

Performing Work on Single Wall UST Systems

Bureau of Underground Storage Tank Regulations (BUSTR)

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Department
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**Ohio Department of Commerce, Division of State Fire Marshal, BUSTR
Performing Work on Single Wall UST Systems –December 2017**

This guidance is intended to clarify when tank owners are required to retrofit their single wall UST systems and install secondarily contained components such as double-wall USTs, double-wall piping, containment sumps and sensors.

Paragraph (C)(6) of rule 1301:7-9-06 of the Administrative Code (effective September 1, 2017) describes the conditions that trigger the retrofit requirements:

(6) Any work performed on an existing UST system that requires a permit pursuant to rule 1301:7-9-10 of the Administrative Code or as otherwise provided in this paragraph, shall meet the following requirements:

(a) If work causes an existing UST to be replaced, the new UST shall be equipped, operated and maintained pursuant to the new UST requirements defined in paragraph (B)(1)(a) of this rule (i.e., secondarily contained components). The following requirements may also apply:

(i) Tank top containment sumps shall be installed pursuant to paragraph (B)(1)(c)(i) of this rule; and

(ii) Existing piping and dispenser containment sumps shall be installed, replaced, or modified pursuant to paragraphs (C)(6)(b) to (C)(6)(d) of this rule;

(b) If piping is installed, replaced, modified, or undergoes major repair that affects more than fifty percent of an existing piping run measured as the length of the pipe between the connection at the UST and the furthest dispenser or use location associated with the UST connection that routinely contains regulated substances, then the piping and associated containment sumps shall be equipped, operated and maintained pursuant to the new piping and containment sump requirements defined in paragraphs (B)(1)(b) and (B)(1)(c) of this rule (i.e., secondarily contained components). The measurements relating to the fifty percent threshold shall be cumulative and shall include all work performed after May 16, 2011;

(c) If a new fuel dispenser is installed where there previously was no fuel dispenser at an existing UST site then a new containment sump shall be installed pursuant to paragraphs (D)(5) and (D)(6) of this rule; and

(d) If an existing fuel dispenser is replaced with another fuel dispenser and all of the equipment needed to connect the dispenser to the underground storage tank system is installed, replaced, modified or undergoes a major repair at the same time, then a new containment sump shall be installed pursuant to paragraph (D)(5) and (D)(6) of this rule. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers, flexible connectors, and other transitional components that are underneath the dispenser and connect the dispenser to the underground piping.

Paragraph (C)(7) of rule 1301:7-9-07 of the Administrative Code (effective September 1, 2017) describes the conditions that trigger the retrofit requirements for release detection:

(7) If work is performed on an existing UST system in order to meet the requirements of paragraph (C)(6) of rule 1301:7-9-06 of the Administrative Code, then the UST, piping, or containment sumps affected by the work shall meet the release detection requirements for new UST systems as described in paragraphs (B)(1) to (B)(3) of this rule, except that containment sumps for existing UST systems installed prior to March 1, 2005, are not required to meet those requirements until fifty percent or more of the containment sumps at the UST site undergo work pursuant to paragraph (C)(6) of rule 1301:7-9-06 of the Administrative Code.

