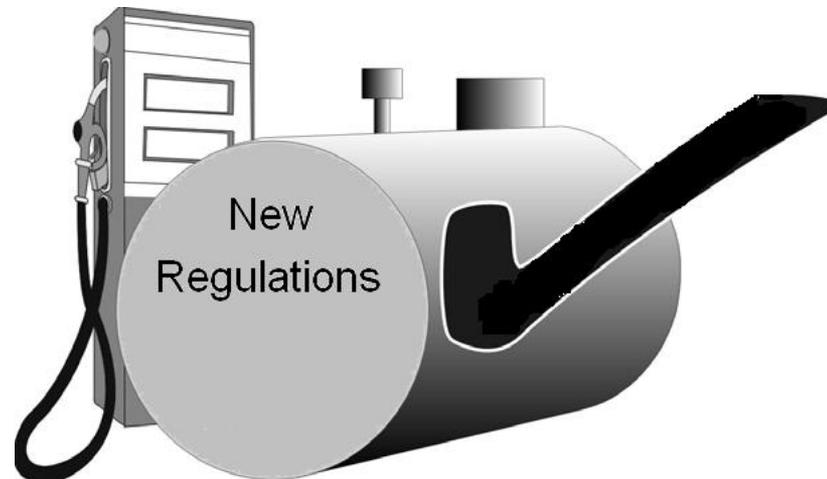




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PROPOSED UNDERGROUND STORAGE TANK RULE CHANGES



Heather Peters
UST Compliance and Technology Unit

Rulemaking Schedule

- Regulatory Impact Report – July 20, 2016
– Comment period closes- Sept. 19, 2016
- Rules filed with SOS- Aug. 15, 2016
- SOS publishes- Sept. 15, 2016
- Public hearing- Oct. 20, 2016
- End of comment period- Oct. 27, 2016
- Final rule published- March 1 & 31, 2017
- Effective- April 30, 2017

Regulation Changes

- Federal Rule Based Changes
 - Federal Regulations finalized in July
 - Federal Rules effective October
 - NOT effective in Missouri
- State proposed changes
 - Open for discussion
 - Very few of the changes

State Program Approval (SPA)

- U.S. Environmental Protection Agency (EPA) enacts underground storage tank (UST) rules
- NOT in effect immediately in Missouri
- MoDNR will promulgate rules
- MoDNR will ‘renew’ program approval

EPA Compliance Dates ≠ Missouri Compliance Dates

EPA has reviewed our rules

- ‘Approved’ most
 - Alternative lining/lined tanks
 - Alternative dispenser sump language
 - Out of use language/ FR
- Did not approve a few items
 - SIR reporting date
 - Operator training – Class C must be trained *before* being responsible before compliance

Definitions

- Many are in the statute
 - 319.100 RSMo
- Federal definitions have been “incorporated by reference”
- Propose to pull definitions into state rule (will be longer)

Interior Linings

- Inspections must include photo/video documentation
- Repair/install technician must be NACE or ICC certified
- Include UL 1856



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Interior Linings



UL1856- The New Lining Standard

1. Lining: single-walled, traditional testing
2. Upgrade: double-walled
 - Requires original “host” tank integrity
3. Self-structural: double-walled
 - Does **NOT** require original “host” tank integrity

UL1856- The New Lining Standard (cont.)

1. Lining: single-walled, traditional testing
 - √ Re-open, repair
2. Upgrade: double-walled
 - × Do not know how to repair (steel tank integrity)
 - × Do not know how to re-open once out of use
3. Self-structural: double-walled
 - √ Repair
 - ? Re-open

Lining Inspection Options

- Standard five year inspection
- OR Interstitial Monitoring
 - If double walled lining
 - May use interstitial monitoring
 - Must have 12 months interstitial monitoring records

NEW!

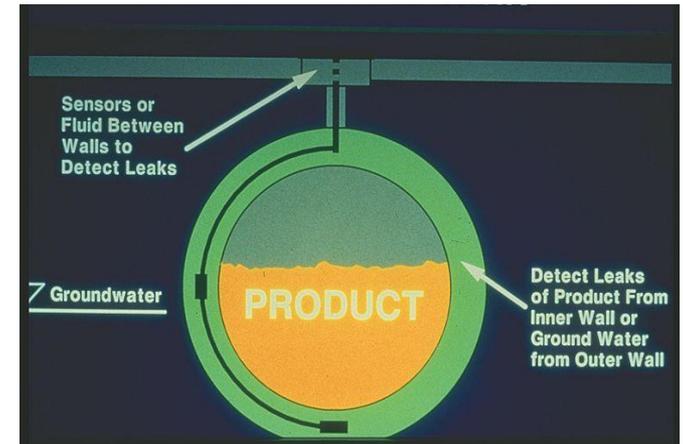
Secondary Containment

- New (including replacement) tanks only
- Piping replacement (50 percent or more of a piping system within one year)
- Does not apply to existing systems (until replaced)

Effective July 1, 2017

Secondary Containment

- Double wall tanks
- Double wall piping
 - ✓ Pressurized piping
 - ✓ Unsafe suction/ Gravity piping
 - × NOT safe suction piping



*Does **not** include spill basins or vent piping*

Remote fill lines – Double walled

Not a problem



Problem Install?





