

Chapter 2

Contaminated Sites - Department of Environment and Local Government

Contents

Chapter Summary.....	11
Key Findings and Observations Table.....	12
Recommendations and Responses.....	14
Audit Introduction.....	20
Conclusions.....	21
Background Information.....	21
Legislative Authority Not Clearly Defined	31
Execution Gaps in Contaminated Sites Management Process	35
Performance Monitoring and Reporting	44
Other Findings.....	51
Appendix I – Glossary of Terms	54
Appendix II – Audit Objectives and Criteria	58
Appendix III – About the Audit	59
Appendix IV – Contaminated Sites Liability under Public Sector Accounting Standard 3260 – Liability for Contaminated Sites.....	60
Appendix V – Engineer Responsibilities in the Contaminated Sites Management Process.....	62
Appendix VI – Responsibilities of Parties in the Contaminated Sites Management Process.....	63
Appendix VII – Jurisdiction Comparison of Contaminated Sites Management Process in Atlantic Canada.....	64



Contaminated Sites – Department of Environment and Local Government

Report of the Auditor General – Volume II, Chapter 2 – November 2022

Why Is This Important?

- Contaminated sites represent a significant risk to human health and the environment
- Ineffective administration of the contaminated sites management process risks contamination spreading and increased remediation costs to the public and government
- The Province of New Brunswick recorded a liability of \$50.8 million in fiscal 2021-2022 for contaminated sites

Overall Conclusions

- The Department does not ensure timely remediation of contaminated sites;
- The Department's lack of performance monitoring hinders its ability to identify deficiencies and improve their processes; and
- The Department has a backlog of over 1,000 contaminated site files spanning over 35 years

What We Found

Legislative Authority Not Clearly Defined

- Contaminated sites management process is not referenced in the *Clean Environment Act* or its regulations
- New Brunswick is the only jurisdiction in Atlantic Canada with no reference to its contaminated sites remediation program in legislation or regulation
- No contaminated sites information is available to the public on the Department's website

Program Execution Gaps

- Department does not establish and enforce remediation timelines
- Department does not ensure all steps required in the remediation standard operating procedures are followed
- Department does not follow up on contaminated site files if the Site Professional does not submit a report
- Over 75% of currently open contaminated site files have remained open 10 years or longer

Other Findings

- Department lacks program to address orphan contaminated sites
- Province may have a potential liability for orphan sites that will increase the longer remediation is delayed
- No government entity is responsible for co-ordinating the remediation of government-owned contaminated sites

Lack of Performance Monitoring and Reporting

- Department is non-compliant with *Accountability and Continuous Improvement Act* for aspects of annual planning and annual reporting
- Department does not set performance targets for the contaminated sites management process nor the occurrence process
- Lack of public reporting on the performance of the contaminated sites management process

Key Findings and Observations Table

Contaminated Sites – Department of Environment and Local Government

Paragraph	Key Findings and Observations
	Legislative Authority Not Clearly Defined
2.21	<i>The contaminated sites management process is not referenced in the Clean Environment Act or its regulations</i>
2.25	<i>New Brunswick is the only jurisdiction in Atlantic Canada with no reference to its contaminated sites remediation program in legislation or regulation</i>
2.27	<i>No contaminated sites information is available to the public on the Department's website</i>
	Execution Gaps in Contaminated Sites Management Process
2.32	<i>Department does not ensure all steps required in the remediation standard operating procedures are followed</i>
2.35	<i>Compliance letter not issued in 86% of remediation files tested</i>
2.37	<i>Department unable to explain why 39% of files tested were missing a compliance letter</i>
2.39	<i>Department does not establish and enforce remediation timelines</i>
2.40	<i>Remedial Action Plans do not regularly include remediation timeline</i>
2.44	<i>Department lacks a mechanism to ensure contaminated site files progress through the contaminated sites management process in a timely manner</i>
2.45	<i>Department does not follow up on contaminated site files if the Site Professional does not submit a report</i>
2.46	<i>Seventy-two percent of remediation files tested did not include a processing date for Site Professional reports</i>
2.49	<i>Remediation database includes over 1,000 open contaminated site files, including sites that remained open after 35 years</i>
2.51	<i>Department's plan to address the open site backlog does not address how to process all open contaminated site files</i>
2.53	<i>Over 75% of open contaminated site files have remained open 10 years or longer</i>
2.55	<i>Department does not monitor requirements of conditional closures</i>
2.57	<i>Occurrence data is incomplete for contaminated site files</i>

Key Findings and Observations Table (Continued)

Paragraph	Key Findings and Observations
2.58	<i>Decision to screen contamination as an occurrence or contaminated sites management file and the reasons for that decision are not always documented</i>
2.62	<i>Small Spill Policy never approved and inconsistently applied across regions</i>
	Performance Monitoring and Reporting
2.65	<i>Department does not create and track performance targets for the contaminated sites management process</i>
2.67	<i>Lack of public reporting on the performance of the contaminated sites management process</i>
2.70	<i>Department does not create and track performance measures for the occurrence process</i>
2.71	<i>Department did not have access to the raw data contained in the Occurrence Database</i>
2.73	<i>New Brunswick Guideline for the Management of Contaminated Sites remains unchanged from 2003</i>
2.76	<i>Information on the contaminated sites management process is not clearly and easily accessible from the Department website</i>
2.79	<i>Department non-compliant with the Accountability and Continuous Improvement Act</i>
2.80	<i>Executive Council Office instructions to departments for annual planning are inconsistent with the requirements of the Accountability and Continuous Improvement Act</i>
	Other Findings
2.84	<i>Department lacks program to address orphan sites</i>
2.85	<i>Department no longer tracks orphan sites</i>
2.87	<i>Contaminated sites with property tax arrears are rejected for tax sale by the Department of Finance and Treasury Board</i>
2.89	<i>Province may have a potential liability for orphan sites that will increase the longer remediation is delayed</i>
2.91	<i>No government entity is responsible for co-ordinating the remediation of government-owned contaminated sites</i>

Recommendations and Responses

Recommendation	Department's response	Target date for implementation
We recommend the Department of Environment and Local Government:		
2.26 propose updates to the <i>Clean Environment Act</i> and its regulations to address gaps in authority for the contaminated sites management process and align more closely with other jurisdictions in Atlantic Canada such as: <ul style="list-style-type: none"> including a reference to the contaminated sites management process; requiring responsible parties to remediate contamination; and creating regulations for contaminated sites. 	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will undertake a jurisdictional review to identify gaps and explore options for government consideration.</i></p>	Q3 - FY 2024-25
2.31 make more contaminated sites information readily available to the public on its website.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will update its website to ensure specific information pertaining to contaminated sites is available to the public with clear indications of where supplementary information is located.</i></p>	Q3 – FY 2023-24
2.43 establish and enforce remediation timelines for each contaminated site file in the contaminated sites management process.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will work to establish regulated timelines for remediating contaminated sites.</i></p>	Q3 – FY 2024-25

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
We recommend the Department of Environment and Local Government:		
2.47 ensure contaminated site files proceed through the contaminated sites management process in a timely manner.	<i>ELG agrees with this recommendation.</i> <i>The Department will develop and implement tools to enhance tracking and timely progress of files through the contaminated sites management process.</i>	<i>Q1 – FY 2023-24</i>
2.48 update the remediation standard operating procedures to require Engineers enter the report processing date in the remediation database (to allow the Department to monitor file progress through the contaminated sites management process).	<i>ELG agrees with this recommendation.</i> <i>The Department had already begun updating the remediation standard operating procedures at the time of the report.</i>	<i>Completed in the 3rd quarter of 2022-2023</i>
2.54 <ul style="list-style-type: none"> • create a plan and establish a timeline to process all outstanding open contaminated site files; and • periodically review the plan against actual results to ensure work will be completed according to the timeline. 	<i>ELG agrees with this recommendation.</i> <i>The Department will develop a schedule to address mid to high-risk contaminated site files.</i>	<i>Q4 – FY 2022-2023</i>
2.56 develop and implement a monitoring program for contaminated site files with a conditional closure.	<i>ELG agrees with this recommendation.</i> <i>The Department will develop an auditing program for conditionally closed remediation files.</i>	<i>Q1 – FY 2023-24</i>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
We recommend the Department of Environment and Local Government:		
2.60 ensure the screening decision and reasons for screening spills as an occurrence or contaminated sites management file is documented.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department, as part of ongoing work updating the Remediation Standard Operating Procedures will require the documentation of screening decision and reasons for screening spills as an occurrence or contaminated sites management file.</i></p>	<p><i>In progress</i></p>
2.61 standardize the information recorded in the Occurrence Database by Regional Inspectors across the Province.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department, as part of updating the occurrence database and ongoing work updating the Remediation Standard Operating Procedures will standardize information recorded by Regional Inspectors.</i></p>	<p><i>In progress</i></p>
2.64 <ul style="list-style-type: none"> update and approve the Small Spill Policy to be consistent with the Remediation Program Standard Operating Procedures; and update the Remediation Program Standard Operating Procedures to ensure a consistent assessment process is followed by Regional Inspectors across the province when contamination is reported. 	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department, as part of ongoing work updating the Remediation Standard Operating Procedures will include a definition of small spills and the procedure for managing them.</i></p>	<p><i>In progress</i></p>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
We recommend the Department of Environment and Local Government:		
2.69 <ul style="list-style-type: none"> create performance targets for the contaminated sites management process and compare actual results against targets to measure performance on a regular basis; and publicly report on the performance metrics of the contaminated sites management process. 	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will develop performance targets for the contaminated sites management process and will regularly measure performance against actuals. Performance outcomes of the contaminated sites management process will be shared publicly through the Department's annual report.</i></p>	<p><i>Q3 - FY 2023-24</i></p>
2.72 <ul style="list-style-type: none"> create performance targets for the occurrence process and compare actual results against performance targets on a regular basis; and publicly report on the performance metrics of the occurrence process. 	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will develop performance targets for the occurrence process and will regularly measure performance against actuals. Performance outcomes of the occurrence process will be shared publicly through the Department's annual report.</i></p>	<p><i>Q3 – FY 2023-24</i></p>
2.75 update the New Brunswick Guideline for the Management of Contaminated Sites to reflect the changes to the Remediation Program in 2018.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will update the New Brunswick Guideline for the Management of Contaminated Sites to reflect the changes to the Remediation Program in 2018 and will continue to regularly update the guideline as a result of ongoing work.</i></p>	<p><i>Q4 – FY 2022-23</i></p>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
We recommend the Department of Environment and Local Government:		
2.78 ensure all necessary information on the contaminated sites management process is located in one place with clear indications of where supplementary information is located.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will update its website to ensure specific information pertaining to contaminated sites is available to the public, with clear indications of where supplementary information is located.</i></p>	<i>Q3 – FY 2023-24</i>
2.90 develop a program to identify and address orphan contaminated sites.	<p><i>ELG agrees with this recommendation.</i></p> <p><i>The Department will explore options for government consideration.</i></p>	<i>Q1 – FY 2023-24</i>

Recommendations and Responses (continued)

Recommendation	Department's response	Target date for implementation
We recommend Executive Council Office:		
2.83 align its instructions to government departments for annual planning with the requirements of the <i>Accountability and Continuous Improvement Act</i>.	<i>ECO will align its instructions to government departments for annual planning with the requirements of the Accountability and Continuous Improvement Act.</i>	<i>January 31, 2023</i>
2.94 assign responsibility to an oversight body for the co-ordination of all government-owned contaminated sites to ensure sites are remediated in a timely manner to the applicable environmental standard.	<i>ECO will assign responsibility to an oversight body for the co-ordination of all government-owned contaminated sites to ensure sites are remediated in a timely manner to the applicable environmental standard.</i>	<i>January 31, 2023</i>

Audit Introduction

Why we chose this topic

2.1 The Department of Environment and Local Government is responsible for administering the contaminated sites management process. This process is the key control ensuring contamination on properties in New Brunswick is remediated to the appropriate environmental standard.

