Costing Contaminated Sites
What was PBO asked to do?

• Parliamentarian asked:
  - What is the cost of remediating the federal government’s contaminated sites?
  - How does this compare to the reported figures in the Public Accounts?
How much more is PBO estimate than liabilities reported in public accounts?

<table>
<thead>
<tr>
<th>(in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
</tr>
<tr>
<td>$1</td>
</tr>
<tr>
<td>$2</td>
</tr>
<tr>
<td>$3</td>
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<tr>
<td>$4</td>
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<tr>
<td>$5</td>
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</tbody>
</table>

Reported Liability

Estimated increase
What’s a contaminated site?

Areas of land or water affected by hazardous waste or pollution:

- above background levels and which pose or are likely to pose an immediate or long-term hazard
- exceeding specified levels
What is remediation?

• Remediation is:
  - Process of reversing or stopping the damage caused by the hazardous waste or pollution

• Remediation can entail:
  - Complete removal of contaminant(s)
  - Adoption of techniques to neutralize the contaminant(s)
  - Installation of impermeable barriers
  - Risk mitigation (e.g. putting a fence around the site)
What is recognized in the public accounts?

• Liability is recognized in the public accounts according to the Public Sector Accounting Standards (PSAS)
• A liability is recognized when a reasonable estimate can be made
Why is PBO’s estimate higher?

The PBO’s estimated cost is higher than the liability reported in the public accounts because it includes:

1. costs for sites that have not been assessed and those that are not fully assessed
2. costs for sites yet to be identified
3. cost increases for sites in active remediation
What environmental liabilities is the federal government responsible for?

in billions

- Future Asset Restoration: $5.7
- Contaminated Sites: $4.9
- Big Five sites: $1.8
- General inventory sites: $1.8
- Port Hope sites: $1.0
- Other: $0.2

1 Adds up to $4.8B due to rounding.
What has been done before?

• US Superfund program contaminated sites costed by:
  – Congressional Budget Office (CBO) in 1994
  – Resources For the Future (RFF) in 2001
What did PBO do?

- Obtained a copy of Federal Contaminated Site Inventory (FCSI) from Treasury Board Secretariat
- Restructured the data in the inventory
- Grouped sites based on class and year entered active remediation
The inventory’s profile varies by class.
Comparison of reported and estimated liabilities

![Bar graph showing comparison of reported and estimated liabilities for different classes.
- Class 1: Reported Liability = $1.4 billion, PBO Estimated Cost = $2.7 billion
- Class 2: Reported Liability = $0.5 billion, PBO Estimated Cost = $1.4 billion
- Class 3: Reported Liability = $0.1 billion, PBO Estimated Cost = $0.3 billion
- Totals: Reported Liability = $2.0 billion, PBO Estimated Cost = $4.4 billion

$2.1 billion more in estimated liabilities compared to reported liabilities.]
What about big five?

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Spent (in billions)</th>
<th>Total Liability (in billions)</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td>0.7</td>
</tr>
<tr>
<td>2008</td>
<td></td>
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<tr>
<td>2009</td>
<td></td>
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<td>2010</td>
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</tr>
<tr>
<td>2011</td>
<td></td>
<td>1.6</td>
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<td>1.8</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td>2.0</td>
</tr>
</tbody>
</table>

11.4%
What about Port Hope?

(in billions)
What risks remain?

• PBO estimate cannot account for yet to be assessed or identified contaminants.
• Example: Perfluorooctane Sulfonate (PFOS)