DO NOT REMOVE THIS CAP UNTIL YOU HAVE BEEN ADVISED BY THE AUTHORITY RESPONSIBLE FOR THE INSTALLATION OF THIS MANHOLE. FAILURE TO CAP BEFORE FILLING MAY CAUSE HAZARDOUS OVERFILL.

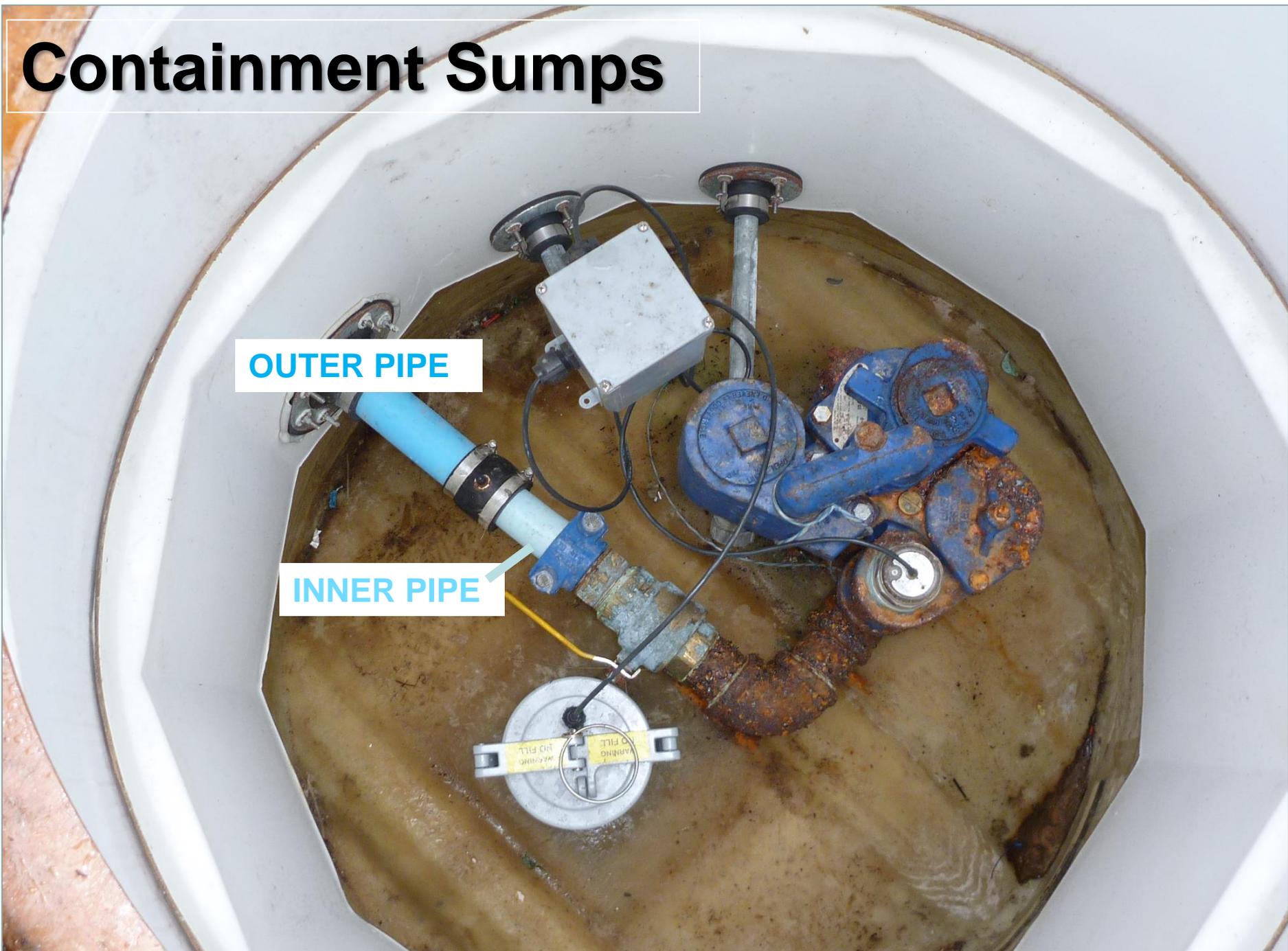
DO NOT CHECK FLUID LEVEL. THE MAN HOLE IS NOT TO BE USED FOR CHECKING FLUID LEVELS.

WARNING: DO NOT REMOVE THIS CAP UNTIL YOU HAVE BEEN ADVISED BY THE AUTHORITY RESPONSIBLE FOR THE INSTALLATION OF THIS MANHOLE. FAILURE TO CAP BEFORE FILLING MAY CAUSE HAZARDOUS OVERFILL.