Interpretation of Retrofit Requirements

- When calculating the percentage of existing piping undergoing work, do not include the length of any new piping added. Base the calculation solely on the length of the single wall piping present at the site on May 16, 2011 (the date the retrofit requirement first became effective). If additional work is performed in the future, the determination of piping that is subject to retrofit requirements shall be calculated using the length of single wall piping that was present on May 16, 2011, compared to the same length of piping that has undergone work (or will undergo work) since May 16, 2011.
- If work is performed on a site that had double wall piping and containment sumps installed prior to May 16, 2011, but the components were not installed in a tight configuration, then any work performed on these components will be subject to retrofit calculations and conditions.
- If a situation exists where piping runs from two USTs are manifolded together (i.e., connected together), the calculation for determining if more than fifty percent of the piping run is affected will be determined by measuring the distance from each UST to the furthest dispensing location (each scenario will be calculated separately). If a scenario exceed fifty percent, then just the components affected by that scenario shall be subject to retrofit requirements.
- When determining if a containment sump should be installed under an existing dispenser, keep in mind the requirement only applies if all of the connecting equipment is replaced at the same time the dispenser is replaced. This includes all shear valves and flexible connectors for all grades of fuel in the containment sump.
- When determining if a containment sump should be installed under an existing dispenser, keep in mind the requirement only applies if the dispenser is replaced with another dispenser unit. If the old dispenser unit is used again in the same location, the requirement to install a containment sump does not apply. However, this condition does not apply in cases where fifty percent or more of the existing piping run is replaced.
- If fifty percent or more of containment sump locations undergo work, sensors only have to be added to the containment sumps that underwent work (in some cases, sensors may not be required in all of the containment sump locations at the site).
- If any circumstances trigger the requirement for secondarily contained piping, keep in mind that interstitial monitoring of the piping is required as well. In many cases, this can only be accomplished by installing sensors in all containment sump locations.

Work and Permits

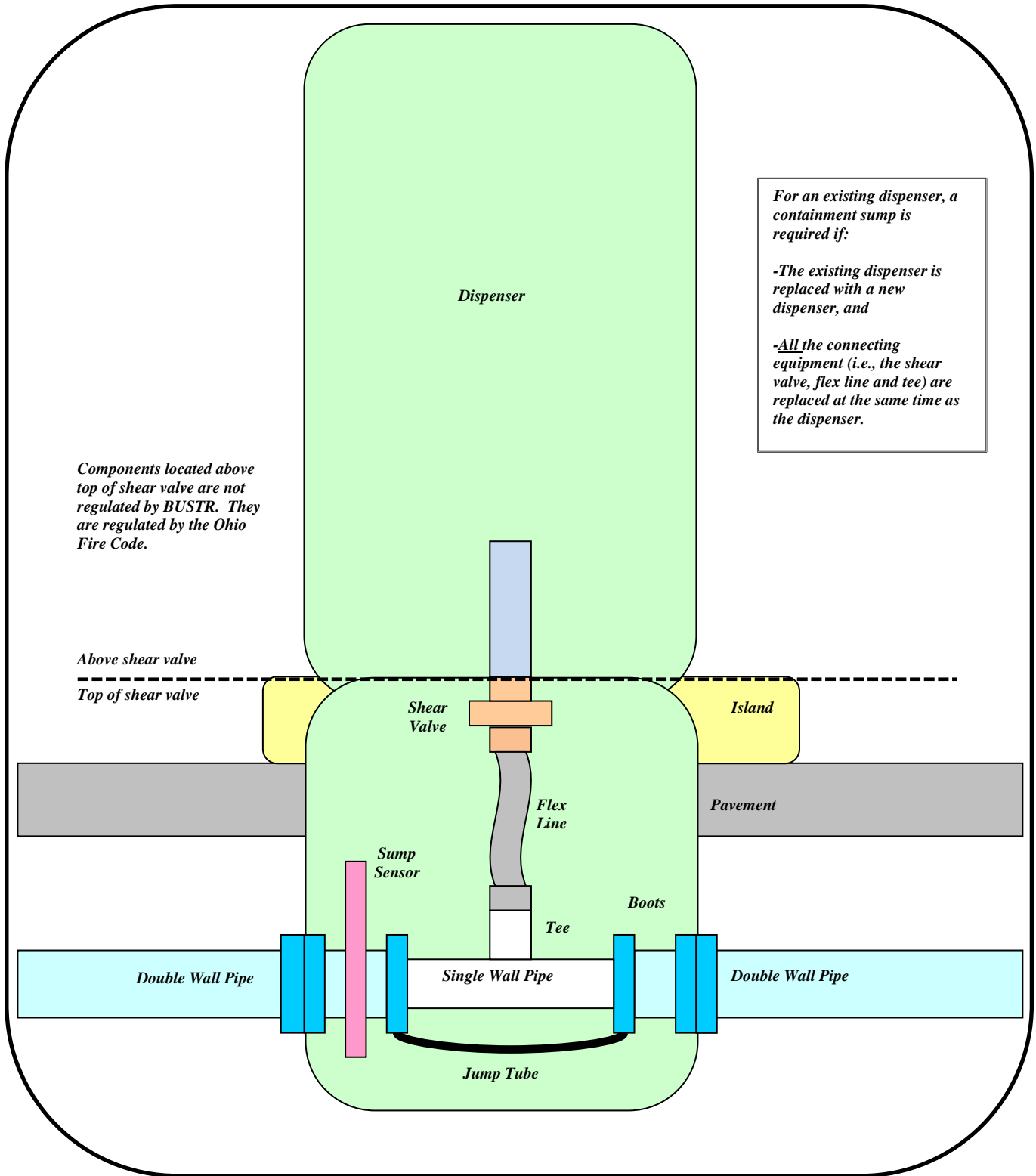
Throughout this document, the term ‘work’ is used to describe activities that could lead to the need to equip UST systems with secondary containment. In this context, work means those activities that require a BUSTR permit such as installation, replacement, modification, and major repair activities. Work does not mean ‘routine maintenance or normal operational upkeep’ as defined in the BUSTR rules.

