, and the information will be reported regularly to senior management in conjunction with the ADM(IE) integrated business plan and performance indicators.	Fall 2016
5. Provide the Defence Strategic Executive Committee with annual updates on the status of the contaminated sites program.	Fall 2016

Table A-1. Contaminated Site Management Framework Action Plan. This table indicates the proposed management actions related to ADM(RS) Recommendation 1 and the timeframe in which they will be completed.

OPI: ADM(IE)

Target Date: July 31, 2017

Contaminated Site Management Processes

ADM(RS) Recommendation (Moderate Significance)

2. It is recommended that ADM(IE) complete current initiatives to establish standards and strategies that can be consistently applied when making remediation and risk management decisions related to Class 2 (medium risk) and Class 3 (low risk) contaminated sites.

A key consideration for Management Action Plan development should include the following:

- ensuring the residual risk associated with implementing contaminated site remediation and risk management strategies remains at an acceptable level.

Management Actions

Agreed. ADM(IE) will refine and promulgate departmental standards and strategies for the risk management and remediation of contaminated sites. The key actions are listed in Table A-2.

Action	Timeframe
1. Review current documentation on standards and strategies associated with remediation and risk management decisions for Class 2 (medium risk) and Class 3 (low risk) contaminated sites.	Spring 2016
2. Amend documentation, where required, to reflect standardized remediation and risk management criteria and strategies for Class 2 (medium risk) and Class 3 (low risk) contaminated sites based on the CCME framework.	Fall 2016
3. Consult with stakeholders and solicit feedback on amended documents and instruments.	Fall 2016
4. Promulgate final process, documentation, and training material.	Spring 2017

Table A-2. Contaminated Site Management Processes Action Plan (1). This table indicates the proposed management actions related to ADM(RS) Recommendation 2 and the timeframe in which they will be completed.

OPI: ADM(IE)

Target Date: July 31, 2017

ADM(RS) Recommendation (High Significance)

3. It is recommended that, given the inherent health and safety risks related to Class 2 (medium risk) and Class 3 (low risk) contaminated sites, ADM(IE) explore new program resourcing options to accelerate site remediation activities.

Management Actions

Agreed. ADM(IE) will explore new programming resourcing options with regards to the contaminated sites program. The key actions are listed in Table A-3.

Action	Timeframe
1. Identify resourcing options and implications to support priority remediation activities.	Spring 2016
2. Submit a decision brief to senior management, including Infrastructure and Environment Board, the Project Management Board, and the Integrated Resource Management Committee.	Summer 2016
3. Update the 2017-18 ADM(IE) Integrated Business Plan to include the resourcing for the contaminated sites program for IRMC approval.	Fall 2016

Table A-3. Contaminated Site Management Processes Action Plan (2). This table indicates the proposed management actions related to ADM(RS) Recommendation 3 and the timeframes in which they will be completed.

OPI: ADM(IE)

Target Date December 31, 2016

UXO Legacy Site Management Framework

ADM(RS) Recommendation (Moderate Significance)

4. It is recommended that ADM(IE) enhance existing UXO legacy site management policy so as to ensure the establishment of clear authorities, responsibilities, and accountabilities related to UXO legacy site management decisions and data quality controls and to ensure the communication of results to senior decision makers.

Key considerations for Management Action Plan development should include the following:

- confirming that proper responsibilities and authorities have been observed and that identified risks have been mitigated and accepted. Processes and guidance should ensure that appropriate management challenge and formal approval controls are established for key activities, management decisions, and financial reporting; and
- improving communication by providing senior management with ongoing and frequent updates regarding the status of UXO legacy sites, including site classification, progress and prioritization, financial and health risks, and remediation and risk management decisions.

Management Actions

Agreed. ADM(IE) will review and, if required, enhance its policy instruments related to the management of UXO legacy sites. The key actions are listed in Table A-4.