Containment Sumps

OUTER PIPE

INNER PIPE





New Containment Sumps

- Must be leak-tight bottom and sides
- Must be maintained and repaired
- Must respond to alarms

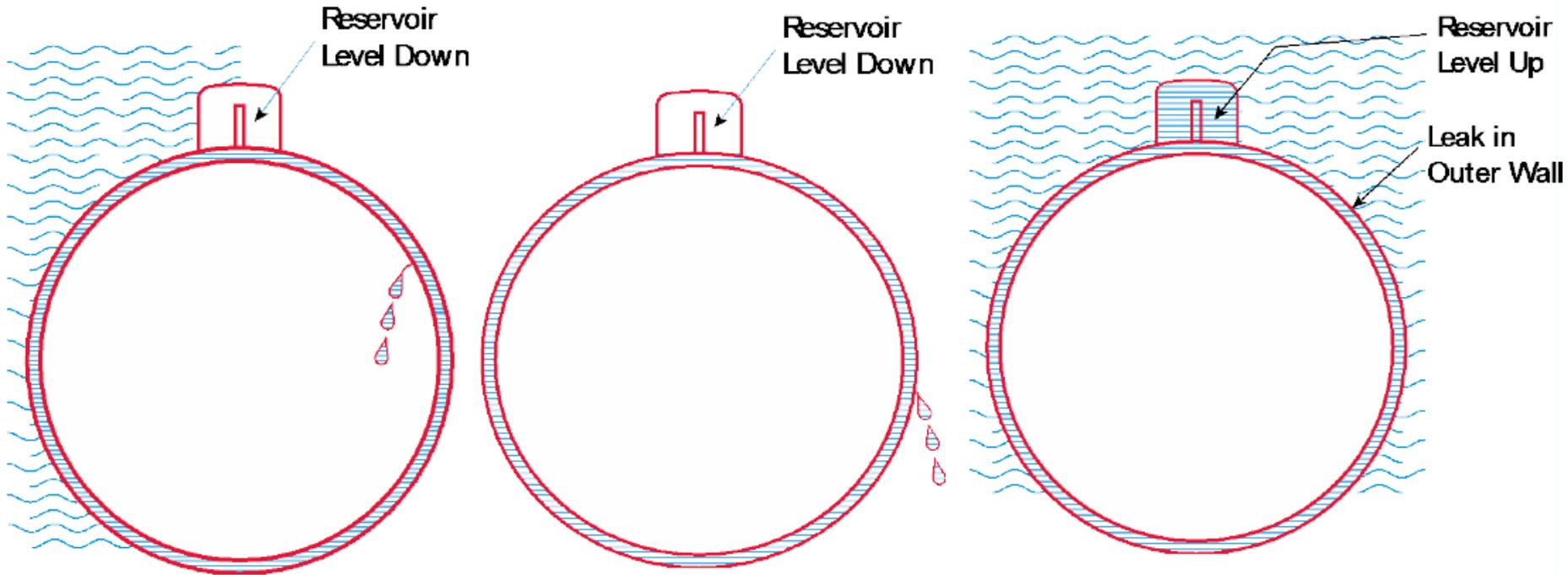
- Must be tested every three years **OR**
- Must be interstitially monitored annually

Sump testing starting at install July 1, 2017

Interstitial Monitoring

- Liquid detection (sensor in interstice or in containment sumps)
- Brine measurements
- Vacuum/pressure testing or monitoring

Brine Interstitial Monitoring



**Primary-Tank Leak
in Wet Hole or Dry Hole**

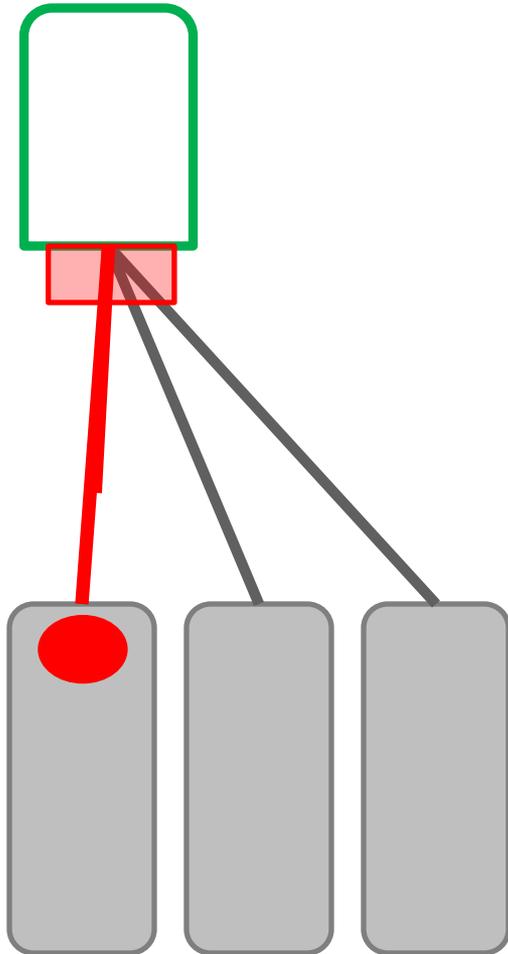
**Secondary-Tank Leak
in Dry Hole**

**Secondary-Tank Leak
in Wet Hole**

50% Piping System Replacement

- Within 12 month period
- For a piping system
 - Single tank's piping (single product)
 - Not of the total site piping
 - Do not combine same products unless piping is manifolded

The *entire* piping system must be double walled with containment sumps and monitoring