Closure Sampling and Closure Assessment Report

It is important to remember that most of the work described in this guidance triggers the requirement for closure sampling and a closure assessment report. These requirements are specific to the type of work being performed at the site, and owners and operators are encouraged to visit the BUSTR web site at

<http://www.com.ohio.gov/fire/BUSTRResources.aspx> for more information on these requirements.

Example of a Cross Section of a UST System Meeting New Rule Requirements

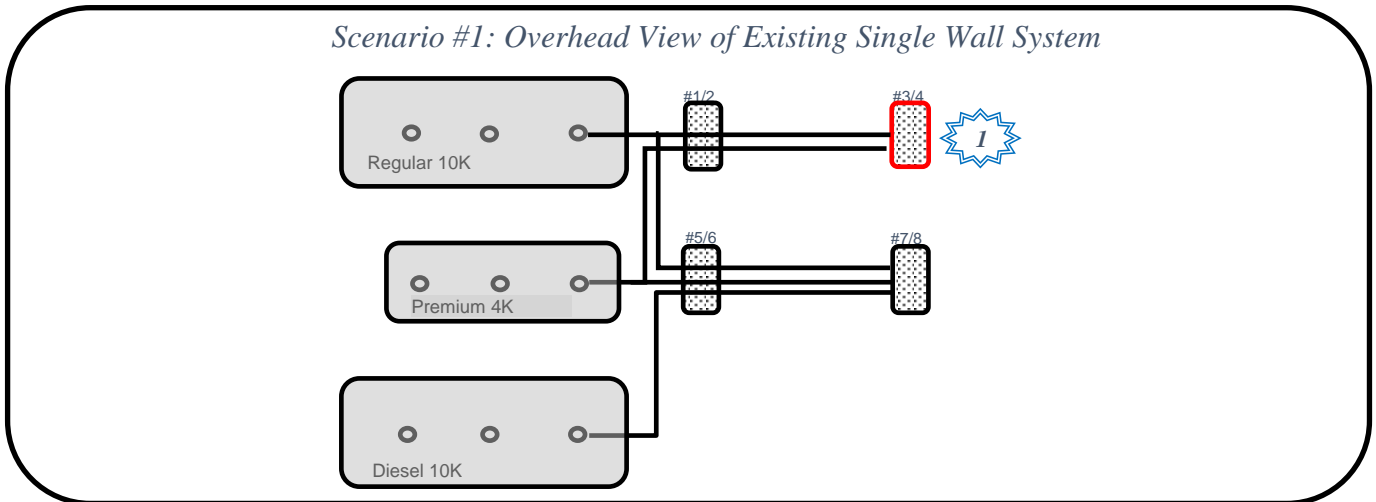


Scenario #1:

Existing facility replacing dispenser. Replace dispenser #3/4 with a new dispenser. No containment sumps present under old dispensers or at tank top. No work to be performed on shear, flex line or product line.