Action	Timeframe
1. Review ADM(IE)'s current documentation, processes, and guidance associated with UXO legacy sites to confirm, clarify and, where required, amend or establish appropriate documentation including the following: (a) authorities, responsibilities, and accountabilities of all relevant parties and stakeholders; (b) management controls and approvals; and (c) financial reporting for each contaminated site.	Spring 2016
2. Consult with stakeholders on amended or new documentation, processes, guidance, and training.	Fall 2016
3. Promulgate final process, documentation, and training materials.	Spring 2017
4. To improve communication and enhance ADM(IE) senior management awareness of the UXO legacy sites program, quarterly dashboards will be further refined in FY 2015/16, and the information will be reported regularly to senior management in conjunction with the ADM(IE) integrated business plan and performance indicators.	Fall 2016
5. Provide the Defence Strategic Executive Committee with updates annual on the status of the contaminated sites program.	Fall 2016

Table A-4. UXO Legacy Site Management Framework Action Plan. This table indicates the proposed management actions related to ADM(RS) Recommendation 4 and the timeframes in which they will be completed.

OPI: ADM(IE)

Target Date: July 31, 2017

UXO Legacy Site Management Processes

ADM(RS) Recommendation (Moderate Significance)

5. It is recommended that ADM(IE) complete current initiatives to establish standards and strategies that can be consistently applied when making remediation and risk management decisions related to UXO legacy sites.

Key considerations for Management Action Plan development should include the following:

- developing and obtaining departmental approval for standardized remediation and risk management criteria and strategies for UXO legacy sites based on site characteristics, conditions, and planned use; and
- ensuring the residual risk associated with implementing UXO legacy site remediation and risk mitigation strategies remains at an acceptable level.

Management Actions

Agreed. ADM(IE) will refine and promulgate departmental standards and strategies for the risk management and remediation of UXO legacy sites. The key actions are listed in Table A-5.

Action	Timeframe
1. Review, and where required, amend or establish appropriate documentation concerning ADM(IE)'s standards and strategies for remediation and risk management decisions for UXO legacy sites.	Winter 2016
2. Consult with stakeholders on amended or new documentation and processes, including Director Ammunition and Explosives Regulation and Canadian Forces Explosive Ordnance Disposal, and address characteristics, conditions, and planned use for UXO legacy sites.	Winter 2016
3. Promulgate final process, documentation, and training materials.	Spring 2017

Table A-5. UXO Legacy Site Management Processes Action Plan (1). This table indicates the proposed management actions related to ADM(RS) Recommendation 5 and the timeframes in which they will be completed.

OPI: ADM(IE)

Target Date: July 31, 2017

ADM(RS) Recommendation (High Significance)

6. It is recommended that, given the inherent health and safety risks related to UXO legacy sites, ADM(IE) explore new program resourcing options to accelerate site mitigation activities.

Management Actions

Agreed. As funding for the UXO legacy sites program sunsets in 2015-16, ADM(IE) will pursue renewed program funding through the integrated business planning cycle for 2016-17. Additional resourcing adjustments will be revisited in future years, as required. The key activities are listed in Table A-6.

Action	Timeframe
1. Identify resourcing options and implications to support priority remediation activities.	Spring 2016
2. Submit a decision brief to senior management including IEB/PMB/IRMC.	Summer 2016
3. Update the 2017-18 ADM(IE) Integrated Business Plan to include the resourcing for the UXO legacy sites program for IRMC approval.	Fall 2016

Table A-6. UXO Legacy Site Management Processes Action Plan (2). This table indicates the proposed management actions related to ADM(RS) Recommendation 6 and the dates by which they will be completed.

OPI: ADM(IE)

Target Date 31 March 2016

Financial Statement Notes

ADM(RS) Recommendation (Moderate Significance)

7. It is recommended that ADM(Fin)/CFO work with ADM(IE) to develop additional disclosures that provide a more comprehensive representation of the Department's potential contaminated and UXO legacy site financial liability.

A key consideration for Management Action Plan development should include the following:

- reporting key contaminated site and UXO legacy site inventory statistics and risk classification levels to provide financial statement users with a better understanding of the Department's environmental liability.

Management Action

As the Level One organization responsible for the preparation of the annual departmental financial statements, ADM(Fin)/CFO will work with ADM(IE) to ensure the notes to the financial statements provide the readers with a fulsome understanding of the financial impacts of environmental liabilities. ADM(Fin)/CFO staff will do this in respect of the new public sector standards for liabilities for contaminated sites (PS 3260), along with separate guidance provided by central agencies on the preparation of financial statements for the year ended March 31, 2015.

By August 31, 2015, ADM(Fin)/CFO working in conjunction with ADM(IE) will do the following:

- assess the impacts of the new public sector reporting standards (PS 3260);
- assess the Government of Canada requirements for the reporting and disclosure of all environmental liabilities, including contaminated sites and UXOs;
- prepare the financial statements, including the relevant note disclosures in consideration of the findings of this audit; and
- brief the CFO and Deputy Minister on the financial statements, including this and other relevant note disclosures, prior to their review and approval.

