Spill and Leak Prevention in Practice

The following fact sheet presents an analysis of pollution prevention (P2) information submitted by facilities to the National Pollutant Release Inventory (NPRI) for the 2014 reporting year.

The analysis focuses on information from facilities that reported practicing spill and leak prevention in 2014. Spill and leak prevention is one of the seven common P2 techniques. It involves using measures to prevent accidental and chronic releases, such as leaks of a substance.

Which sectors reported practicing this pollution prevention technique in 2014?

Three hundred and fifty-nine (359) facilities from 26 different sectors reported practicing spill and leak prevention in 2014. The following table identifies the 5 sectors with the most facilities that practiced the P2 technique.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Facilities Practicing Spill and Leak Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Manufacturing</td>
<td>42</td>
</tr>
<tr>
<td>Mining and Oil and Gas Extraction</td>
<td>39</td>
</tr>
<tr>
<td>Mining (except Oil and Gas)</td>
<td>26</td>
</tr>
<tr>
<td>Paper Manufacturing</td>
<td>21</td>
</tr>
<tr>
<td>Wood Product Manufacturing</td>
<td>19</td>
</tr>
</tbody>
</table>
Quick facts

- Number of facilities that reported practicing at least one of the seven common P2 techniques in 2014: 953²
- Number of facilities that reported practicing spill and leak prevention in 2014: 359
- The most reported spill and leak prevention subtechnique: Implemented inspection or monitoring program of potential spill or leak sources
- The provinces with the most facilities that reported practicing spill and leak prevention (with the percentage share of all facilities that reported practicing spill and leak prevention):
  - Quebec: 129 (36%)
  - Ontario: 72 (20%)
  - Alberta: 65 (18%)
  - British Columbia: 51 (14%)
  - Manitoba: 12 (3%)

What were the most practiced spill and leak prevention subtechniques in 2014?

In the NPRI reporting form, the individual P2 techniques are broken up into subtechniques. Facilities can select which subtechnique they practiced in that reporting year. Note that individual facilities can report practicing multiple P2 subtechniques.

The following graph shows the number of facilities that reported practicing spill and leak prevention subtechniques in 2014.
The most practiced spill and leak prevention subtechniques in 2014

Subtechnique Used

- Implemented inspection or monitoring program of potential spill or leak sources: 188
- Improved storage or stacking procedures: 117
- Improved procedures for loading, unloading, and transfer operations: 90
- Modified containment procedures: 59
- Installed vapor recovery systems: 48
- Improved draining procedures: 25
- Other: 112
Where was this pollution prevention technique practiced in 2014?

The NPRI tracks the location of each reporting facility. The following map shows the location of facilities that reported practicing spill and leak prevention in 2014.
Examples of how Canadian facilities practiced spill and leak prevention in 2014

Facilities reporting to the NPRI can provide comments on their P2 activities, describing their initiatives in more detail. The following examples are drawn from facilities that reported practicing spill and leak prevention in 2014:

- A chemical manufacturer in Manitoba updated and field-tested its product loading and handling standard operating procedures to reduce the risk of spills.
- A chemical manufacturer in Quebec replaced its single-walled oil tank with a double-walled oil tank to reduce the risk of leaks.
- A fabricated metal manufacturer in Alberta installed automatic shut-off valves and overflow alarms. When the alarms trigger, the system sends automatic messages to the emergency response team; this ensures that the spill is addressed in a timely matter regardless of what time of day or night the spill occurs.
- A primary metal manufacturer in Ontario has implemented secondary containment within its operating facility. This has resulted in a reduction of waste generated by accidental releases.

Other pollution prevention in practice fact sheets

- Pollution Prevention in Practice
- Materials or Feedstock Substitution in Practice
- Product Design or Reformulation in Practice
- Equipment or Process Modification in Practice
- On-site Reuse, Recycling or Recovery in Practice
- Inventory Management or Purchasing Techniques in Practice
- Good Operating Practice or Training in Practice

1 Sectors are based on the North American Industry Classification System (NAICS).
2 Overall, 1157 facilities reported practicing P2 in 2014; however, this includes facilities that reported practicing an "other" P2 technique (i.e., a technique other than the 7 common P2 techniques). As this fact sheet looks only at the 7 common P2 techniques, these other facilities are not included in this analysis.