Action needed: No permit required. No containment sumps or sensors required under replaced dispenser.

Rationale: No ancillary equipment is undergoing work that requires permit. Since all of the connecting equipment is not being replaced, the old dispenser may be replaced with a new dispenser unit without triggering the requirement for containment sumps or sensors.

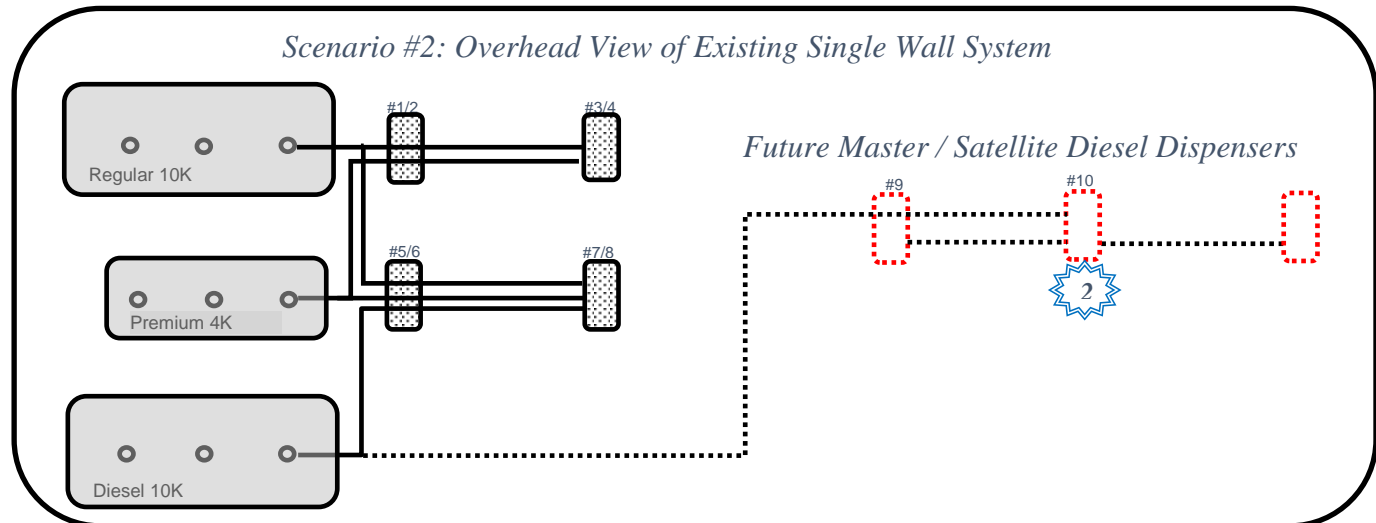


Scenario #2:

Existing facility adding several dispensers. Add three new diesel dispensers (in master/satellite configuration). Old dispensers to remain unchanged. No containment sumps present under old dispensers. Less than 50% of existing diesel product line to be worked on.

Action needed: Permit required. Existing single wall piping and any piping added may be single wall. Containment sump required under new dispensers, though no sensor required.

Rationale: Since the old dispensers are not being replaced, only the new dispenser shall have a containment sump. Since less than 50% of the containment sumps have been worked on (i.e., three of ten possible containment sumps associated with the existing UST systems and future dispensers at the site), no sensors are required. Note: When calculating the percentage of existing single wall piping undergoing work, do not include the new piping in the calculation (the 50% retrofit calculation is based off the existing piping only).