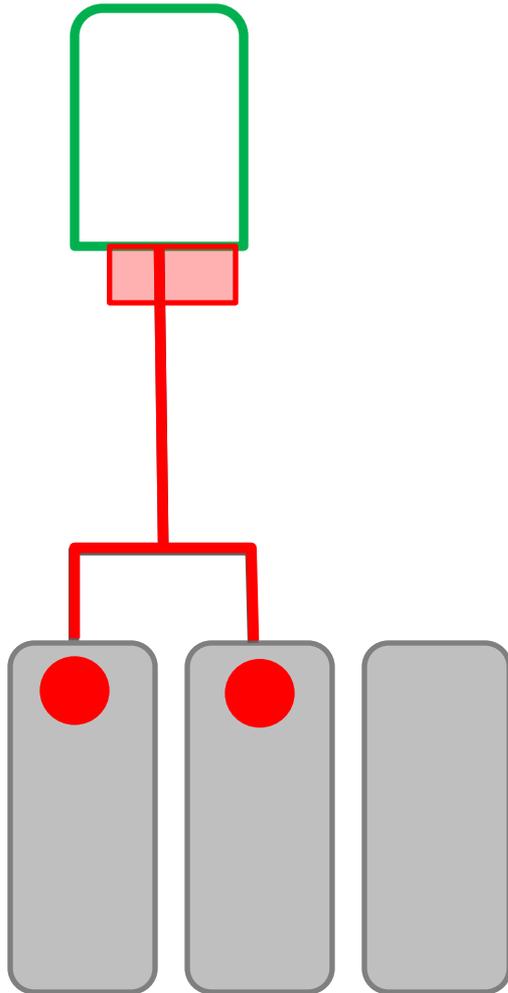
- Based on individual tank systems
- Does not matter how many different systems/products are beneath the dispenser
- May have to install containment sumps under dispensers with other piping runs entering

Dispenser Replacement

- Sumps required when:
 - Dispenser replaced **AND**
 - Piping beneath dispensers replaced
 - Must have containment sump
 - Must be tested every three years

Starting July 1, 2017





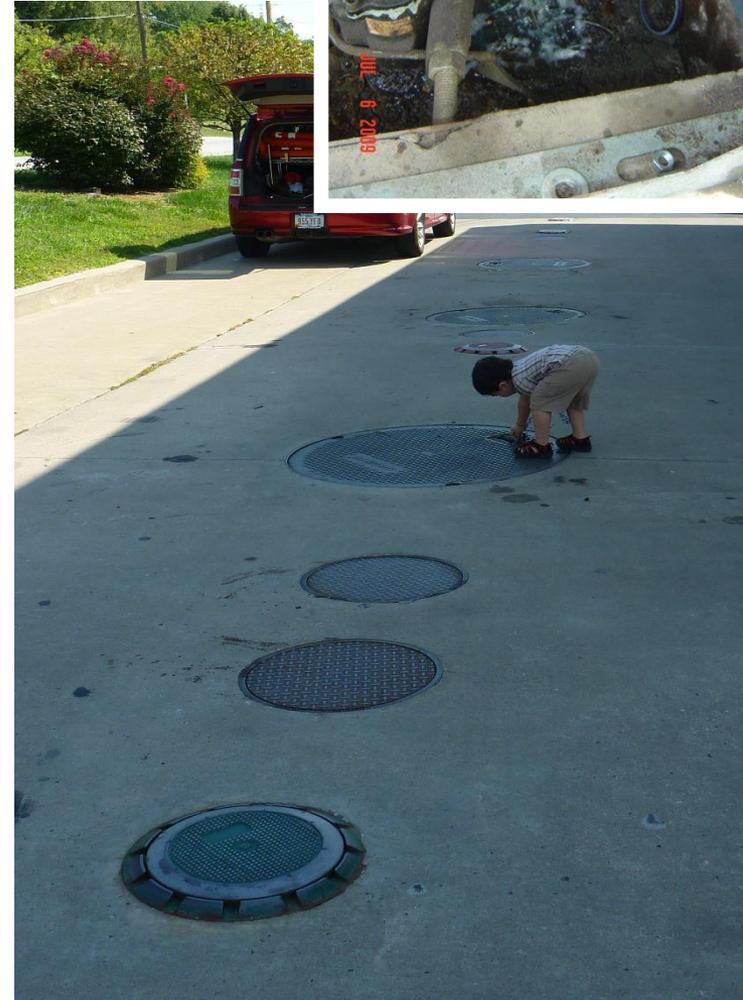
- Manifold piping (all connected) counts as a system
- Even if only affects one “half” of the manifold, all of the connected piping must comply
- Includes sumps at each end and transition

Walkthrough Inspections

Annually:

- Dispensers
- All tank top manholes/containment sumps
- Hand-held release detection equipment