2.2 We chose to audit the contaminated sites management process for the following reasons:

- Contaminated sites can represent a significant risk to human health and the environment;
- Ineffective administration of the contaminated sites management process risks contamination spreading and increased remediation costs to the public and government; and
- The Province of New Brunswick recorded a liability of \$47.5 million in fiscal 2020-2021 for contaminated sites

Audit Objective

2.3 The objective of this audit was to determine if the Department of Environment and Local Government effectively administers the contaminated sites management process.

Audit Scope

2.4 We focused our audit on the Department's administration of the contaminated sites management process. We also examined how contaminated sites are escalated from an occurrence to a remediation file and transferred to the contaminated sites management process.

2.5 Our primary auditee was the Department of Environment and Local Government. We also made enquiries to and obtained audit evidence from other entities including the Department of Transportation and Infrastructure, Department of Finance and Treasury Board, and Executive Council Office. Our audit period covered fiscal years 2018-2019 to 2020-2021; however, our testing extended outside of the audit period as deemed necessary.

2.6 A glossary of key terms can be found in Appendix I. More details on the audit objectives, criteria, scope and approach we used in completing our audit can be found in Appendix II and Appendix III.

Conclusions

2.7 The Department of Environment and Local Government is not effectively administering the contaminated sites management process. Specifically:

- The Department does not ensure timely remediation of all contaminated sites;
- The Department's lack of performance monitoring hinders their ability to identify deficiencies and improve their processes; and
- The Department has a backlog of over 1,000 contaminated sites spanning over 35 years.

If these issues continue to be unaddressed, there is a risk of contamination spreading, and potential harm to the environment and human health.

Background Information

2.8 The Department of Environment and Local Government (the Department) is responsible for administering the *Clean Environment Act* which prohibits the release of a contaminant into the environment without prior authorization.

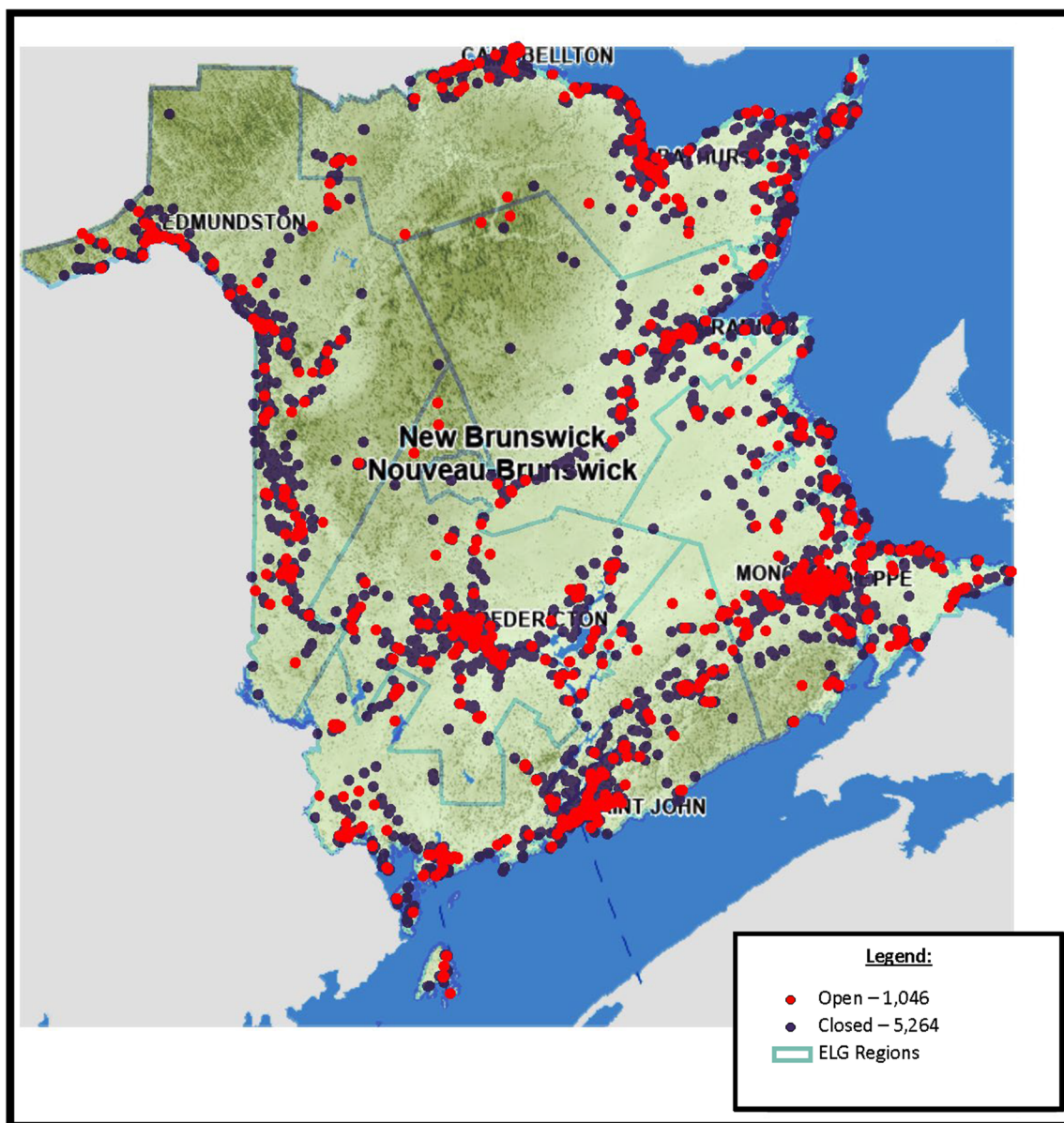
2.9 A contaminant is defined in the Act as any matter or effect foreign to the environment that affects the quality of the environment, endangers human health or plants or animal life, normal conduct of transport or business, the normal enjoyment of life, the enjoyment of property, or that is designated by the Minister as a contaminant under the Act, and includes pesticides and waste. Under the contaminated sites management process, examples include spills of fuel from motor vehicle accidents or home heating oil tanks, and oil from damaged power pole mounted transformers.

2.10 Corporations and individuals can apply for authorization to release a contaminant at specific levels in accordance with the *Clean Environment Act* and its regulations. If the individual or corporation's contaminant levels exceed the levels set out in their permit or authorization, the Department addresses this contamination through its Compliance and Enforcement Policy. The goal in these cases is to have the individual or corporation perform sufficient remediation and mitigation efforts to regain compliance with their permit or authorization.

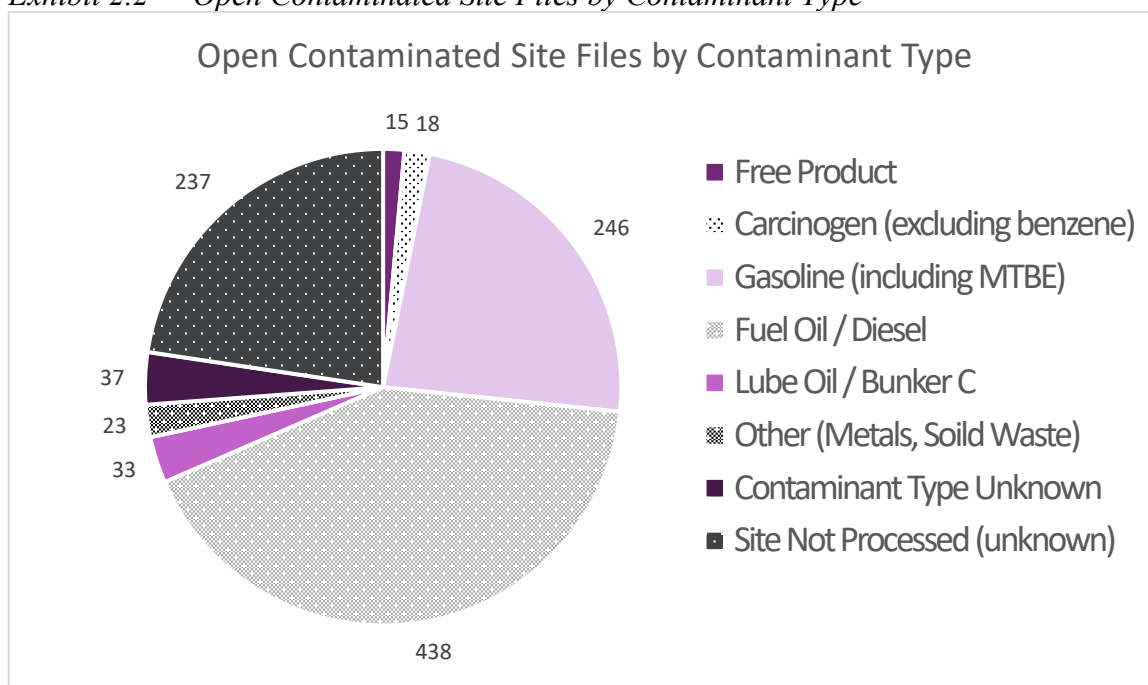
- 2.11** For tangible contamination released into the environment that is not otherwise covered by an authorization or permit, the Department administers a Remediation Program to ensure the risk to human health and the environment is minimized, and contamination is cleaned up to the applicable environmental standard. The program was created after the *Petroleum Handling and Storage* regulation first came into effect in 1987, which resulted in contamination occurring when many petroleum storage tanks were replaced across the province.
- 2.12** The Province is required to record a liability for the remediation of a contaminated site when it meets certain criteria specified in the Public Sector Accounting Standard 3260 – Liability for Contaminated Sites. For fiscal year 2021-2022, the province recorded a liability of \$50.8 million for 54 of 162 sites within scope of the standard. We included a chapter on this standard in our 2019 Report¹ and more information on the standard can be found in Appendix IV.
- 2.13** In 2021, 1,046 contaminated site files remained open in the contaminated site management process across New Brunswick. Exhibit 2.1 is a map displaying all open and closed files. Exhibit 2.2 shows the open contaminated site files by contaminant type.

