WASTE AND REMEDIATION DIVISION
Waste & Underground Tank Management Bureau

POLICY MEMORANDUM

SUBJECT: Dri-Sump Testing

DATE: February 26, 2021

DISCLAIMER: The Department is in no way endorsing or advertising this product. This policy addresses only the specified applications for the product.

BACKGROUND:

Montana requires testing to be done by a licensed installer or compliance inspector according to ARM 17.56.303(2). See rule at:
http://www.mtrules.org/gateway/RuleNo.asp?RN=17%2E56%2E303

ARM 17.56.306(1)(C) allows for alternative methods of containment tightness testing as long as the method is no less protective of human health and the environment than the requirements listed in (1)(a)(ii)(A) and (B). See the rule at
http://www.mtrules.org/gateway/ruleno.asp?RN=17.56.306 [mtrules.org]..

POLICY:

The following testing method done only by an installer or compliance inspector licensed by Montana DEQ is approved by the UST Program under ARM 17.56.306(1)(C).

1) Dri-sump Containment Tightness Testing

a) Must file a minor construction permit before installation of tubes and test equipment for dri-sump testing. Minor construction permit can be found at:
https://deq.mt.gov/files/Land/UST/Documents/PDFfiles/NewApplications/Permit%20Application%20Minor.pdf

b) Must only be done by an installer or compliance inspector licensed by Montana DEQ.

c) Return testing forms and site map to DEQ via email degustprogram@mt.gov or mail to:

Department of Environmental Quality
WUTMB - UST Section
PO Box 200901
Helena, MT 59620-0901

d) Must report suspected releases to a person within the department or to the 24-hour Disaster and Emergency Services duty officer available at telephone number (406) 324-4777 within 24 hours of discovery.

e) Licensed testers must use the test method below:

AC'CENT Environmental
Dri-Sump Containment Tightness Test Method
SECONDARY AND SPILL CONTAINMENT TEST METHOD

Certification

Leak rate of 0.1 gph with PD = 100%, and PFA = 0%

Please be aware that the authority having jurisdiction in your particular state, territory, tribe or municipality may have set a minimum detectable leak rate for secondary and spill containment testing.

Applicability

For testing spill and sump containments that are free of debris or measurable liquid, located in non-saturated backfill consisting of sand, pea gravel, or clay/silt.

Specification

Containment must be free of debris and measurable liquid.
Containment backfill can be moist but not saturated with measurable liquid as verified by visual observation of liquid level in Vapor Stimulator Tubes (VST) or if the sump bottoms are deeper than the VST through observation wells located in the containment backfill.
VSTs shall be installed per manufacturer's installation training and certification procedures and instructions which include the minimum number of VSTs, placement and depth for each type of containment.

Vapor Stimulator Tubes (VST) Placement Chart

Containment Sump Type	Minimum Number of VSTs per Containment Sump	Maximum Horizontal Distance from Sump Wall	Minimum Length of VST	Backfill Soil Type Acceptance	Minimum Test Time for pass or fail results
Spill Bucket	1	8 inches (±1")	18 inches	All	1 minute
Under Dispenser Containment Sump (UDC)	1	8 inches (±1")	18 inches	All	1 minute
Transition Sump (UDC depth)	1	8 inches (±1")	18 inches	All	1 minute
Transition Sump (STP depth)	2	8 inches (±1")	36 inches	All	1 minute
Submersible Turbine Sump (STP)	2	8 inches (±1")	36 inches	All	1 minute

Pre-test

A manometer is used to indicate adequate air flow and communication between VSTs in

Verification	a 5-10 second pre-test procedure. Communication will be verified between two VSTs within the tank, piping, and dispenser in the same type backfill.
Waiting Time	No waiting time before test begins.
Test Period	Minimum of one minute once the test begins.
System Features	A leak is determined by observation of a change in the specialized laser light beam from a dot to a line which is indicative of the presence of the proprietary heavy vapor.
Comments	Dri-sump Containment Tightness Test method uses the proprietary heavy vapor aerosol instead of water to completely fill the sump, interstice or vessel. AC'CENT states this proprietary vapor aerosol is made from a formula of chemicals which are all food grade, pH neutral, non-petroleum based, non-toxic, non-flammable, and pose no environmental impact. The dissipation of the aerosol reverts back to normal organic elements in ambient air. When installed per the manufacturer's placement requirements this method allows for detecting heavy vapor egress from the containment at any point. The method automatically tests for adequate flow of air and vapor through the backfill each time the system is activated. Any stoppage of flow through the VST or backfill will cause increased vacuum on the View Chamber that is quickly identified by a significant collapse of the View Chamber side walls. Temperature is not a factor. The evaluation testing was conducted with three different non-metallic commercially manufactured deep containment sumps, 300 gallon capacity, 47 inches diameter and 60 inches long. These were installed as would typically be found at a fuel service station. They were tested in different backfill types, including: sand; pea gravel, and clay/silt mix. The presence of water above the bottom of the sumps was not evaluated.

Danny Brevard, PG

AC'CENT Corporate Offices

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E-mail: info@info@accent-us.com
URL: www.accent-us.com

Evaluator: Ken Wilcox Associates

1125 Valley Ridge Dr

Grain Valley, MO 64029

Tel: (816) 443-2494

Dates of Evaluations: 10/04/18

Dri-sump® Containment Tightness Test Report

Date:

Facility Name:	Owner:
Address:	Address:
City, State, Zip:	City, State, Zip:
Facility I.D. #:	Phone:

Tank Number						
Product Stored						
Sump Type	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP	☐ Spill Bucket ☐ UDC _____ ☐ Transitional ☐ STP
Sump Capacity						
Construction	☐ Single-walled ☐ Double-walled	☐ Single-walled ☐ Double-walled	☐ Single-walled ☐ Double-walled	☐ Single-walled ☐ Double-walled	☐ Single-walled ☐ Double-walled	☐ Single-walled ☐ Double-walled
Liquid & debris removed	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Visual Inspection (No cracks, loose parts or sump/pipe separation points.)	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail
Communication: (in/WC)	Close:_____ Open:_____	VST: _____	Closed Hose=C Open Hose=O VST Connect=V	Formula: C>O C>V and V≥O	Comments:	
Test in seconds						
Laser Verification	☐ Dot (pass) ☐ Line (fail)	☐ Dot (pass) ☐ Line (fail)	☐ Dot (pass) ☐ Line (fail)	☐ Dot (pass) ☐ Line (fail)	☐ Dot (pass) ☐ Line (fail)	☐ Dot (pass) ☐ Line (fail)
Final Test Results	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail

Must pass/fail visual sump inspection and Laser results seen by the laser-line (fail) or laser-dot (pass) Conduct second test on any sump which fails the first test. VST Location Map must be attached to this report to be valid.

COMMENTS:

Failed tests must be reported to a person within the department or to the 24-hour Disaster and Emergency Services duty officer available at telephone number (406) 324-4777 within 24 hours of discovery.

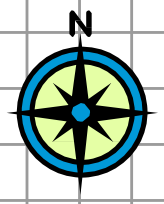
Tester Name and Company Contact Information:		
Tester Certification Info:	Certification #:	Cert Date:
Equipment Certification Info:	Certification #:	Cert Date:

Montana License # _ Montana License Expiration Date_

Dri Sump Site Plan

Facility Name:	**Facility ID#:**

INSTRUCTIONS: Show location of VST's, sumps and piping, and buildings on property site. Clearly label these items.



(Inspector Initial)	(Date)		