Due Jan. 1, 2020

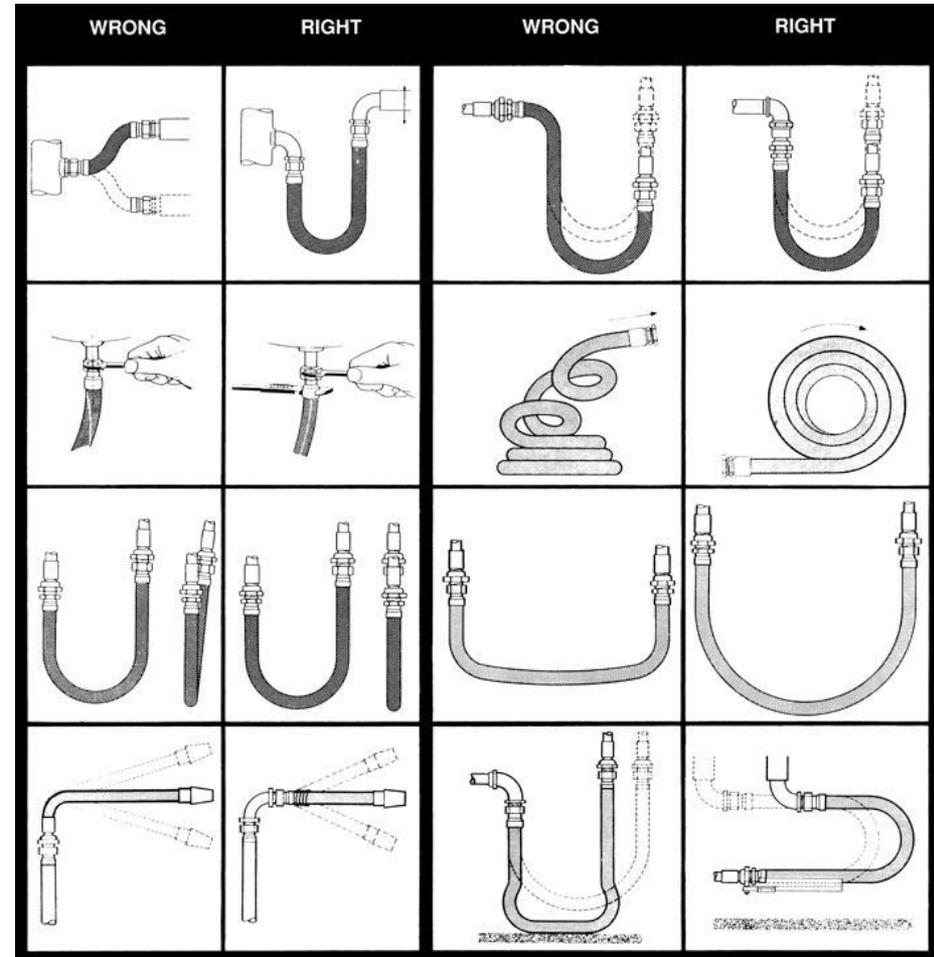




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Check flexible connectors



Walkthrough Inspections

Monthly:

- Electronic release detection equipment
- Spill basins



Start Jan. 1, 2020

Spill Bucket Testing

- Every three years **OR**
- Monthly Interstitial
- Post-repair testing



If your containment sump is your spill basin, these requirements apply to the sump!

Due at install or by Jan. 1, 2020

Monthly Spill Bucket Monitoring

Date	Staff	Gauge	Action If Any
January	HP	0	
Feb	AD	0	
March	CA	0	
April	BE	0	
May	DK	0	
June	ET	0	
July	HP	0	
August	AD	0	
Sept	CA	0	
Oct	BE	0	
Nov	DK	0	
Dec	ET	0	



ALL Spill basins must be tested



SYSTEM

STA
22-91

STI 86



Spill Bucket Repairs



- ✓ Allow repair kits
- ✓ Allow repair inserts
- ✓ Allow double-wall bucket kits

- × Eliminate epoxies/caulks
- × Eliminate spray-on adhesives
- × Eliminate field-applied paint



Release Detection Equipment

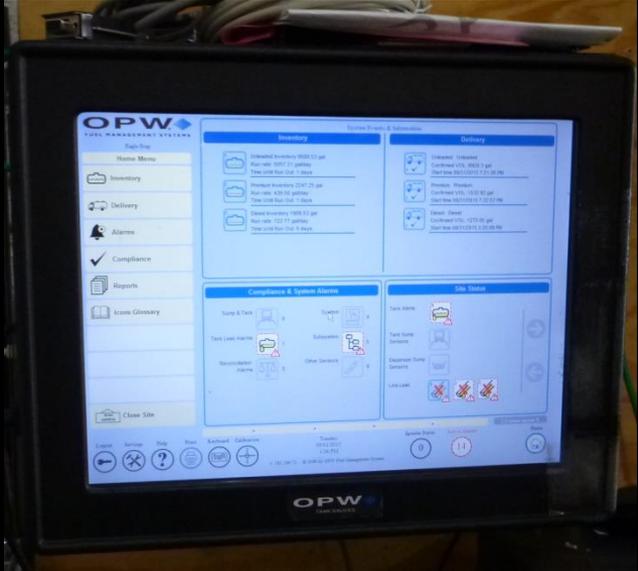
- Must be tested annually
- Will have to “pick” primary method
- New tanks and piping (after July 1, 2017) must use interstitial as primary



Due by Jan. 1, 2020

Release Detection Equipment (cont.)