¹ 2019 Report of the Auditor General of New Brunswick, Volume III, Chapter 7,

Exhibit 2.1 - All Open and Closed Contaminated Site Files in New Brunswick as of October 2021



Source: Created by AGNB with information from Department of Environment and Local Government (unaudited)

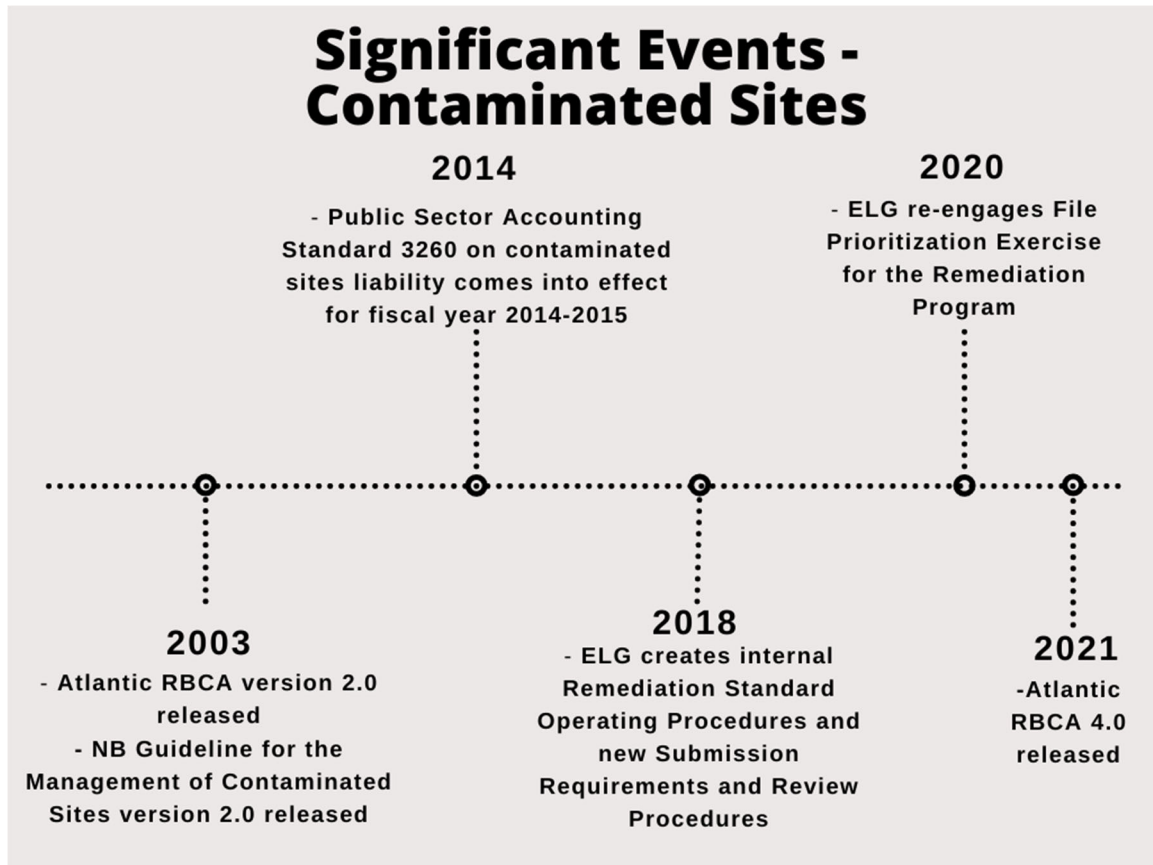
Exhibit 2.2 - Open Contaminated Site Files by Contaminant Type

Source: Created by AGNB with information from the Department of Environment and Local Government

2.14 New Brunswick is a member of the Atlantic Partnership in Risk-Based Corrective Action Implementation (Atlantic PIRI), a multi-stakeholder group that maintains the Atlantic Risk-Based Corrective Action (Atlantic RBCA) standards, guidance, and software. Atlantic RBCA is used to remediate petroleum hydrocarbon spills (such as motor vehicle accidents and petroleum storage tank leaks), which are the most common types of contaminated sites in New Brunswick.

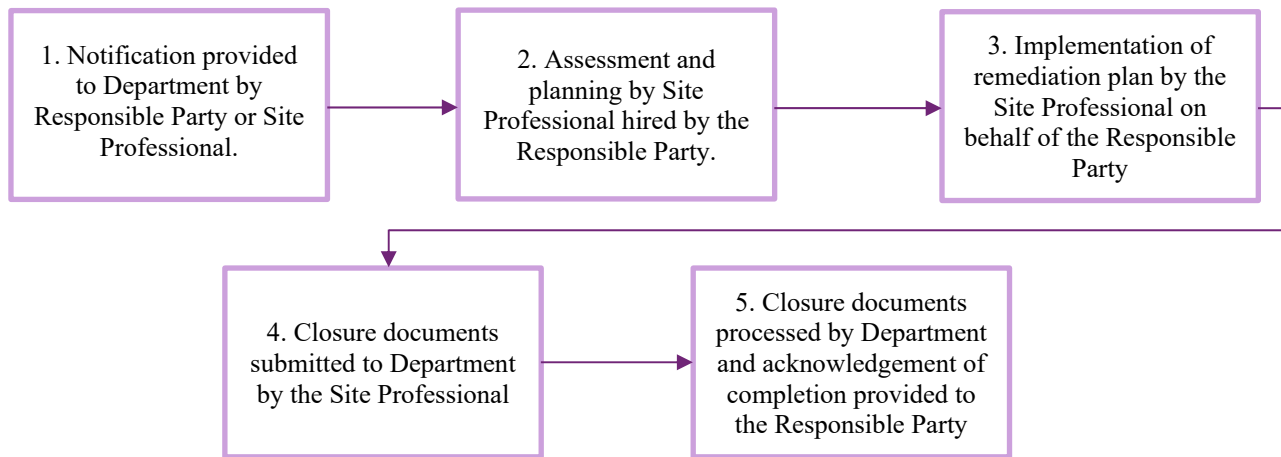
2.15 Exhibit 2.3 provides a timeline of significant events related to the audit.

Exhibit 2.3 - Timeline of Significant Events Related to the Contaminated Sites Management Process



Source: Created by AGNB with information from Department of Environment and Local Government and Atlantic Partnership in Risk-Based Corrective Action Implementation

2.16 The expectations and requirements for individuals responsible for contamination is contained in the New Brunswick Guideline for the Management of Contaminated Sites (Guideline), created in 1999 and updated in 2003 when Atlantic RBCA version 2.0 was released (no other updates have been made to the Guideline since 2003). The Guideline describes the Remediation Program, allowing for the remediation of contaminated sites through a limited remedial action process and the contaminated sites management process. The program consists of five main steps found in the Guideline, outlined in Exhibit 2.4.

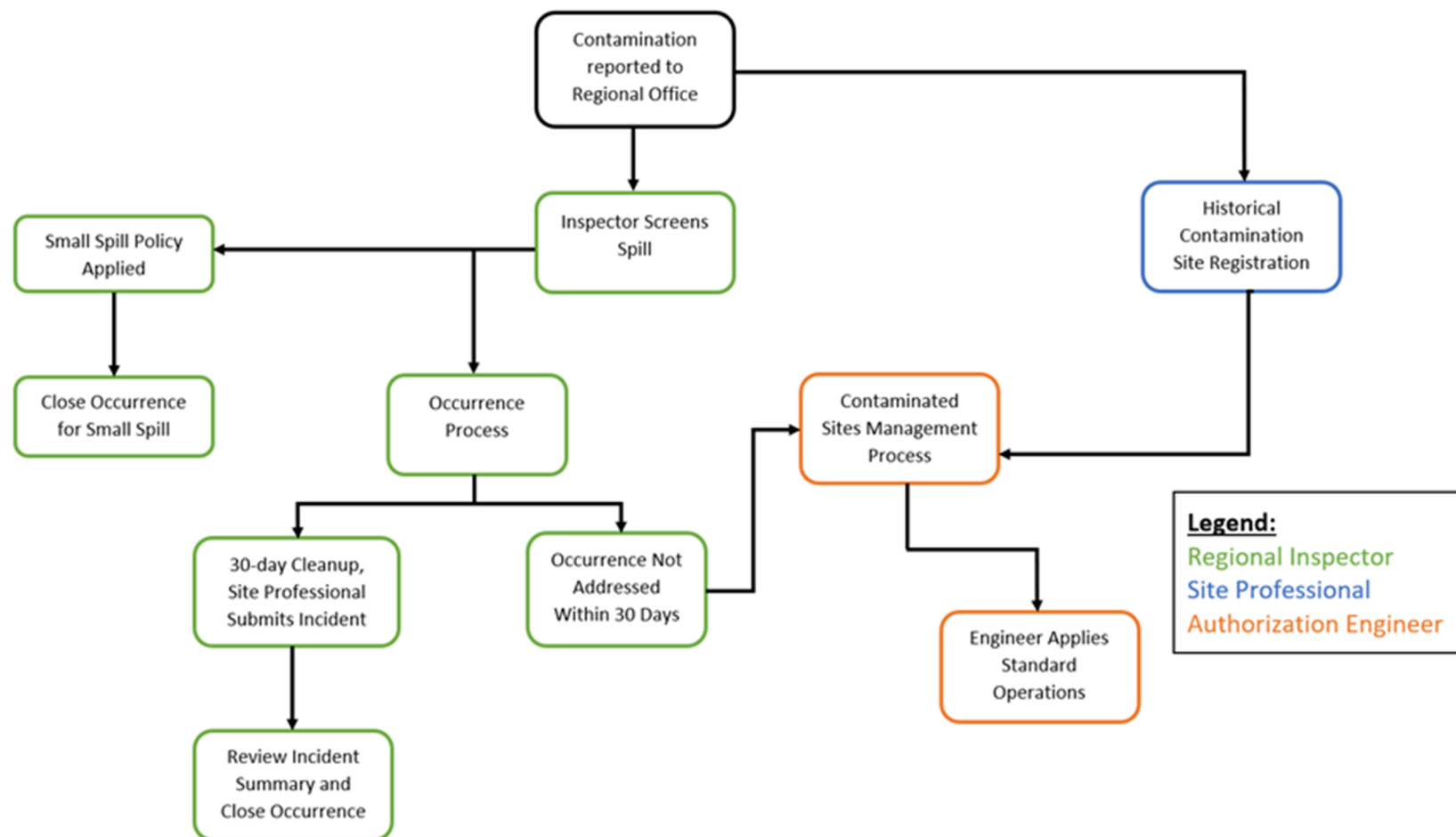
Exhibit 2.4 - Main Steps in the Remediation Program

Source: Adapted from New Brunswick Guideline for the Management of Contaminated Sites

2.17 The Department made significant changes to the Remediation Program in 2018. The Remediation Program is now made up of two parts: the occurrence process managed under the Regional Operations and Compliance Branch; and the contaminated sites management process managed under the Authorizations Branch. This division of responsibilities occurred after the Department's organizational restructuring process in February 2016, and the implementation of an updated version of the Remediation Program by the Authorizations Branch in March 2018.