By September 30, 2015, ADM(Fin)/CFO will confirm to ADM(RS) and ADM(IE) the results of the analysis and the impact on the financial statements.

OPI: ADM(Fin)/CFO

Target Date: September 30, 2015

Annex B—Audit Criteria

The audit criteria were assessed using the following levels:

Assessment Level and Description

Level 1: Satisfactory

Level 2: Needs Minor Improvement

Level 3: Needs Moderate Improvement

Level 4: Needs Significant Improvement

Level 5: Unsatisfactory

Criteria

1. Criteria. Environmental policy and guidance establish clear responsibilities, accountabilities, and authorities regarding the development of site management strategies and environmental liabilities.

Assessment Level 3 – Responsibilities, authorities, accountabilities, and corresponding procedures related to site management decisions, liability data quality control, and the communication of site information to senior decision makers are not clearly established in departmental policy.

2. Criteria. Environmental site management processes facilitate the development of site management strategies that take into account health and safety concerns and the development of accurate and complete departmental environmental liabilities.

Assessment Level 4 – Departmental processes and current funding allocations do not facilitate the development of consistent and clearly defined contaminated site and UXO legacy site management strategies and risk acceptance practices for the following:

- a) action at Class 2 and 3 contaminated sites (medium and low priority); and
- b) action at UXO legacy sites with differing characteristics and priority levels.

Notes to the Department's financial statements do not provide sufficient information to develop a comprehensive understanding of the level of risk and financial exposure associated with contaminated and UXO legacy sites. Additionally, given the potential future obligations that the Department may face as a result of ongoing UXO legacy site assessments and identification of Class 2 contaminate sites, the allocation of additional resources should be examined.

Source of Criteria

Treasury Board Secretariat. Audit Criteria related to the Management Accountability Framework: A Tool for Internal Auditors, March 2011.

Reference to: PP-1,4; AC-1,3; G-1; RM-8

Reference to: RM-2,3; ST-1,5,6,7,10,11,12,15,18,20, 23; PPL-1,4,7,8; CFS-1,4,5; G-5; LICM-4

Annex C—CCME’s National Classification System for Contaminated Sites

The primary mechanism used to prioritize contaminated sites is the CCME’s National Classification System for Contaminated Sites. This system is used to screen and prioritize sites based on the level of risk and action (e.g., characterization, risk assessment, or remediation) required to protect human health and the environment. Contaminated sites are categorized into one of five classes, as follows:

Class 1 – Available information indicates that action is required to address existing concerns for public health and safety (high risk).

Class 2 – Available information indicates that there is a high potential for diverse off-site impacts, although threat to human health and the environment is generally not imminent. Action is likely required (medium risk).

Class 3 – Available information indicates that the site is not a high concern. Additional investigation may be carried out to confirm the classification and some degree of action may be required (low risk).

Class N – Available information indicates that there is probably no significant environmental impact or human health threats, and that there is likely no remedial action required.

Class INS – Some assessment action has been taken, but there is insufficient information to classify the site. In this event, additional information is required to address data gaps.

Annex D—Contaminated and UXO Legacy Site Reported Liabilities

Site Type	FY	Opening Liability (# Sites)	+/- Adjustment ²³	- FCSAP Expenditure	- DND Expenditure	= Closing Balance (# Sites)
Contaminated Sites	2012/13	\$425M (246)	\$26.5M	(\$41M)	(\$3.4M)	\$407.1 (277)
	2013/14	\$407.1 (277)	\$103.4M	(\$45.1M)	(\$3M)	\$462.4 (242)
UXO Legacy Sites	2012/13	\$3.76M (10)	\$979.5K		(\$1.69M)	\$3.04M (8)
	2013/14	\$3.04M (8)	(\$201.6K)		(\$853.8K)	\$1.99M (6)

Table D-1. Contaminated and UXO Legacy Site Reported Liabilities. This table represents the opening liability, adjustments, FCSAP expenditures, DND expenditures and closing liability for FYs 2012/13 and 2013/14, as well as the number of sites with reported liabilities.

²³ Represents changes in estimated remediation costs and cost estimates associated with newly identified sites.