- Already testing line leak detectors
 - Must meet manufacturer's test procedure
 - Must simulate a leak
- Can combine with annual walkthrough
- Must meet manufacturer certification/
training requirements



Manufacturer Testing Procedures

- Must meet minimum manufacturer procedures AND EPA rule
- ATG probes/ floats
 - Inspect for residue
 - Floats move freely
 - Shaft is not damaged/ cable not kinked
 - Test alarm operation and communication
- Electronic (Interstitial) sensors



PSTIF Advisory Committee Motion

- Meeting June 14, 2016
- Motion requested NO removal of probes/floats to test equipment
- Reviewed manufacturer procedures
- Reviewed Iowa submittal to EPA Region 7
- MoDNR alternative option (no removal)
- EPA Region and HQ **denied**

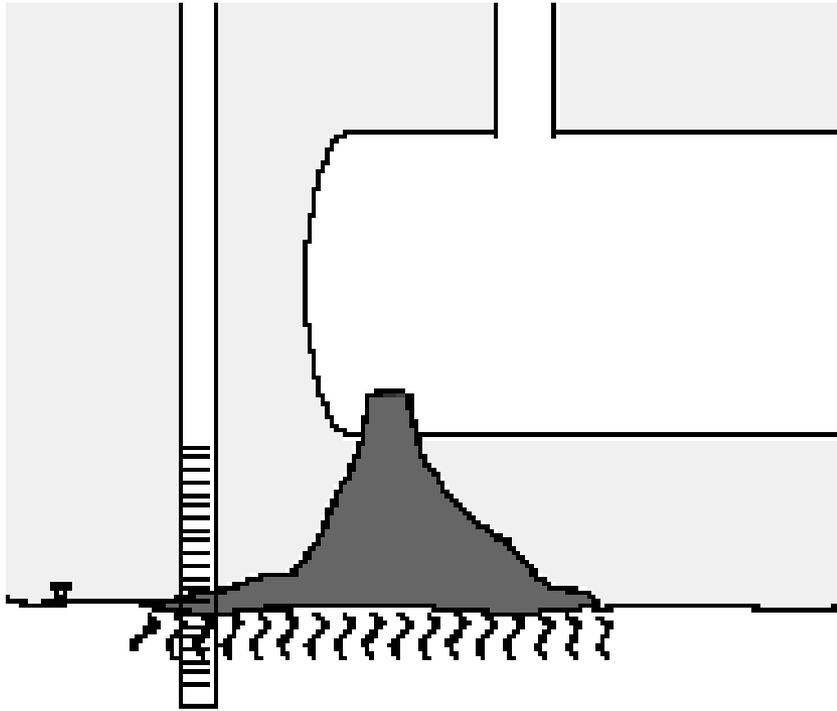
Statistical Inventory Reconciliation

- EPA is requiring report by *end of month* (30th/31st)
- Denying our 15th of month currently in rule
- MoDNR is debating this answer (SPA)
- EPA Region vs HQ (SPA)
- “Policy” Option on the table
- Role of National Work Group on Leak Detection Evaluation (NWGLDE www.nwglde.org)

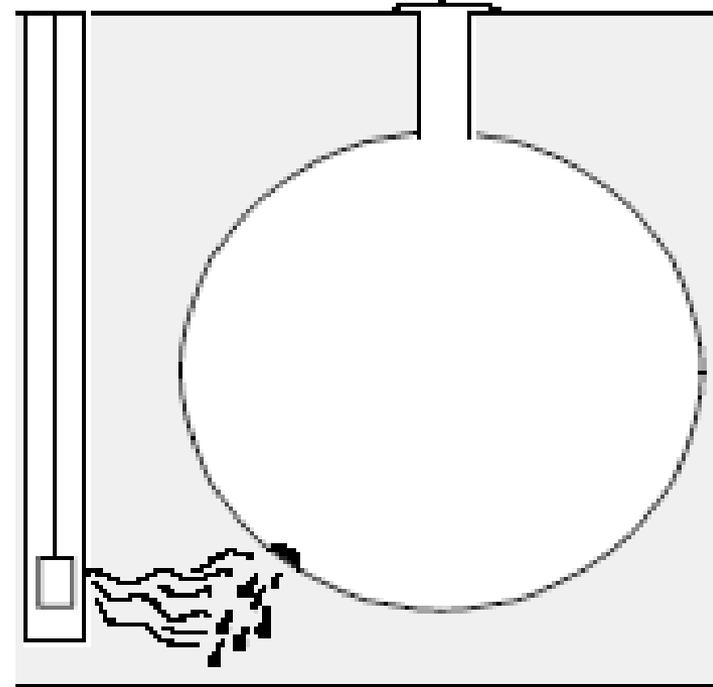
Statistical Inventory Reconciliation (cont.)

- Keep supporting documentation*
- Daily inventory and deliveries*
- Read product level to the nearest 1/8”*
- Report due by 15th of following month*
- **April 30, 2017- report will be due by the 10th**
- Should not be used at high-throughput*

2011 (current) rules



Groundwater Monitoring



Vapor Monitoring

**Proposing to eliminate methods
by July 1, 2020**

Groundwater/Vapor Monitoring

- Approximately 42 sites
- Contacted most
- Many already using SIR
 - Diesel tanks
- Some already changing
- More time to change than EPA regulation
- Site Assessment
- If contamination is found, cannot use
- Must cleanup
- Well installation
- Well spacing
- Transmission Rates
- Water table - high/low
- Geologist/Engineer



Leak Alarms

Okay

- Re-test. If pass, okay.
- Clears itself.
- Find water at sensor, clean and clear. (Need to find source)
- If repair, *monitor* equip and clears immediately.
- Bad calibration/repaired.