2.18 The updated Remediation Program generally follows the five steps from the Guideline, but the processing of sites and documents is now split between Regional Inspectors and Engineers depending on whether the contaminated site remains an occurrence or is transferred to the contaminated sites management process. Exhibit 2.5 provides an overview of what happens when contamination is reported to the Department.

Exhibit 2.5 - Simplified Flowchart of Department of Environment and Local Government Response to Reported Contamination



Source: Modified by AGNB from Department of Environment and Local Government Remediation Program Submission Requirements and Review Procedures

2.19 Once a contaminated site enters the contaminated sites management process, the Department assigns a primary and supporting Engineer to the file. The Engineer's responsibility is to follow the Remediation Standard Operating Procedures (SOP) including:

- Sending a compliance letter to Responsible Party;
- Processing Site Professional report submissions and responding within 30 days; and
- Completing a closure package and sending it to the Responsible Party upon file closure.

See Appendix V for a diagram of responsibilities of an Engineer in a contaminated site file.

2.20 Exhibit 2.6 shows photographs of contamination typically encountered by the Department in the contaminated sites management process.

Exhibit 2.6 - Photographs of Contamination Typically Encountered in the Contaminated Sites Management Process

Removal of petroleum storage tank parts



Damaged petroleum storage tank and leak



Damaged fuel tank after motor vehicle accident



Spill from damaged fuel tank after motor vehicle accident



Source: Provided by the Department of Environment and Local Government

Legislative Authority Not Clearly Defined

The contaminated sites management process is not referenced in the Clean Environment Act or its regulations

2.21 We found the contaminated sites management process is not referenced in the *Clean Environment Act* or its regulations. While the New Brunswick Guideline for the Management of Contaminated Sites (Guideline) requires specific steps from the Responsible Party of the contaminated site, it is not always clear where the legislative authority originates.

2.22 The Department considers all petroleum hydrocarbon contamination at risk of polluting water regardless of where the spill occurs, meaning the *Water Quality Regulation – Clean Environment Act* (WQR) applies in all cases of petroleum hydrocarbon contamination. A portion of contaminated sites originate from petroleum storage tank leaks and spills, in which case the *Petroleum Product Storage and Handling Regulation – Clean Environment Act* (PPSHR) applies. Reporting and remediation of all other contaminant types (such as dry-cleaning chemicals, and industrial chemicals like chromium) are not directly addressed by the Act or its regulations.

2.23 The Department does have the option of issuing a Minister's Order under s. 5(1) of the Act compelling a Responsible Party to remediate the contamination if the Responsible Party does not voluntarily comply with the Remediation Program, but delays in remediation can lead to adverse effects to the environment and human health.

2.24 Of the 21 responsibilities listed in the Guideline, only three are linked to the *Clean Environment Act* and its regulations:

- the Responsible party must notify the Department of contamination (WQR and PPSHR);
- the Responsible Party must take action to protect environment and human health (only to limit water pollution – WQR); and
- the Site Professional must notify the Department of contamination (only in cases of petroleum storage tank leaks they observe – PPSHR)

This is not to say the Department cannot provide Responsible Parties and Site Professionals with environmental standards and report submission requirements through their policies, but we expected to see key responsibilities of the contaminated sites management process referenced in the *Clean Environment Act* and its regulations. A full list of the responsibilities outlined in the Guideline can be found in Appendix VI.

New Brunswick is the only jurisdiction in Atlantic Canada with no reference to its contaminated sites remediation program in legislation or regulation

2.25 We found New Brunswick is the only jurisdiction in Atlantic Canada with no references to its contaminated sites remediation program in legislation or regulation. Nova Scotia and Prince Edward Island both have specific regulations detailing their respective contaminated site remediation programs. Nova Scotia, Prince Edward Island, and Newfoundland and Labrador directly reference their contaminated site remediation programs to legislation or regulation. See Appendix VII for a jurisdictional comparison of key aspects of environmental legislation in Atlantic Canada relating to contaminated sites.

Recommendation

2.26 We recommend the Department of Environment and Local Government propose updates to the *Clean Environment Act* and its regulations to address gaps in authority for the contaminated sites management process and align more closely with other jurisdictions in Atlantic Canada such as:

- including a reference to the contaminated sites management process;
- requiring responsible parties to remediate contamination; and
- creating regulations for contaminated sites.

No contaminated sites information is available to the public on the Department's website

2.27 We found no contaminated sites information is available on the Department's website. We compared access to information on contaminated sites across Canadian jurisdictions and found New Brunswick is one of six jurisdictions with no information available on their websites (four of these require a fee for access to information on contaminated sites). The remaining seven jurisdictions have summary or complete information on contaminated sites available to the public on their websites. All seven have at least some information available without a fee. Exhibit 2.7 provides a summary of our jurisdictional comparison of contaminated site information on government websites.

Exhibit 2.7 - Jurisdictional Comparison of Contaminated Site Information Availability and Fees Required Across Provinces and Territories

Jurisdiction	Contaminated Site Information Available Online	Summary or Detailed Contaminated Site Information Provided for Free
Alberta	✓	✓
British Columbia	✗	✗
Manitoba	✓	✓
New Brunswick	✗	✗
Newfoundland and Labrador	✗	✗
Northwest Territories	✗	unknown
Nova Scotia	✗	✗
Nunavut	✗	unknown
Ontario	✓	✓
Prince Edward Island	✓	✓
Quebec	✓	✓
Saskatchewan	✓	✓
Yukon	✓	✓

Source: Created by AGNB with information from websites of provinces and territories.

- 2.28** The Property-Based Environmental Information Program allows an individual or business to request information on a specific property using its unique Parcel Identifier (PID). The cost to search a single PID in New Brunswick under the program is \$55 and returns to the applicant summary information of environmental impacts on the property. For a \$30/hour research fee, an applicant can receive the detailed scientific reports associated with the property such as Environmental Site Assessments and Closure Reports in the remediation database (the research time for most requests is one to three hours).
- 2.29** The fee structure for the Property-Based Environmental Information Program is detailed in the *Fees for the Provision of Environmental Information Regulation – Financial Administration Act*. The wording in section 3 of the regulation is permissive: “The Minister of Environment and Climate Change **may** charge the following fees under this Regulation” (emphasis added). The Department can choose whether to charge for one or all aspects of the Property-Based Environmental Information Program.
- 2.30** Making more information about contaminated sites readily available to the public increases government transparency and accountability. It enables more New Brunswickers the ability to know and understand the extent of contamination in the province and could also reduce administrative burdens for the Department.
- 2.31** **We recommend the Department of Environment and Local Government make more contaminated sites information readily available to the public on its website.**

Recommendation

Execution Gaps in Contaminated Sites Management Process

Department does not ensure all steps required in the remediation standard operating procedures are followed

2.32 We found Department staff frequently missed steps in the remediation Standard Operating Procedures (SOP) and did not consistently document file progress in the remediation database. We tested contaminated site files from the audit period to determine the Department's compliance with the remediation SOP and found instances of:

- missing SOP steps such as issuing compliance letters;
- no processing date for site closure reports. This date is important for tracking the progress of file processing to ensure contamination risks are mitigated in a timely manner; and
- missing site closure checklists that document actions taken before a site is considered closed.

While many of these files were eventually closed, gaps exist in the process that could lead to delays in remediation and difficulties in having Responsible Parties meet their obligations.

2.33 In response to the missing information identified in our testing, the Department stated:

The SOP is a fairly lengthy document and staff are only working on remediation files from a few times a month to only a few times a year (as this is one of many sectors they work with). Without having to read the SOP from start to finish to re-familiarize themselves each time, some steps likely were unintentionally omitted.

Department Engineers only interact with a contaminated site file according to the SOP, meaning the SOP is a key control to ensuring contaminated sites are remediated in a timely manner.

Compliance letter not issued in 86% of remediation files tested

2.34 The Department created a site closure checklist to aid Department staff in processing contaminated site file closure and continues to update the checklist as deficiencies are found. We do not consider this to be a sufficient control as the checklist does not address issues occurring throughout the contaminated site file's lifecycle, and no review is performed by management to determine if checklists are complete in files that are closed.

2.35 The Remediation SOP requires the primary engineer assigned to the remediation file send a compliance letter to the Responsible Party informing them to hire a Site Professional and contact the Department within 15 days. In 86% of remediation files tested (31 of 36 files), no compliance letter was sent to the Responsible Party.

2.36 The Department informed us staff may not send a compliance letter where a Historical Contamination Site Registration form is submitted because a Site Professional is already involved. The Department also informed us staff are reluctant to send a compliance letter when the Responsible Party is a government entity either because of a close working relationship between the two government entities, or because staff assume the government entity understands their remediation responsibilities.

Department unable to explain why 39% of files tested were missing a compliance letter

2.37 The Department was unable to explain why 39% (14 of 36) of files tested were missing a compliance letter. These files have an individual or business as the Responsible Party and were not historical contamination files.

2.38 The compliance letter is used as an administrative tool to ensure compliance with the Remediation Program and is the first step the Department takes to enforce compliance. A compliance letter and follow-up with the Responsible Party are the steps normally taken before issuing a Minister's Order to compel a Responsible Party to remediate contamination. Not sending a compliance letter could lead to delays in remediation of the contamination. This is concerning as petroleum hydrocarbon contamination can end up in groundwater, which could result in contamination spreading and the potential for harm to human health or the environment. The Department informed us 30 days is used as a critical date by which contamination should be addressed to prevent further spread into groundwater.

Department does not establish and enforce remediation timelines

2.39 We found the Department is not holding Responsible Parties and Site Professionals to a remediation timeline. The Guideline requires the Responsible Party complete the contaminated site management process in a timely manner and states the Department will establish a remediation timeline and communicate this to the Responsible Party. Not establishing and enforcing a remediation timeline may prevent timely remediation, leading to risks of contamination spreading and increased remediation costs.

Remedial Action Plans do not regularly include remediation timeline

2.40 We found Remedial Action Plans (RAP) did not regularly include a remediation timeline detailing how long it would take to clean up the contamination. The Guideline states a timeline and reporting schedule is considered by the Department as a fundamental and essential component of any RAP submitted by the Site Professional. Of the RAPs we reviewed, only one included a timeline or reporting schedule. The Department informed us they only require RAPs for complex files whereas RAPs are not required for simple files such as a motor vehicle accident where a fuel tank spilled onto the highway to groundwater (rather than impacts related to the release of chemicals from dry cleaning operations). The Department also informed us they do not require a remediation timeline from the Site Professional because there is no legislative requirement to do so.

