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New method to test all types of UST containment sumps without water or waste

Kwan, Roxanne S <roxanne.kwan@doh.hawaii.gov> Tue, Mar 27, 2018 at 2:31 PM
To: Danny Brevard <danny@accent-us.com>
Cc: "office@accent-us.com" <office@accent-us.com>

Hi Danny

Thank you for sending me information on your product. Hawaii does not have a certification program.

Roxanne

From: Danny Brevard [mailto:danny@accent-us.com]
Sent: Wednesday, February 28, 2018 12:28 PM
To: Kwan, Roxanne S <roxanne.kwan@doh.hawaii.gov>
Cc: office@accent-us.com
Subject: New method to test all types of UST containment sumps without water or waste

Hi Roxanne,

I have been contacted by a contractor in Hawaii about my new method of testing spill buckets and any type of open top sump including under dispenser sumps, STP sumps, transitional sumps and any containment that is required to be liquid tight to contain spills.

I will be presenting it to the NWGLDE in April. The following is my introduction for the NWGLDE presentation. **I am requesting information on how and what to provide to obtain acceptance for this testing method in the state of Hawaii.**

DRI-sUmp™ Containment Tightness Testing

A method to quickly and safely test any open-top containment sump to 0.10gph standard with no waste by-products and without water.

Underground storage tanks (USTs) that contain a wide variety of materials, including regulated liquids such as gasoline, aviation fuel, diesel and other types of regulated liquids, are required under federal and state regulations to provide various compliance documentation and periodic tests. One of these requirements is that tanks and piping installed after April 11, 2016 (EPA) must have secondary containment and interstitial monitoring. Further, secondary containment sumps for dispensers, submersible turbine pumps, transition and spill are required to be tested for integrity at least once every three years. Furthermore, some containment sumps must be tested for integrity annually.

The only current acceptable method to test containment is filling the containment with a test liquid such as water. Typically, a volume of water is placed in the containment above any bottom and side penetrations, measured and then remeasured after a calculated period of time. If there is no loss of the test liquid, then the containment system is determined to have passed the integrity test. However, the water testing fluid is considered contaminated since it was placed in a containment vessel used to catch releases of liquids such as gasoline or diesel fuel. Thus, the water testing fluid must be disposed of in an environmentally safe manner. Currently, the EPA states that there are approximately 223,157 UST facilities in the United States and each facility averages three USTs and four dispenser islands. The annual testing of spill bucket containment would require the disposal of approximately 4,463,140 gallons of water annually at a cost of approximately $89,262,800.00. Additionally, and based on current EPA Regulatory Costs (5/5/2013), the three-year integrity testing of underground storage tank and dispenser containment sumps would require the disposal of approximately 7,810,495 gallons of water annually at a cost of approximately $156,209,900.00. (EPA-Regulatory Costs 5/5/2013)

This is a potential waste of over 12 million gallons of water with a total cost of almost a ¼ billion dollars…annually.

The problem in testing containment sumps is complicated since it is not possible to "seal" containment sumps with piping and other ancillary equipment entering the sump from all directions. Containment sumps consists of STP sumps, transitional sumps, under-dispenser sumps and other sumps designed to be liquid tight and to contain spill. RP1200 describes testing methods for spill buckets using a vacuum system with a test time of approximately on minute under Section 6. However, RP1200 only addresses a hydrostatic test (water) that is one hour in length for all open-top containment sumps which also contain double wall piping complications. The basis for a leak is the loss of more than 1/8". However, the volume of 1/8" in a 12-inch diameter spill bucket is much more stringent than the 1/8" in a 36-inch diameter STP sump or a large multi dispenser containment sump. The idea of determining a leak based on 0.10gph is not in the equation in this type test. The PMAA has presented an "under-fill" hydrostatic test that decreases the ability to determine a leak even more and should not even be considered as anything other than a politically motivated financial option. The main problem with hydrostatic testing is indicated in the cost of water disposal as stated above.

The DRI-sUmp™ equipment and method uses **no water**, creates **no waste** and can be conducted in as little as **10-90 seconds.** (Patent-pending US and all foreign) The proprietary heavy vapor fog is created from food-grade materials and is completely safe. It can be used to test any open top containment including but not limited to:

- Spill buckets
- Under dispenser containment sumps
- Transition sumps
- STP sumps

The test can be conducted with either negative or positive pressure. STP sumps can be tested using existing 4-inch observation wells. If wells do not exist, then a small ¾" slotted tube can be permanently installed near the containment sump. This vapor tube can be left in place for future tests.

The Dri-sUmp™ method is also a visual test that can be seen and verified by any interested party. Everything is visual including:

- The Containment Sump can be seen "full" of the vapor fog.

- Pass/Fail is seen by the laser-line (fail) or laser-dot (pass)

The heavy vapor fog dissipates in approximately 10 minutes which leaves no residual waste. Further, the method is capable of quickly identifying the location of the leak, so repairs can be made quickly and then tested again.

Finally, this method offers reproducible results under multiple test conditions and a measurable amount of loss meeting or exceeding the 0.10gph requirement for tightness testing.

Sincerely,

Danny Brevard; PG

Click for Brevard Curriculum Vitae

Click for Brevard LinkedIn Profile

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