24 hours

Investigate/Report

- Continuous Alarms.
- Not electrical.
- Not fixed promptly.
- Source of alarm unknown.
- **PRODUCT FOUND**

EER

573-634-2436

Biofuels

- Must notify at least 30 days prior to switching tank to biofuel
- Prove compatible
- Can ask compatibility for any UST system
- Pre-1981 FRP tanks likely not compatible with regular gasoline (10 percent ethanol)

Monthly Testing

Existing Site (Start 1/1/20)

- Walkthrough Inspection
 - Check spill buckets
 - Interstitial skip three year test
 - Check release detection
 - Every other month check rectifier for cathodic protection, if present

New Sites (Start 7/1/17)

- Walkthrough Inspection
 - Check spill buckets
 - Interstitial skip three year test
 - Check release detection

Annual Testing

Existing Site (Start 1/1/20)

- Line Tightness Test
- Line Leak Detector Test
- ATG Check (release det.)
- Walkthrough Inspection

New Sites (Start 7/1/17)

- Line Leak Detector Test
- Containment Sump Sensors Checked
- Tank Interstitial Sensors Checked
- Walkthrough Inspection
- Containment Sump *Interstitial* Sensors Checked (skip three year test)

Triennial Testing (Three Years)

Existing Site (Start 1/1/20)

- Spill Bucket Test
 - (unless monthly interstice)
- Overfill Prevention Test
- Cathodic Protection System Test (if present)

New Sites (Start 7/1/17)

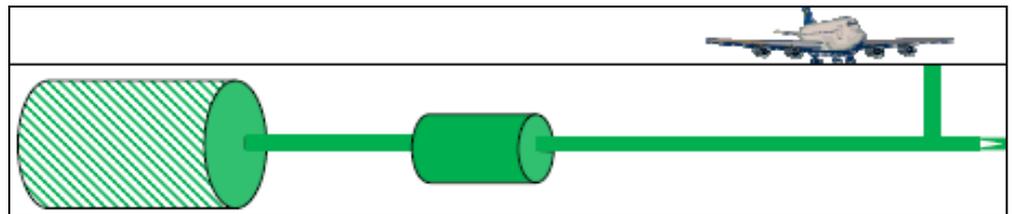
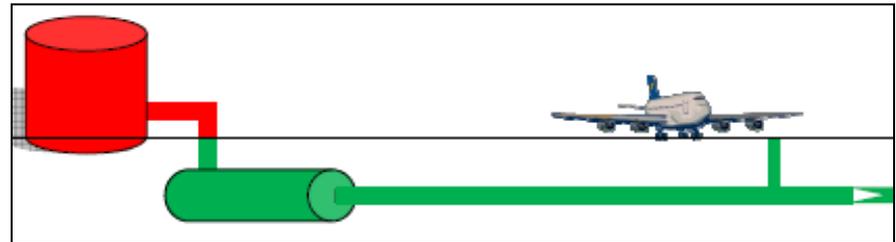
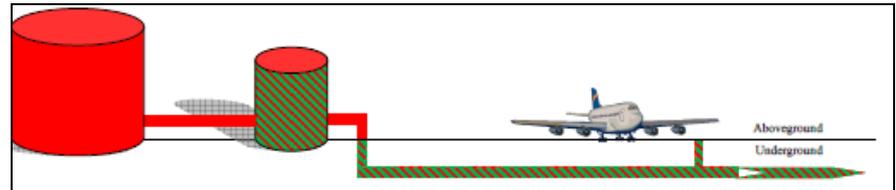
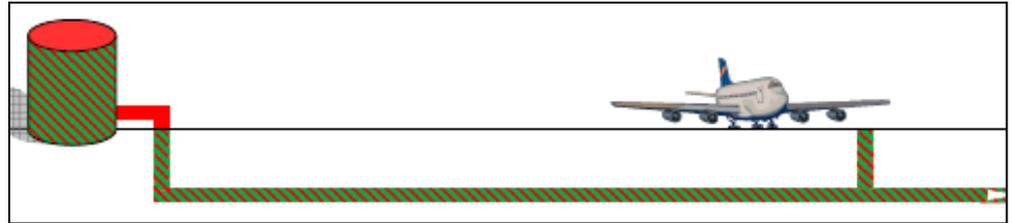
- Containment Sump Test
 - (unless annual interstice)
- Spill Bucket Test
 - (unless monthly interstice)
- Overfill Prevention Test

Key Dates to Remember

- New Systems: **July 1, 2017**
- Existing Sites: **Jan. 1, 2020**
(2019 conduct the testing)

New “USTs”

- Airport Fuel Hydrant Systems
- Field Constructed Tanks
- *Did NOT change exempt Oil/ Water Separators*

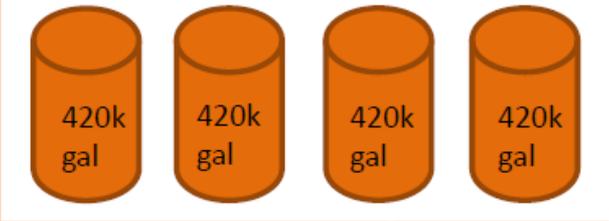


UST- Water bottoms and pressure relief. Product does not pass through this tank to the hangars.