2.41 As the Department does not require remediation on a specific timeline (except in the case where a Ministerial Order has been issued and it is part of the Order given), and RAPs are not frequently submitted, the Department does not have a way of knowing when remediation will be completed. This prevents the Department from holding the Responsible Party accountable for the timely remediation of their contaminated site.

2.42 Amongst jurisdictions in Atlantic Canada, New Brunswick and Newfoundland and Labrador do not require timelines in their legislation or regulations. Nova Scotia requires remediation be completed within two years unless otherwise permitted due to site complexity. Prince Edward Island requires remediation within a specified timeline that is set for each individual contaminated site.

Recommendation

2.43 We recommend the Department of Environment and Local Government establish and enforce remediation timelines for each contaminated site file in the contaminated sites management process.

Department lacks a mechanism to ensure contaminated site files progress through the contaminated sites management process in a timely manner

2.44 We found the Department has no mechanism to prompt staff or inform management when a remediation file is not progressing through the contaminated sites management process in a timely manner. Timely remediation is a requirement of the Guideline. If contaminated sites are not remediated in a timely manner the Department risks the contamination spreading and potential harm to the environment and human health.

Department does not follow up on contaminated site files if the Site Professional does not submit a report

2.45 Department staff interact with a remediation file at specific points in a remediation file's lifecycle. Department Engineers are responsible to identify the Responsible Party, send out the compliance letter, and respond to the Site Professional within 30 days when a report is submitted to the Department. No other requirements to interact with a remediation file exist for Engineers. If the Site Professional does not submit a report, years could go by, and it is likely no Department staff would interact with the file as there are no timelines set by the Department. Over time, this has led to a backlog of open contaminated site files. At the time of the audit, this list contained 1,046 open contaminated site files.

Seventy-two percent of remediation files tested did not include a processing date for Site Professional reports

2.46 We found 72% of remediation files tested did not include the date the responsible Engineer processed (reviewed against submission requirements and responded to) the Site Professional's submitted reports. These dates are important to inform management whether files are progressing in a timely manner. We found Engineers do not record these dates because there is no requirement to do so in the SOP. By not tracking and reviewing processing dates of contaminated site files, the Department cannot determine if sites are being remediated in a timely manner. As a result, some sites may continue unremediated for longer periods of time leading to increased risks to the environment and human health.

Recommendations

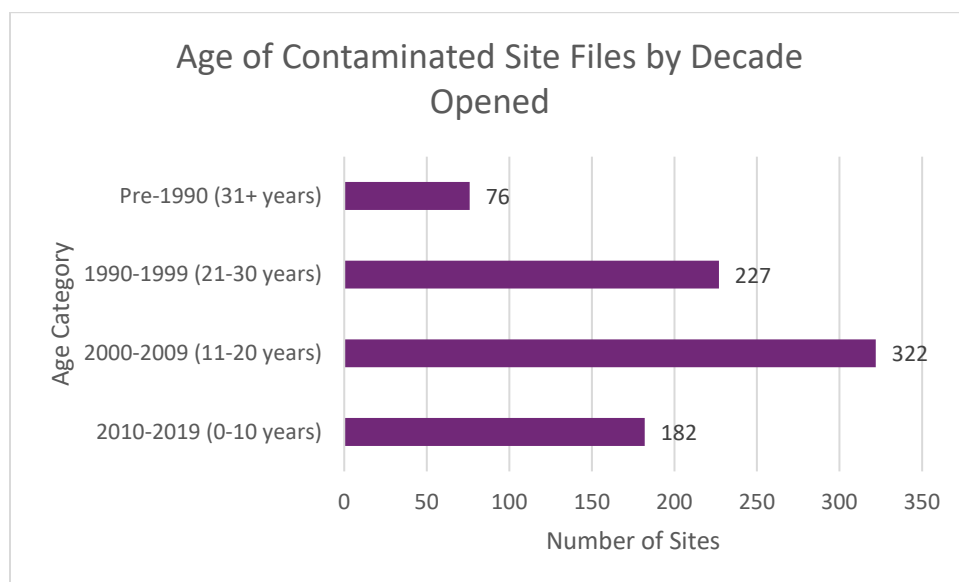
2.47 We recommend the Department of Environment and Local Government ensure contaminated site files proceed through the contaminated sites management process in a timely manner.

2.48 We recommend the Department of Environment and Local Government update the remediation standard operating procedures to require Engineers enter the report processing date in the remediation database (to allow the Department to monitor file progress through the contaminated sites management process).

Remediation database includes over 1,000 open contaminated site files, including sites that remained open after 35 years

2.49 We found the remediation database included 1,046 open contaminated site files at the time of our audit. These sites range from a few months to over 35 years old. The status of open sites ranges from: remediation completed but file not closed to remediation ongoing, or unknown. Exhibit 2.8 shows the age of open sites in the remediation database.

Exhibit 2.8 - Age of Open Contaminated Site Files by Decade Opened



Note: Data includes 809 contaminated site files (including two files of unknown age) that have been evaluated and prioritized by the Department of the 1,046 total open contaminated site files

Source: Created by AGNB with information from the Department of Environment and Local Government

2.50 The Department stated some of the long-open files are due to a resource issue that existed in the past. We believe several problems likely contributed to this result:

- **No remediation timelines:** not setting and enforcing timelines allows files to remain open indefinitely;
- **No performance monitoring:** without tracking and reviewing performance data, Department is unaware of sites that are not remediated year-to-year; and
- **Orphan sites:** sites where the Responsible Party cannot be determined or sites where the Responsible Party claims financial hardship remain contaminated. This issue is discussed later in the chapter.

Department's plan to address the open site backlog does not address how to process all open contaminated site files

2.51 The Department informed us of a file prioritization exercise they started in 2020, which was designed to address the over 1,000 open contaminated site files that have not been brought to closure over the past 35 years. A similar exercise was conducted by the Department in 2010 but did not result in closure of the significant backlog of contaminated site files. The 2020 exercise includes two phases:

- Phase I: develop a plan and prioritize all open contaminated site files; and
- Phase II: review each file to determine steps required for closure, address highest risk sites and sites with closure reports on file.

As of the writing of this report, the Department is still working on phase I and phase II. We reviewed documentation on the file prioritization exercise indicating a third phase is required to process the files that remain open. This documentation indicated the Department anticipates this work continuing into at least 2030.

2.52 While some of the sites have already been remediated, it is unknown to the Department whether the contamination remains at some of the oldest sites, often due to a lack of documentation for older sites. The Department informed us they do not have the human resources available to commit to a short timeline while also maintaining regular operations at the Authorizations Branch (such as processing permits and authorizations and performing inspections at approved facilities). Without a plan to complete the file closure process, contaminated sites may remain unremediated with potential unaddressed risks to the environment and human health.

Over 75% of open contaminated site files have remained open 10 years or longer

2.53 At the time of our audit, Department staff had processed 77% (809 of 1046) of open contaminated site files and assigned priority scores for each. Of these 809 sites, over 75% (624) had been open for more than 10 years at the beginning of the audit period.

Recommendation

2.54 We recommend the Department of Environment and Local Government:

- **create a plan and establish a timeline to process all outstanding open contaminated site files; and**
- **periodically review the plan against actual results to ensure work will be completed according to the timeline.**

Department does not monitor requirements of conditional closures

2.55 We found the Department does not monitor whether Responsible Parties fulfill the requirements of a conditional closure after acknowledgement of site closure is provided. For some contaminated site files, conditions must be put in place by the Responsible Party prior to the closure being acknowledged by the Department. However, there is no follow-up by Department staff to monitor whether conditions continue to be met over time. Examples of conditions include maintaining a layer of topsoil on the site, not placing buildings on the site, and not installing drinking wells on the site. If conditions are not monitored, there is a risk responsible parties may not maintain the conditions as required.

Recommendation

2.56 We recommend the Department of Environment and Local Government develop and implement a monitoring program for contaminated site files with a conditional closure.

Occurrence data is incomplete for contaminated site files

2.57 We found the data contained in the Occurrence Database was incomplete for contaminated site files we reviewed (such as missing information of remediation steps taken, documentation of consultation with Authorizations Engineer when needed, reasons for screening a spill as an occurrence or remediation file). The Department stated there is no standard method for data entry in the Occurrence Database. Data entry uses free text, so anything can be entered and can vary by Regional Inspector, leading to lower quality or incomplete data. The Department informed us they are currently undergoing a review of the Occurrence Database to understand what could be changed to improve Department processes. We encourage the Department to standardize the data input methods for the Occurrence Database.

Decision to screen contamination as an occurrence or contaminated sites management file and the reasons for that decision are not always documented

2.58 We found the decision whether a contaminated site is screened as an occurrence or contaminated sites management process file, and the reasons for that decision are not always documented by the Department. The Department informed us Regional Inspectors discuss individual spills with Authorization Branch Engineers in person or by telephone, but these discussions and the resulting decision are not documented as the SOP does not explicitly require it.

2.59 Regional Inspectors process occurrence files and the Site Professional directs the remediation of the site. When a site is classified as a contaminated sites management process file, the Site Professional conducts more testing and analysis and writes larger reports due to the increased complexity of the contamination, which are reviewed by a Department Engineer. Without documenting the decision of the Regional Inspectors and the reasons for that decision, it is difficult for the Department to determine whether contaminated sites are being screened and remediated appropriately.

Recommendations

2.60 We recommend the Department of Environment and Local Government ensure the screening decision and reasons for screening spills as an occurrence or contaminated sites management file is documented.

2.61 We recommend Department of Environment and Local Government standardize the information recorded in the Occurrence Database by Regional Inspectors across the province.

Small Spill Policy never approved and inconsistently applied across regions

2.62 We found the Small Spill Policy was never approved as an official policy and is not applied consistently across all regions. The Small Spill Policy was intended to apply to spills up to 50 litres in volume to enable the Responsible Party to clean up the spill without hiring a Site Professional where there is little risk to the environment or human health.

2.63 The Department informed us this has led to various interpretations of the policy across the regions, and some regions do not use it at all. The remediation SOP provides each Regional Office with the discretion whether they use the Small Spill Policy. If a standardized approach to processing small spills is not used by all regions, there is a risk contaminated sites may not be processed under the appropriate process in every region. As a result, contamination may not be remediated to the RBCA standards.

Recommendation

2.64 We recommend the Department of Environment and Local Government:

- **update and approve the Small Spill Policy to be consistent with the Remediation Program Standard Operating Procedures; and**
- **update the Remediation Program Standard Operating Procedures to ensure a consistent assessment process is followed by Regional Inspectors across the province when contamination is reported.**

Performance Monitoring and Reporting

Department does not create and track performance targets for the contaminated sites management process

2.65 We found the Department does not create and track performance targets for the contaminated sites management process (such as turnaround times for Site Professional report submissions, data entry in remediation database, compliance letter sent to Responsible Party, percentage of open sites closed each year). As a result, the Department is unable to measure actual performance of the contaminated sites management process and make evidence-based improvements.

