

ADEM Guidance for Low Level Hydrostatic Integrity Test of UST Containment Sumps Effective December 8, 2017

On October 13, 2015, EPA finalized the first significant changes to the federal UST regulations since 1988. All states will have to update their UST regulations to be "no less protective" than EPA's regulations. Alabama's revised UST regulations were final December 8, 2017. These regulations are equivalent to the EPA requirements.

By December 8, 2020, owners and operators of all UST systems using interstitial monitoring as a method of leak detection, will be required to test all single walled containment sumps to ensure that they remain liquid tight. These tests must be performed once every three years. However, sumps installed on or after December 8, 2017 are required to meet this requirement upon installation.

Test methods that may be used to test UST Containment Sumps

The regulation allows owners and operators of USTs must use one of the following test methods:

- Testing requirements developed by the manufacturer (only if the manufacturer has developed a test method),
- Test methods from a code of practice developed by a nationally recognized association or independent testing laboratory, or
- Testing requirements determined by the Department to be no less protective of human health and the environment than the testing requirements listed.

Currently, there are several methods available to test sumps that are in accordance with the first two bullets above. However, there is currently no manufacturer or code of practice procedure for a low level hydrostatic UST containment sump integrity test. Therefore, ADEM has developed a low level hydrostatic UST containment sump integrity test procedure (attached) in accordance with the last bullet above.

The test must be performed in accordance with the test procedure outlined on the next 2 pages. A completed copy of *ADEM 3 Year Containment Sump Integrity Test Report Form (Low Level Method)* must be sent to ADEM with 30 days of completing the test. A copy of the test must be maintained by the UST owner for 3 years from the date of the test.

If there are any questions regarding this low level hydrostatic integrity test procedure for UST containment sumps please call us at 334 270-5655.

ADEM Low Level Hydrostatic Integrity Test Procedure for UST Containment Sumps

The following ADEM low level hydrostatic test procedure is based on PEI Recommended Practice 1200-17, Section 6.5 "Containment Sump Integrity Testing". This recommended practice is only available from the Petroleum Equipment Institute, and may be ordered from their website at www.pei.org/recommended-practices.

This ADEM test procedure may only be used to determine if single walled submersible pump, intermediate, and dispenser sumps are leaking (PEI Subsections 6.5.1 "General" and 6.5.2 "Purpose"); it may only be used as a once every three year test (i.e. it cannot be used in lieu of the high level sump test required at installation by PEI Recommended Practice 100-17, Section 8.5.4 "Containment Sump Testing"); and it may only be used if the sump sensor is permanently mounted at the lowest level in the sump, and when activated, will shut off the submersible pump.

If the sump sensor is found to be mounted at a higher level in the sump than indicated in the test report any time after this ADEM sump test procedure was performed, the test will be considered invalid. A new high level test will be required to be performed immediately in accordance with PEI Recommended Practice 1200-17, Section 6.5 "Containment Sump Integrity Testing".

This test procedure requires water to be added to the sump and the water level measured at the beginning and end of the test to determine if a sump is leaking (PEI Subsections 6.5.3 "Description of test").

Use *DRAFT ADEM 3 Year Containment Sump Integrity Test Report (Low Level Method)*, form # D1 to document the test results.

PREPARE FOR THE TEST AS FOLLOWS:

- Become familiar with the PEI "Caution" statements concerning removal of sump lid, cover, and/or manhole cover; and potential damage to electrical connections due to the addition of water to the sump (PEI Section 6.5 "Containment Sump Integrity Testing").
- Obtain the necessary equipment for the test which consists of a measuring device, time clock, and water (PEI Subsection 6.5.4 "Test Equipment").
- Be sure to take necessary precautions during rain or freezing weather (PEI Subsection 6.5.4 "Test Equipment" Paragraph 1).
- Water, fuel, trash, and debris must be removed from sump prior to test (PEI Subsection 6.5.5 "Preparation" Paragraph 2). Document this on the ADEM test report form.

- Ensure the sump is free of cracks, holes, and compromised boots (PEI Subsection 6.5.5 "Preparation" Paragraph 3). If any of these are present, the sump immediately fails the test (PEI Subsection 6.5.5 "Preparation" Paragraph 6). Document this on the ADEM test report form.

PROCEED WITH THE TEST AS FOLLOWS:

- Place a measuring stick in the sump at the lowest level of the sump (PEI Subsection 6.5.6 "Test Procedure" Paragraph 2).
- Document the level of the lowest sump penetration above the bottom of the sump on the ADEM test report form.*
- Add water to the sump until the sump sensor shuts off the submersible pump. Document this level above the bottom of the sump on the ADEM test report form.*
- Increase the liquid level 3 inches in the sump. Due to the potential for sump deflection, wait 5 minutes before beginning the test. Document the water level above the bottom of the sump and the test start time on the ADEM test report form.*
- Avoid disturbing the water in the sump during the test (PEI Subsection 6.5.6 "Test Procedure" Paragraph 3).
- After completion of the one hour test, document the test end time and the water level above the bottom of the sump on the ADEM test report form (PEI Subsection 6.5.6 "Test Procedure" Paragraph 4).

* PLEASE NOTE: For conducting a low level hydrostatic sump test in Alabama, these procedures supersede those described in PEI Subsection 6.5.6 "Test Procedure" Paragraph 1.

AFTER COMPLETION OF THE TEST, PROCEED AS FOLLOWS:

- Document the drop in water level accurate to 1/16th of an inch on the ADEM test report form (PEI Subsection 6.5.6 "Test Procedure" Paragraph 2).
- Document whether or not the test passes on the ADEM test report form. Pass - level drops less than 1/8th inch; Fail - level drops 1/8th inch or more. (PEI Subsection 6.5.7 "Pass/Fail Criteria").
- Provide the tester's initials and date on the ADEM test report form.
- Remove the measuring stick from the sump.
- Remove water from the sump. Remove or open any test boots that would prevent flow of liquid from the piping interstitial space into the sump. Put the sump lid, cover, and/or manhole cover back in place (PEI Subsection 6.5.6 "Test Procedure" Paragraph 5).
- If repairs are required, document the repairs at the bottom of the ADEM test report form.