*2 pumphouses and USTs

1,680,000 gallon aboveground storage

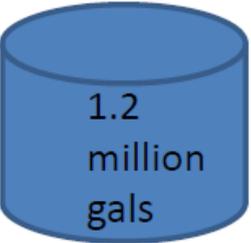
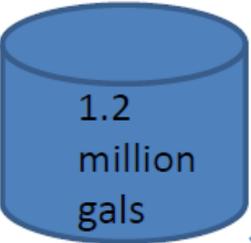


Piping between ASTs and pumphouse
26,604 gallons

Underground piping to ASTs from pumphouse

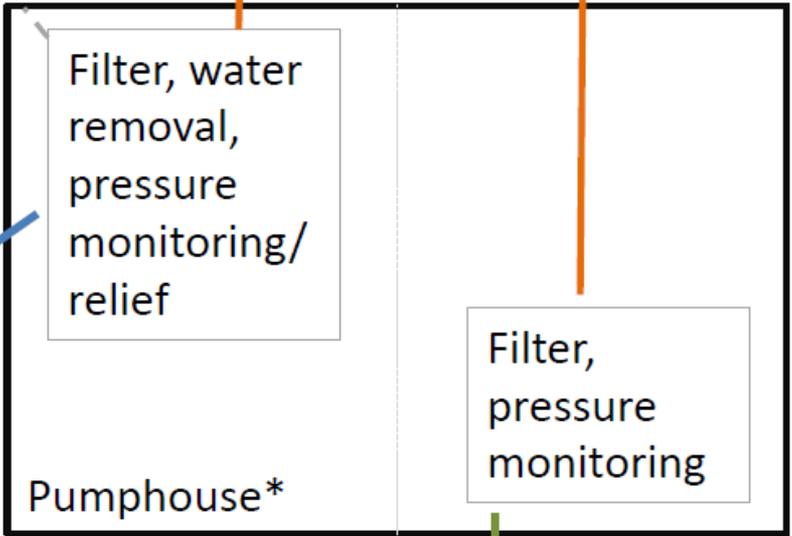
Underground piping from ASTs to other side of pumphouse

2.4m gal aboveground storage



Underground piping to pumphouse

36,312 gallons underground piping



Total Aboveground Storage= 4,080,000 gallons
Total Underground Storage= 234,134 gallons
Less than 10% below ground

Underground piping hydrant loop including hangars/docks
163,218 gallons

Underground piping from pumphouse to hangars



Airport Fuel Hydrant Systems

July 1, 2019

- Register/FR
- Operator Training
- Release Prevention

July 1, 2020

- Release Detection

Operator Training

- Training/testing online **NOW**
- By July 1, 2016 qualified Class A/B
 - Must pass Missouri's online training/testing
 - Be certified in an adjacent/bordering state
- By July 1, 2016, trained or test Class C

http://www.pstif.org/ust_operator_training.html

Operator Documentation

- Class A/B
 - On-line test/training
 - Certificate from neighboring state
- Class C
 - Class A/B operator or Mo Class C on-line
 - Only one needs to be designated/documentated
 - Class A/B Operator signs all are trained

Class A/B & Class C Operator Designation Form

Class C Operator Training Certification

FILE

ST

For this designation to be accepted, each section must be completed.
Training is required for Missouri Class A/B and Class C persons pursuant to 10 CSR 100-6.010.

Designation of Class A/B and Class C Operator

I am the designated Class A/B and Class C Operator for the facilities listed in this section.

If you did not use the on-line testing or training program at www.pstif.org, please provide your state-issued certificate from Arkansas, Oklahoma, Kansas, Iowa, Illinois, Kentucky, or Tennessee.

This designation applies to:

- Only the facility(ies) listed: _____
- All facilities owned by the following owner identification number(s): _____
- All facilities on the attached list (must provide a list of facilities).

I hereby certify that all Class C operators are properly trained pursuant to 10 CSR 100-6.010.

- Class C Operators have successfully completed the on-line training provided by the Missouri Petroleum Storage Tank Insurance Fund at www.pstif.org
- Class C Operators have passed the on-line test-only option offered by the Missouri Petroleum Storage Tank Insurance Fund at www.pstif.org
- Class C Operators have been properly trained on identifying and responding to alarms, spills, releases and other indications of an emergency, including:
 - Initial response to spills and overfills.
 - What to do in the event of a spill, overflow or release.
 - Who to contact in the event of these emergencies.

I am an: owner (or owner's agent) operator (or operator's agent) independent contractor

CLASS A/B and C OPERATOR NAME

E-MAIL ADDRESS (preferably associated with on-line certification):

CLASS A/B and C OPERATOR SIGNATURE

Stay Tuned!!

- Webpage:
<http://dnr.mo.gov/env/hwp/ustchanges.htm>
- Sign up for our e-mail service:
https://public.govdelivery.com/accounts/MODNR/subscriber/new?topic_id=MODNR_128



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- Questions, Comments or Concerns?

heather.peters@dnr.mo.gov

573-751-7877