2.66 We observed that the remediation database has the potential to generate and email reports to management showing the progress of open files and the completeness of closed files but it is not currently enabled to do so. This will require a focus on quality data entry on the part of Department staff and the regular comparison of actual performance against established targets.

Lack of public reporting on the performance of the contaminated sites management process

2.67 We found there is little information available to the public on the performance of the contaminated sites management process. The number of contaminated site files opened, and the number of files closed is included in the Department's annual report for some, but not all, fiscal years. This information does little to describe the performance of the program as remediation does not always occur within the same fiscal year the contamination is discovered.

2.68 To increase accountability and transparency, program performance information should be made publicly available. Many methods exist to achieve this including: quarterly or annual reporting on performance, or a web-based dashboard displaying real-time or time-delayed performance metrics. The Department could report on information such as the number of sites opened, number of sites closed, average time from file open to closure, and average processing time of report submissions.

Recommendation**2.69 We recommend the Department of Environment and Local Government:**

- **create performance targets for the contaminated sites management process and compare actual results against targets to measure performance on a regular basis; and**
- **publicly report on the performance metrics of the contaminated sites management process.**

Department does not create and track performance measures for the occurrence process

2.70 We found the Department does not create and track performance measures for the occurrence process (such as staff response times, length of time files remain open, application of specific policies for contaminated site files, and whether a contaminated site is escalated to the contaminated sites management process). Without this information, it is difficult for the Department to measure performance and make evidence-based improvements to the occurrence process.

Department did not have access to the raw data contained in the Occurrence Database

2.71 We found the Department did not have access to the raw data contained in the Occurrence Database, which is maintained by Service New Brunswick. The Department informed us their lack of ability to search and display all data in the occurrence database makes the creation and tracking of performance targets for the occurrence process a difficult task as the raw data needs to be extracted and analyzed. Department staff have not historically had direct access to this raw data and only gained access to it for the first time during our audit. This lack of access to raw data resulted in the Department's inability to assess the performance of programs that use the Occurrence Database.

Recommendation**2.72 We recommend the Department of Environment and Local Government:**

- **create performance targets for the occurrence process and compare actual results against performance targets on a regular basis; and**
- **publicly report on the performance metrics of the occurrence process.**

***New Brunswick
Guideline for the
Management of
Contaminated Sites
remains unchanged
from 2003***

2.73 We found the Department has not updated the Guideline since the changes made to it when Atlantic RBCA version 2 was implemented in 2003. Since that time, Atlantic RBCA has seen two version updates, the Department underwent an organizational restructuring, and the Remediation Program changed significantly in 2018. As a result, some aspects of the Guideline are out of date such as:

- hyperlinks point to websites that no longer exist;
- Limited Remedial Action process was replaced by Occurrence process; and
- Site Professional submission requirements have changed.

Without clear information provided to the public, individuals may not be able to understand their responsibilities, or hold the Department to account for its role in the Remediation Program. The Department informed site professionals of the changes when they occurred.

2.74 The Guideline states:

Amendments to this Guideline document are anticipated as opportunities for improvement arise. Users should ensure they are using the most recent version.

The Department has not made any updates because the Guideline refers the user to the current version of Atlantic RBCA for petroleum hydrocarbon contamination. The Department did inform us an updated Guideline document is planned for the fiscal year 2022-2023.

Recommendation

2.75 We recommend the Department of Environment and Local Government update the New Brunswick Guideline for the Management of Contaminated Sites to reflect the changes to the Remediation Program in 2018.

Information on the contaminated sites management process is not clearly and easily accessible from the Department website

2.76 We found relevant information on contaminated sites was difficult to find or was not located on the Department's website. Several Department policies and guidance documents are housed on a third-party website belonging to the Atlantic Partnership in Risk-Based Corrective Action Implementation (Atlantic PIRI) such as:

- Submission Requirements and Review Procedures;
- New Brunswick Advisory and Implementation Plan for Atlantic RBCA Version 4; and
- Notification and Submission Forms.

While there was a hyperlink to Atlantic PIRI on the Department's website, there was no indication the contaminated sites management process information is hosted on this third-party website.

2.77 The Department's website represents an opportunity to provide the public with relevant information on Department programs and activities. Making information readily available to the public can increase transparency, and reduce the need for members of the public to call the Department to request information on program requirements.

Recommendation

2.78 We recommend the Department of Environment and Local Government ensure all necessary information on the contaminated sites management process is located in one place with clear indications of where supplementary information is located.

Department non-compliant with the Accountability and Continuous Improvement Act

2.79 We found the Department was not aware of its responsibilities under the *Accountability and Continuous Improvement Act*, resulting in the Department being non-compliant with sections relating to annual planning and annual reporting, including:

- section 4(1) preparing an annual plan document: while the Department provided documents including aspects of annual planning, the Department could not provide an annual plan document;
- section 4(2)(a)(i) including in goals set the strategic direction provided to the Department by the Minister responsible: the Department could not provide evidence the Minister provided strategic direction to the Department to include in annual plan goals during the audit period;
- section 4(3) and 4(5) Submitting the completed annual plan to the responsible Minister for approval, signature, and publishing: of the planning documents provided by the Department, none were signed by the responsible Minister, nor were they published on the Department's website; and
- section 5(3) explaining variances between actual and projected results presented in the annual report: while the Department identified the variance between budgeted and actual expenditures, explanations for the variances were not provided in the annual reports during the audit period except for one line item in two of three fiscal years.

Executive Council Office instructions to departments for annual planning are inconsistent with the requirements of the Accountability and Continuous Improvement Act

2.80 The Department follows the processes for annual planning as instructed by Executive Council Office (ECO), however these instructions are not compliant with the Act. ECO informed us they consider the instructions for annual planning to address the intent of the Act, and recognize departments have difficulty complying with some areas of the Act. A summary of the inconsistencies we found is presented in Exhibit 2.9.

Exhibit 2.9 - Inconsistencies between Accountability and Continuous Improvement Act and Executive Council Office instructions to departments for annual planning

Act Section	Act Requirements	Executive Council Office Instructions	Instructions Match Act Requirements
4(1)	Prepare annual plan document	Department budget in Main Estimates, Strategic Objective Measure Initiative and Actions (SOMIA) documentation, balanced scorecards	Partially*
4(2)(c)	Include in annual plan statement indicating Minister is accountable for the preparation of the plan and achieving the goals and objectives of the plan	Statement made by Minister to the Legislature during Main Estimates presentation	✗
4(3)	Plan submitted to and signed by Minister	Main Estimates MEC signed by Minister	✗
4(5)	Following approval of plan, Minister publishes plan on the department's website	Main Estimates filed with the Clerk of the Legislature and published on the Government of New Brunswick website	✗

**Note: Main Estimates annual budget for the Department is a component of annual planning, SOMIA documentation included some Department goals and objectives.*

Source: Created by AGNB from the Accountability and Continuous Improvement Act and information provided by Executive Council Office

2.81 We do not consider an annual budget a sufficient substitute for an annual plan for the Department to satisfy its obligations under the Act, and none of the products of the Department's planning activities are published on the Department's website as required by the Act.

2.82 Our Office previously commented on risks in ECO's oversight of Crown Agencies in our 2021 Report – Volume 1, Chapter 4. Our overall conclusion in the report was, "the Executive Council Office and most Crown agencies did not comply with all of the requirements of the *Accountability and Continuous Improvement Act* when preparing critical documents needed for oversight."² This is also consistent with our findings related to the Act involving government departments.

Recommendation

2.83 We recommend Executive Council Office align its instructions to government departments for annual planning with the requirements of the *Accountability and Continuous Improvement Act*.

² Risks Exist in Government's Oversight of Crown Agencies – Executive Council Office, Report of the Auditor General of New Brunswick – Volume I, Chapter 4, October 2021, page 129

Other Findings

***Department lacks
program to address
orphan sites***

2.84 We found there is currently no program in place to resolve orphan contaminated sites (to determine who is responsible for remediation and clean up the site). Orphan sites are contaminated sites where no Responsible Party can be determined or where the Responsible Party is unable to afford remediation. This presents a significant challenge to the Department's file prioritization exercise as orphan sites are part of the open contaminated site listing and there is currently no one responsible for monitoring or remediating these sites.

***Department no longer
tracks orphan sites***

2.85 We found the Department stopped tracking orphan sites when the Orphan Site Program was terminated in 2009. The Orphan Site Program began in 1990 with joint funding from the Federal and Provincial Governments intended to remediate orphan sites. The Federal Government funding ended in 1995, and from that time Provincial Government funding was reduced every few years until the program's end in 2009. Since 2009, there has been no action by the Department on known orphan sites, and no new contaminated sites have been designated by the Department as orphan sites. The Department informed us they were unable to identify which sites that opened after 2009 would be considered orphan sites.

2.86 In some cases, the Responsible Party of a contaminated site that cannot afford to remediate contamination will stop paying property taxes (these are known at the Department as hardship cases). There are also cases where a company that is a Responsible Party of a contaminated site ceases to operate or flees the jurisdiction, also resulting in property tax arrears. These properties remain contaminated, the cost of remediation will increase over time, and the property will eventually need to be addressed by the Province either through tax sale or remediation.

Contaminated sites with property tax arrears are rejected for tax sale by the Department of Finance and Treasury Board

2.87 We found the Department of Finance and Treasury Board (FTB) rejects contaminated sites for tax sale if the Department of Transportation and Infrastructure (DTI) will not accept the transfer of the site when the property fails to be sold, resulting in no department becoming responsible for these sites and contamination not being remediated. This leads to risks of contamination increasing or spreading, and over time the cost to remediate increasing.

2.88 Department of Finance and Treasury Board staff informed us they consult with staff at the Department of Transportation and Infrastructure on tax sale candidate properties with potential environmental liabilities. DTI staff confirmed this to us, describing an informal process where FTB staff call DTI staff to discuss a problem property. If DTI staff believe the property will have significant remediation costs, they inform FTB that DTI will reject the transfer to DTI's land surplus, which would leave FTB with a contaminated site to remediate. FTB informed us that as a result, the property will not be put up for tax sale. We also noted this process is not formally documented by either of the two departments.

Province may have a potential liability for orphan sites that will increase the longer remediation is delayed

2.89 We found the Province may have a potential liability for orphan contaminated sites that will increase the longer remediation is delayed. If no one takes ownership of a contaminated site property, the property reverts to the Province regardless of whether a tax sale occurs (through the dissolution of a Responsible Party corporation with no shareholder accepting title for the property³, or the death of an individual Responsible Party with no inheritor accepting title for the property⁴). Once the Province takes ownership of the property, they will become liable for the contamination, meaning any delays in remediation may result in increased costs to the Province due to inflation on the cost to remediate year-to-year.

