Containment Sump and Spill Bucket
Installation and Periodic Testing

Which containment sumps or spill buckets require tightness testing?

Tightness testing is required for all new containment sumps, including spill containment/buckets, when initially installed, unless the containment sump or spill containment/bucket is double-walled with continuous electronic pressure, vacuum, or liquid-filled interstitial monitoring and the monitoring system has been verified as operational in accordance with the manufacturer’s specifications.

Periodic tightness testing is required for all existing containment sumps that are part of a piping interstitial monitoring system, and spill containment/buckets, unless the containment sump or spill containment/bucket is double-walled with continuous electronic pressure, vacuum, or liquid-filled interstitial monitoring.

When do containment sumps or spill buckets need to be tightness tested?

At installation:

- Secondary containment sumps, including spill containment/buckets must be tested for leaks at the time of installation, in accordance with the manufacturer’s instructions and the adopted standard PEI/RP1200 unless the containment sump or spill containment/bucket is double-walled with continuous electronic pressure, vacuum, or liquid-filled interstitial monitoring and the monitoring system has been verified as operational in accordance with the manufacturers specifications (ATCP 93.500(6)(d) and 93.505(2)(a)3.).

After repairs:

- Any repair that affects any portion of a containment sump or a spill containment/bucket for a UST system must be followed by a tightness test of the affected portion of the sump or spill containment/bucket in accordance with the manufacturer’s instructions and the adopted standard PEI/RP1200 to verify that the containment complies with this chapter before that portion is placed back into service. Another method may be used if approved in writing by the department. (ATCP 93.500(7)(h) and (j)). Low-level sump tightness testing is not allowed for containment sump post-repair tightness testing.

- Following the post-repair tightness test of a containment sump or a spill containment/bucket that is monitored with either a liquid sensor or is double-walled with continuous electronic pressure, vacuum, or liquid-filled interstitial monitoring, the monitoring system must be verified as operational in accordance with the manufacturer’s specifications before placing back in service.
Every 3 years following initial installation:

- All containment sumps (except for double-walled containment with continuous electronic pressure, vacuum, or liquid-filled interstitial monitoring) that are part of a piping interstitial monitoring system and all spill buckets must be tested for leaks at least once every 3 years using one of the following methods:
  - Hydrostatic testing per the manufacturer’s instructions and the adopted standard PEI/RP1200.
  - A code of practice developed by a nationally recognized association or independent testing laboratory.
  - Another method approved by the department (ATCP 93.500(8)(c) and 93.505(3)(b)).

- Methods approved by the department include the use of:
  - Low-level liquid testing for containment sumps is allowed if a liquid level sensor is mounted at the lowest point in the sump and a periodic test is performed by adding liquid to a point that will ensure activation of the sensor; and
    - The submersible pump(s) for all petroleum product piping contained in the sump automatically shuts off when product activates the sensor, or
    - The dispenser automatically shuts off when product activates the sensor, and the facility is always staffed when the pumps are operational.
  - Dri-sump Containment Tightness Method, Secondary Containment and Spill Bucket Integrity Test (Material Approval 20190006)

Note: PEI/RP1200-19 should be used to perform and record the low-level liquid test.

Note: The 3-year containment sump periodic test applies to all new tank systems installed after February 1, 2009, and all existing tank systems prior to February 1, 2009 that use interstitial monitoring for their pipeline leak detection method. The 3-year spill containment/bucket periodic test applies to all spill containment/buckets regardless of installation date. DATCP enforcement of this requirement will not begin until November 1, 2022.

Note: prior to performing the periodic test, a visual inspection of the containment sump or spill bucket is required in accordance with PEI/RP1200, ATCP 93.500(8), and ATCP 93.505(3). Any cracks, loose parts/clamps, torn/damaged penetration fittings would fail the visual inspection and require repair or replacement prior to proceeding with the periodic test.

Use the flowchart below to determine if a tank system with double wall piping requires periodic testing.
Use the flowchart below to determine if a tank system spill containment/bucket requires periodic testing.

Does the technician performing the tightness testing need to be credentialed?

No, however the person performing the containment sump tightness testing and their employer must not have any personal or monetary interest in the facility where the testing is taking place (ATCP 93.500(8)(c)(2).

What happens if the containment sump or spill bucket fails tightness testing?

The containment sump or spill bucket must be repaired or replaced and pass a post-repair or installation tightness test. See the Containment Sump Repair Fact Sheet for more details.