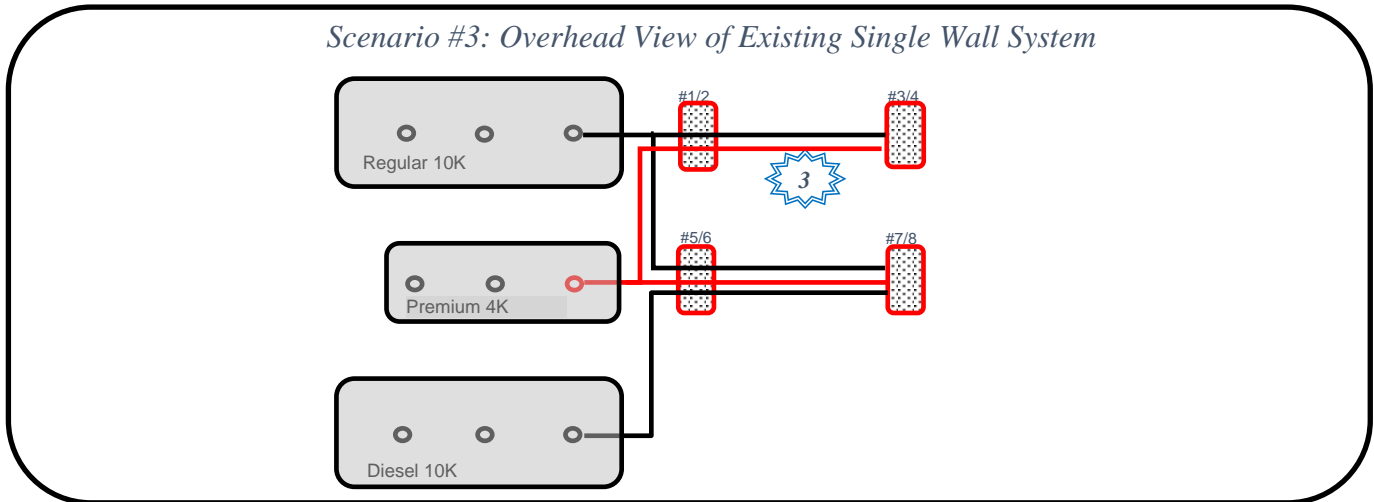


Scenario #3:

Existing facility undergoing line repair. Following a line leak, more than 50% of existing single wall product line from the premium UST to be replaced. No containment sumps present under old dispensers.

Action needed: Permit required. All piping associated with the premium line shall be double wall. Containment sumps and sensors required under all dispensers offering premium fuel (or blended with premium fuel) and at the premium tank top.

Rationale: Working on greater than 50% of the existing premium product line triggers requirement for all piping to be double wall and the installation of containment sumps at all locations associated with premium fuel. Since more than 50% of the containment sumps have been worked on (i.e., five of seven possible containment sumps associated with the existing UST systems at the site), sensors are required in each containment sump. If the premium product line share a common trench with other product lines, and the work causes more than 50% of the other product lines to be replaced, then the other product lines are also subject to retrofit requirements.



Scenario #4:

Existing facility undergoing cumulative work. In 2012, less than 50% of existing single wall regular product line was replaced. In 2017, additional work on same line leads to more than 50% of the line being replaced (cumulatively). No containment sumps present under old dispensers.

Action needed: Permit required. All piping associated with the regular line shall be double wall. Containment sumps and sensors required under all dispensers offering regular fuel (or blended with regular fuel) and at the regular tank top.

Rationale: The work performed in 2012 and 2017 caused more than 50% of the existing regular line to be replaced. This cumulative activity triggers the requirement for all regular piping to be double wall and the installation of containment sumps at all locations associated with regular fuel. Since more than 50% of the containment sumps have been worked on (i.e., five of seven possible containment sumps associated with the existing UST systems at the site), sensors are required in each containment sump. If the regular product line share a common trench with other product lines, and the work causes more than 50% of the other product lines to be replaced, then the other product lines are also subject to retrofit requirements.