Recommendation

2.90 We recommend the Department of Environment and Local Government develop a program to identify and address orphan contaminated sites.

³ New Brunswick Business Corporations Act, RSA 2000, c B-9, at ss. 153(1) and 154(1)

⁴ New Brunswick Escheats and Forfeitures Act, RSNB c 107, at s. 1(1)

No government entity is responsible for co-ordinating the remediation of government-owned contaminated sites

2.91 We found no single government entity is responsible for coordinating the remediation of government owned sites. Departments separately budget for and remediate sites they are responsible for. The Department informed us they act as the regulator, and do not play such a co-ordinating role. By not using a whole-of-government approach there is no government-wide plan to assess risks and prioritize remediation work to ensure the timely remediation of contaminated sites where a government department is the Responsible Party.

2.92 We are concerned with this siloed approach for the remediation of government owned sites, contamination risks may not be prioritized from a province-wide perspective. This could lead to inefficient allocation of resources to mitigate those risks. We believe a more coordinated approach would allow the Province to allocate remediation resources in an efficient manner to address sites with the highest contamination risks regardless of which department is the Responsible Party.

2.93 In reviewing other jurisdictions in Atlantic Canada, we observed the Province of Nova Scotia is developing an oversight function for its contaminated site inventory.

Recommendation

2.94 We recommend Executive Council Office assign responsibility to an oversight body for the co-ordination of all government-owned contaminated sites to ensure sites are remediated in a timely manner to the applicable environmental standard.

Appendix I – Glossary of Terms

Atlantic PIRI⁵	A collaborative group of provincial environment regulators, industry representatives, and regional environmental consultants from Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador. This group identifies and discusses issues, develops standards and processes, provides recommendations for continued technical and regulatory harmonization, and oversees the implementation of Atlantic Risk Based Corrective Action in New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island.
Atlantic RBCA⁶	A process to assess and manage the remediation and redevelopment of sites impacted by petroleum hydrocarbons and other contaminants. Centred around risk to human health and the environment, Atlantic Risk Based Corrective Action is specific to Atlantic Canada's needs and equals or exceeds Canada-wide Standards (CWS) developed by the Canadian Council of Ministers of the Environment (CCME). Atlantic RBCA is based on the scientific standards, principles, and processes developed by US environmental professionals and ASTM International (the American equivalent to the Canadian Standards Association).
Closure Report⁷	A final report prepared by the Site Professional and provided to the Department of Environment and Local Government following successful implementation of the Remedial Action Plan including all required monitoring which substantiates the statements in the Record of Site Condition.
Contaminated Site⁸	A property or collection of properties where the concentration of specified chemicals in air, soil, or groundwater exceed levels considered acceptable by the Department of Environment and Local Government. The contaminated site may consist of a property or properties where the contamination originated (Source Property) and

⁵ Atlantic PIRI website atlanticrbca.com/about-atlantic-rbca/

⁶ *ibid*

⁷ Guideline for the Management of Contaminated Sites, Version 2 – Definitions, New Brunswick Department of Environment and Local Government, 2003, at page 1

⁸ *ibid*, at page 1

Contaminant⁹

other properties which have been chemically altered by the source property (Third Party properties).

means any solid, liquid, gas, microorganism, odour, heat, sound, vibration, radiation or combination of any of them, present in the environment,

- a) that is foreign to or in excess of the natural constituents of the environment,
- b) that affects the natural, physical, chemical or biological quality or constitution of the environment,
- c) that endangers the health, safety or comfort of a person or the health of animal life, that causes damage to property or to plant life or that interferes with visibility, the normal conduct of transport or business or the normal enjoyment of life or use or enjoyment of property, or
- d) that is designated by the Minister as a contaminant under section 4.2,

and includes a pesticide or waste.

Limited Remedial Action¹⁰

The remediation of soil impacts at a site under the direction of a Site Professional, or Department of Environment and Local Government personnel in exceptional circumstances. The Department of Environment and Local Government shall determine, during completion of a site inspection questionnaire, if it is appropriate to attempt to use limited remedial action measures at a site.

Petroleum Hydrocarbon Compound (PHC)¹¹

mixtures of organic compounds found in or derived from geological substances such as oil, bitumen and coal. Petroleum products released to the environment typically contain thousands of compounds, in varying proportions, composed predominantly of carbon and hydrogen, with minor amounts of nitrogen, sulphur and oxygen.

⁹ *Clean Environment Act*, RSNB 1973, c C-6, at page 5

¹⁰ Guideline for the Management of Contaminated Sites, Version 2 – Definitions, New Brunswick Department of Environment and Local Government, 2003, at page 1

¹¹ Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil, Canadian Council of Ministers of the Environment, 2001, at page 3

Phase I Environmental Site Assessment (ESA) ¹²	A systematic process to review all available information relating to the site. The objective of a Phase I ESA is to assess whether current and/or past practices on the site may have resulted in environmental contamination or unsafe conditions. A Phase I ESA does not involve the intrusive investigative procedures of sampling, analyzing and measuring.
Phase II Environmental Site Assessment (ESA) ¹³	A more extensive evaluation, including intrusive investigation, to confirm and delineate, or demonstrate, the absence of contamination in the various media on a site identified through the Phase I procedure. This information will indicate whether more detailed testing is required in specific areas and will provide the inputs required to develop appropriate site cleanup criteria. It is not essential that a Phase I ESA be completed prior to conducting a Phase II ESA. In some instances, sufficient information exists regarding potential contamination to proceed directly to a Phase II ESA.
Phase III Environmental Site Assessment (ESA) ¹⁴	A complete evaluation (including further intrusive investigation if necessary), sufficient to fully characterize the extent and degree of contamination. The data collected should be sufficiently representative of the site condition to provide further assessment of site specific remedial objectives using a risk assessment approach, to investigate the feasibility of various cleanup options and to input to the development of the various components of the Remedial Action Plan.
Record of Site Condition ¹⁵	A document prepared by the Site Professional and provided to the Department of Environment and Local Government in a prescribed format confirming that the Management Process has been followed and the remedial objectives for the site have been met.
Remedial Action Plan ¹⁶	A report which provides the rationale for the selected remedial criteria and includes risk assessment and

¹² Guideline for the Management of Contaminated Sites, Version 2 - Definitions, New Brunswick Department of Environment and Local Government, 2003, at page 2

¹³ *ibid*, at page 2

¹⁴ *ibid*, at page 2

¹⁵ *ibid*, at page 2

¹⁶ *ibid*, at page 2

management documentation, identifies remedial options and objectives with a conceptual remediation plan, identifies the feasibility of the remedial options, including a monitoring plan and if required, a plan for managing engineered or institutional controls.

Remediation¹⁷

The improvement of a contaminated site to prevent, minimize, or mitigate damage to the environment and human health.

Responsible Party¹⁸

In most cases, the Responsible Party is a person whose conduct or failure to act has caused or contributed to the contamination of property and who, in the opinion of the Minister, is responsible for remediation of a contaminated site. However, in some cases, the persons among whom the Minister may choose to remediate the site are specifically listed in an Act or regulation and may include, for example, the owners or the person having the charge of a storage tank system.

Site Professional¹⁹

A person of appropriate qualifications as per the requirements of the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB). The Site Professional manages the assessment and remediation of contaminated sites on behalf of the Responsible Party.

¹⁷ *ibid*, at page 2

¹⁸ *ibid*, at page 3

¹⁹ Guideline for the Management of Contaminated Sites, Version 2, New Brunswick Department of Environment and Local Government, 2003, at page 10

Appendix II – Audit Objectives and Criteria

The objective and criteria for our audit of the Department of Environment and Local Government contaminated sites management process are presented below. The Department of Environment and Local Government and senior management reviewed and agreed with the objective and associated criteria.

Objective 1	To determine if the Department of Environment and Local Government effectively administers the contaminated sites management process.
Criterion 1	The Department of Environment and Local Government should have clearly defined processes, authorities, and responsibilities related to the contaminated sites management process that are readily available to the public and industry.
Criterion 2	The Department of Environment and Local Government should have strategic and operational plans for the contaminated sites management process, including performance measures and targets, and compare actual results against performance targets to foster continuous improvement.
Criterion 3	The Department of Environment and Local Government should follow established procedures to ensure contaminated sites are effectively remediated.
Criterion 4	The Department of Environment and Local Government should ensure information on contaminated sites and their impacts are made readily available to the public.

Source of Criteria: Developed by AGNB based on:

- Canadian Audit and Accountability Foundation's Practice Guide to Auditing Efficiency
- Practice Guide to Auditing Efficiency of a Regulatory Inspection and Enforcement Function
- New Brunswick Guideline for the Management of Contaminated Sites
- Relevant audit reports of other Canadian Legislative Audit Offices

Appendix III – About the Audit

This independent assurance report was prepared by the Office of the Auditor General of New Brunswick on the Department of Environment and Local Government on the contaminated sites management process. Our responsibility was to provide objective information, advice, and assurance to assist the Legislative Assembly in its scrutiny of the Department of Environment and Local Government on its administration of the contaminated sites management process.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001 – Direct Engagements set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook – Assurance.

AGNB applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

In conducting the audit work, we have complied with the independence and other ethical requirements of the Rules of Professional Conduct of Chartered Professional Accountants of New Brunswick and the Code Professional Conduct of the Office of the Auditor General of New Brunswick. Both the Rules of Professional Conduct and the Code are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

In accordance with our regular audit process, we obtained the following from management:

- confirmation of management's responsibility for the subject under audit;
- acknowledgement of the suitability of the criteria used in the audit;
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided; and
- confirmation that the findings in this report are factually based.

Period covered by the audit:

The audit covered the period between April 1, 2018 and March 31, 2021. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded and proceeded the starting date of the audit.

Date of the report:

We obtained sufficient and appropriate audit evidence on which to base our conclusion on November 2, 2022, in Fredericton, New Brunswick.

