

February 2023 DATCP Installer Training Containment Sump and Spill Bucket Installation and Periodic Testing

Greg Bareta, PE
Internal Operations Manager
Bureau of Weights and Measures
Wisconsin Department of Agriculture,
Trade and Consumer Protection
greg.bareta@wi.gov
(608) 224-5150
www.datcp.wi.gov

Containment Sump and Spill Bucket Installation and Periodic Testing

Which containment sumps or spill buckets require tightness testing?

1. **Initial** 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 manufacturers specifications.
2. **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.

Containment Sump and Spill Bucket Installation and Periodic Testing

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.

Containment Sump and Spill Bucket Installation and Periodic Testing

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

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. **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

Containment Sump and Spill Bucket Installation and Periodic Testing

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

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

Containment Sump and Spill Bucket Installation and Periodic Testing

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

Every 3 years following initial installation (cont'd):

- 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.

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

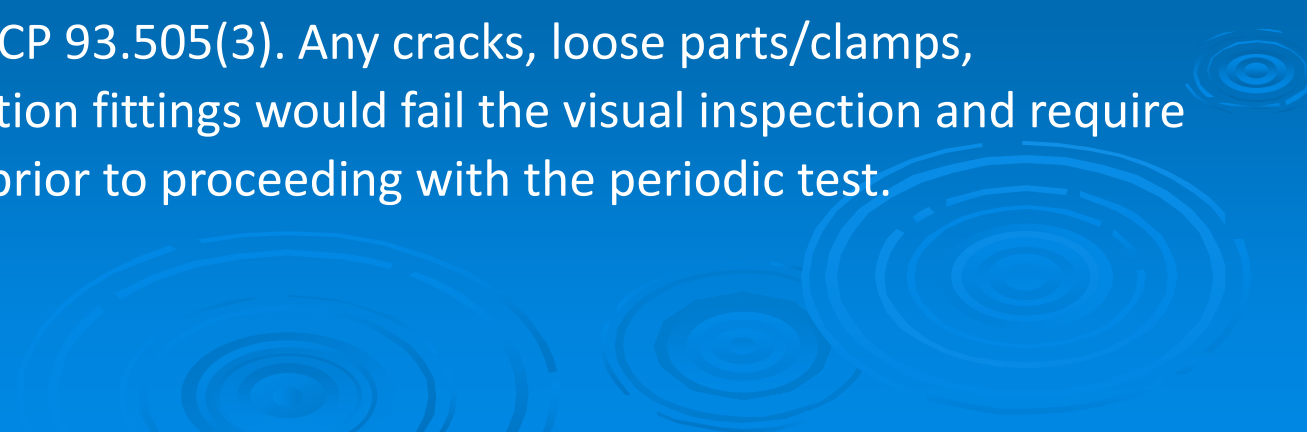
- Dri-sump Containment Tightness Method, Secondary Containment and Spill Bucket Integrity Test (Material Approval 20190006)

Containment Sump and Spill Bucket Installation and Periodic Testing

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

Note: The 3-year 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. 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.



Containment Sump and Spill Bucket Installation and 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.

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.



Containment Sump and Spill Containment Basin/Bucket Repairs

What is considered a repair?

A repair is defined by ATCP 93 as any work necessary to correct or restore a tank, pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, leak detection equipment, or other storage tank or dispensing system component that either has caused a suspected or obvious release or has failed to function properly per ATCP 93.050(105)



Containment Sump and Spill Containment Basin/Bucket Repairs

Can spill Containment Basins/Buckets be repaired?

Spill Containment buckets typically cannot be repaired; however, several manufacturers provide replaceable inserts or bladders for single and double-wall spill containments that do not require breaking concrete for replacement. Repair of spill containment basins/buckets, including the use of any sealants, fiberglass, or other materials to seal holes or seams, is not allowed unless approved by the department. Replacement Spill Containment basins/buckets must meet the requirements for a new spill containment basin/bucket in accordance with ATCP 93.500(6).

Containment Sump and Spill Containment Basin/Bucket Repairs

Can spill Containment sumps be repaired?

Yes- any secondary containment sump with a tear, crack, or hole must be either repaired or replaced with equipment meeting the criteria for new secondary containment. If the containment sump subsequently becomes no longer liquid-tight then it must be replaced with equipment meeting the criteria for new secondary containment per ATCP 93.500(8).

Note: The one-time-repair limit in this section does not apply to connection boots or clamps. This section is directed instead at patches to the wall or floor of a sump because these patches commonly have failed by delaminating



Containment Sump and Spill Containment Basin/Bucket Repairs

What are the requirements for containment sump repairs?

Repairs to underground tank systems, including containment sumps, must be made by:

- the manufacturer's authorized representative or;
- in accordance with a standard developed by a nationally recognized association or;
- in accordance with a standard developed by an independent testing laboratory that is acceptable to the department per ATCP 93.500(7)(b).

Note: One acceptable standard for performing repairs of a containment sump is **NLPA/KWA Standard 823— First Edition 10-01-2020**, Standard for Preventative Maintenance, Repair, and In-situ Construction of Petroleum Sumps. This standard is available from NLPA at <http://www.nlpa-online.org/standards.html>

Containment Sump and Spill Containment Basin/Bucket Repairs

What repair methods are approved for containment sumps?

Approved containment sump repair methods include:

- the sump manufacturers authorized materials/procedures;
- with a department accepted standard such as the NLPA/KWA Standard 823, Standard for Preventative Maintenance, Repair and In-situ Construction of Petroleum Sumps; or
- with third-party repair products and procedures as approved by the department.

Third-party repair products/procedures as approved by DATCP include:

- All Seal-Sump Tite(Armor Shield) • Tanknology • icon Containment Solutions • Blueline Technologies • Bravo
- All repairs must be performed by a licensed contractor trained and certified in the repair method used. Repair materials and methods must be compatible with up to E100 and B100 fuels.
- **Note:** Repairs which use any type of sealant to coat or fill in cracks or other damage to boots, sump walls, seams, gaps, or any other component without structural reinforcement are not acceptable.

Containment Sump and Spill Containment Basin/Bucket Repairs

What post-repair testing is required?

Any repair that affects any portion of a containment sump or a spill containment basin/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 per ATCP 93.500(7)(h) and (i).

Note: Low-level sump tightness testing is not allowed for containment sump post-repair tightness testing



Containment Sump and Spill Containment Basin/Bucket Repairs

What do I need to submit to DATCP?

Any repair to below-grade tank system components below the top of a shear valve, including containment sumps and components, must be recorded on the department's TR-WM-136 form.

- A copy of the completed TR-WM-136 form shall be provided to the tank system operator.
- The tank system operator shall have the completed TR-WM-136 form on site and available for inspection within 30 days after receiving it from the party that performed the repair, except as provided in sub. ATCP 93.500(9)(b)2. for unattended sites.

Containment Sump and Spill Containment Basin/Bucket Repairs

Is a tank system site assessment (TSSA) required following a repair or replacement?

When any Containment sump or spill containment basin/bucket that has an obvious or suspected release of product to the environment is repaired or replaced, an assessment shall be performed in accordance with ATCP 93.580 to 93.585.