Appendix IV – Contaminated Sites Liability under Public Sector Accounting Standard 3260 – Liability for Contaminated Sites

Public Sector Accounting Standard 3260 – Liability for Contaminated Sites requires the accounting for and recording of liabilities for the remediation of contaminated sites. The standard specifically:

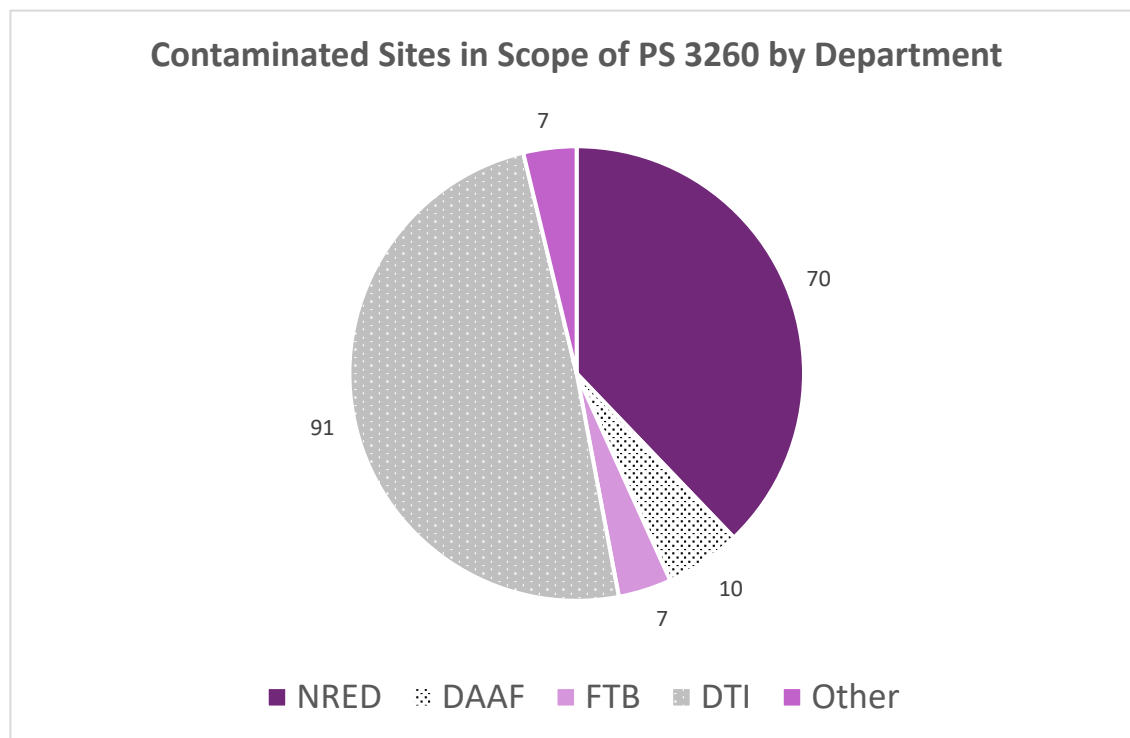
- a) defines the activities that would be included in a liability for remediation;
- b) establishes the requirements for recognizing and measuring the liability; and
- c) provides the presentation and disclosure requirements to include in financial statements.

The definitions contained in the standard sometimes differ from those used by the Department of Environment and Local Government's Remediation Program. This results in contaminated sites being recorded as liabilities by the Government of New Brunswick that are not contained in the Remediation Program.

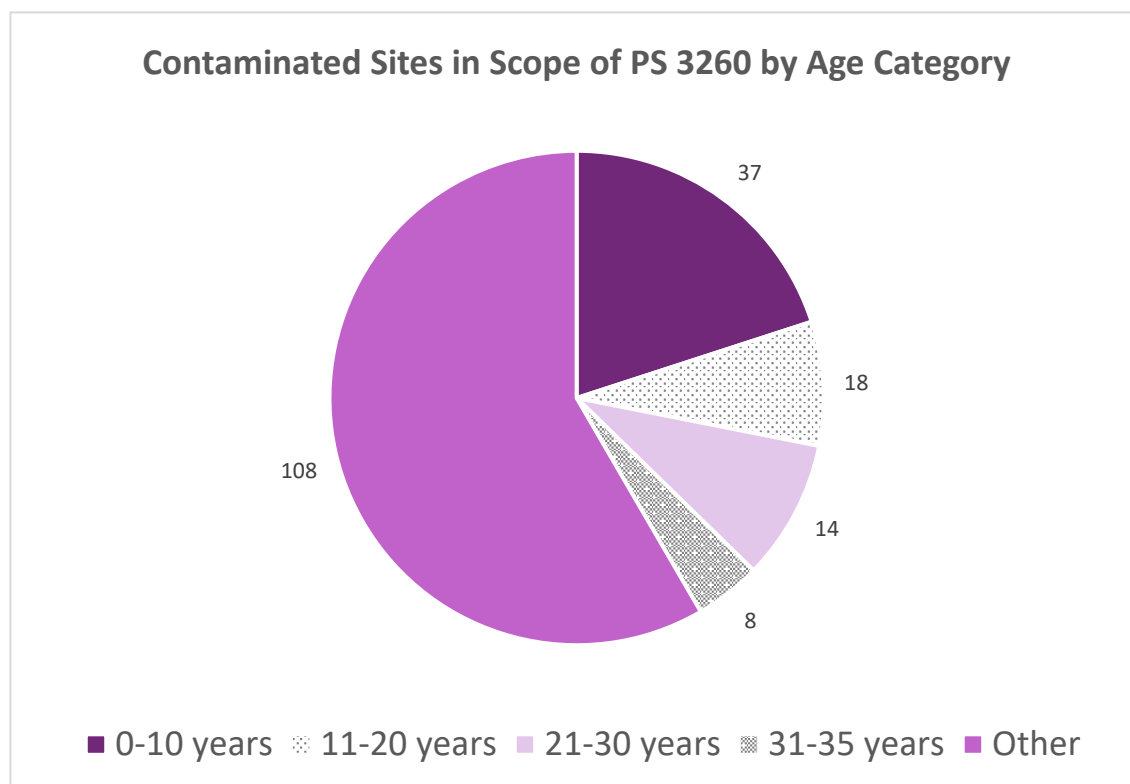
Each department provides the Office of the Comptroller information on the contaminated sites it owns, including:

- number of owned sites remediating;
- number of owned sites not remediating;
- number of owned sites outside the scope of the standard;
- total estimated liability;
- source and nature of contamination; and
- comments on sites, including reasons for not recognizing a liability

The breakdown of contaminated sites under the standard for fiscal 2020-2021 is presented below by department and by age category.



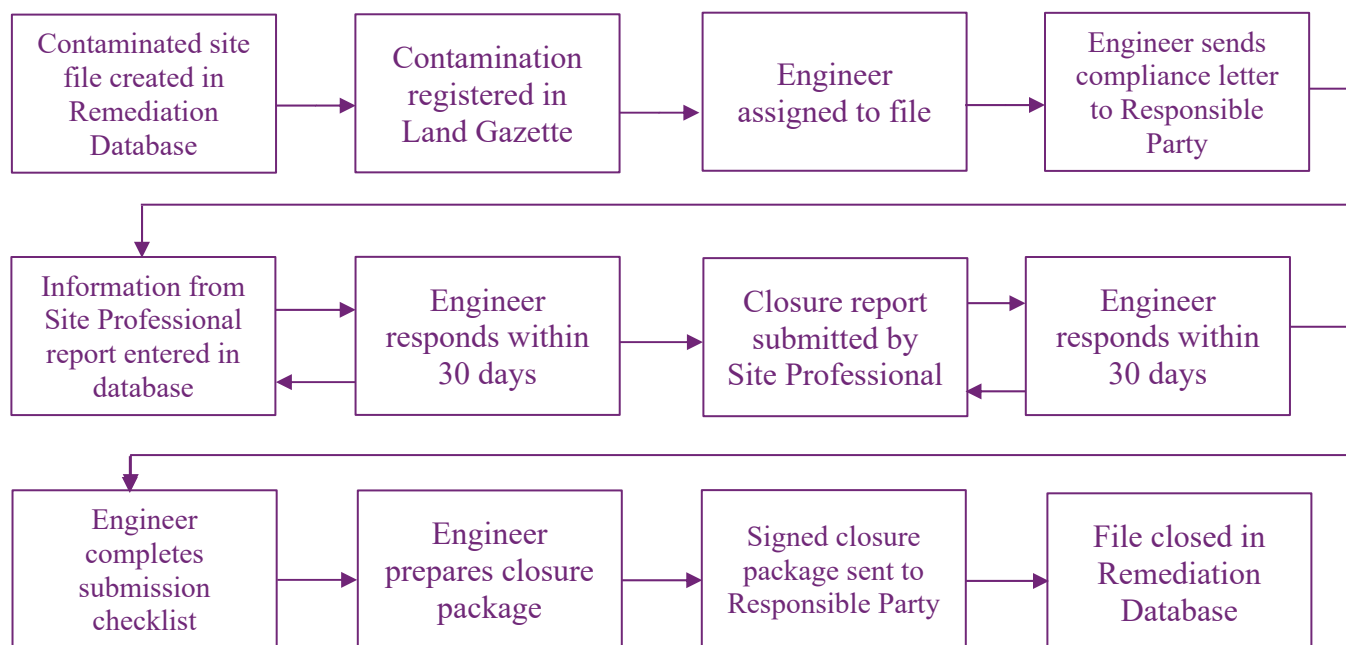
Note: Other contains 1 ELG site, 1 PHL site, and 5 SD sites



Note: Other contains 75 sites of unknown age and 33 sites marked as closed

Source: Created by AGNB with information from the Office of the Comptroller

Appendix V – Engineer Responsibilities in the Contaminated Sites Management Process



Source: Created by AGNB with information from the Department of Environment and Local Government

Appendix VI- Responsibilities of Parties in the Contaminated Sites Management Process

Responsible Party

RP1 compliance with Guideline
 RP2 notify Department
 RP3 notify impacted third parties
 RP4 hire Site Professional
 RP5 take action to protect environment and human health
 RP6 stay informed of process
 RP7 forward Site Professional documents to Department
 RP8 timely completion of CSM process

Site Professional

SP1 ensure professional competence of all work
 SP2 notify Department and Responsible Party of contamination
 SP3 review contents of all reports in part 2a of Record of Site Condition
 SP4 complete reports in part 2b of Record of Site Condition
 SP5 determine if Remedial Action Plan has been completed
 SP6 deliver all documents to Responsible Party
 SP7 complete Record of Site Condition and provided to Responsible Party

Department

D1 supporting and promoting the protection, restoration, enhancement, and wise use of environment
 D2 identifying the Responsible Party
 D3 ensure CSM process followed and regulatory response provided in a timely manner
 D4 auditing the CSM process
 D5 ensure compliance with the Guideline by the Responsible Party
 D6 acknowledge conclusion of the CSM process when remediation of the contaminated site is complete

Source: Created by AGNB with information from the Department of Environment and Local Government

Appendix VII – Jurisdiction Comparison of Contaminated Sites Management Processes in Atlantic Canada

	Legislation includes contaminated site regulation	Unauthorized contaminant release prohibited by legislation /regulation	Contaminated site remediation process referenced by legislation /regulation	Remediation required by legislation /regulation	Notification required by legislation /regulation	Insurance or security requirement in legislation /regulation for polluting activities	Orphan sites addressed in legislation /regulation	Remediation timeline required by legislation /regulation	Liability apportionment for contaminated sites addressed in legislation /regulation
New Brunswick	N	Y	N	N	Y	N	N	N	N
Nova Scotia	Y	Y	Y	Y	Y	Y	Y	Y	Y
Prince Edward Island	Y	Y	Y	Y	Y	N	N	Y	N
Newfoundland and Labrador	N	Y	Y	Y	Y	Y	N	N	Y

Source: Created by AGNB with information from the legislation of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador