**Section 175.410 Submersible, Under-dispenser, Transition and Other Containment Sumps**

a) All containment sumps must consist of a factory manufactured containment that is liquid-tight on its sides, bottom and at any penetrations and is compatible with the substance conveyed by the piping. Such containment shall also have a factory manufactured protective cover and supporting components that are properly maintained. If the protective cover or its supporting components are cracked, deteriorated or missing, the cover and supporting components that are defective shall be replaced.

b) On or after May 1, 2003, a submersible containment sump must be installed at the tank on all new tanks with submersible pumps or American suction piping systems. European suction piping systems are not required to have this containment.

c) When an existing submersible pump is removed and replaced with another submersible pump, or when piping, flex connectors or other transitional components at the submersible pump are replaced, a submersible containment sump must be installed.

d) On or after May 1, 2003, under-dispenser containment must be installed on all new dispenser installations where there previously was no dispenser. European suction systems are not exempt from the requirement for under-dispenser containment. Under-dispenser containment must allow for visual inspection and access to the components in the containment system or be monitored every 30 days for leaks from the dispenser system.

e) Under-dispenser containment shall be required when:

1) Both the dispenser and the equipment needed to connect the dispenser to the underground storage tank system are installed at a UST facility. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are underneath the dispenser and connect the dispenser to the underground piping; or

2) Work is being done to replace or modify any components at or below the shear valve, regardless of whether the dispenser is replaced.

f) On or after October 13, 2028, containment sumps shall be installed where no sump currently exists.

g) If more than 20 feet or 50% of a pipe run is replaced, the appropriate containment required to make the associated interstitial monitoring functional (e.g., a tank containment sump, under-dispenser containment, or a junction sump) shall also be installed.

h) Water in Sumps

1) Sumps Without Interstitial Monitoring Sensors. If water is in a sump and it is in contact with bare metal piping or metal, including flex connectors, then corrosion protection, using impressed current, spike anodes, or wristband anodes with proper electrolyte, must be installed on the metal piping in accordance with Section 175.510. On or after October 13, 2028, cathodic protection in sumps shall be removed, as sumps must be maintained clean and dry as of that date.

2) Sumps with Interstitial Monitoring Sensors. Water that could interfere with the operation of double-wall interstitial monitoring systems or that is in contact with bare metal piping or metal, including flex connectors, shall be permanently removed and the source of ingress repaired. The sump shall be maintained so that, other than internal condensation, there is no water in contact with bare metal.

3) Requirement for All Sumps. In all cases, sumps shall be maintained and repaired using petroleum compatible materials as necessary so that, in the event of a release, product will not be leaked out of sumps via cracks, broken seals or other openings. On or after October 13, 2028, all sumps shall be maintained clean and dry.

i) Ban on Field-installed Spray-on or Pour-on Materials in UST Containment Sumps. All required containments shall be factory manufactured containments resistant to petroleum and chemical products. Field-applied spray-on or pour-on materials shall not be used in UST containment sumps. All repairs shall be made according to manufacturer's specifications. The application of any material shall not interfere with the normal operation of the shear valves or fusible links, or any equipment installed under dispensers or submersible pumps.

j) A hydrostatic or other manufacturer-required equivalent test will be performed on all containment sump installations and immediately after repairs (including all submersible, piping, transition and fill sumps, whether single-walled or double-walled) as follows:

1) All penetrations, including electrical, must be completed prior to testing.

2) Piping containment sumps are to be filled with water to a height that covers the highest penetration or sidewall seam by 4 inches.

3) Fill sumps (spill buckets) shall be filled to within 1½ inches of the top of the sump.

4) Minimal backfilling that may be necessary for support of the containment sump is allowed prior to the test.

5) Test duration is 30 minutes and performed under PAI Time and Date Certain requirements with no drop in water level of more than ⅛ inch.

k) All testing required by this Section shall be performed:

1) By an OSFM-licensed contractor that has licensure in the installation/retrofitting or inspection and testing of UST equipment module; and

2) Using an employee of the OSFM-licensed contractor for testing who is certified in the installation-retrofitting or inspection and testing of UST equipment module.

l) Owners and operators of UST systems with containment sumps used for interstitial monitoring of piping must meet these requirements for periodic testing and shall ensure the equipment is operating properly and will prevent releases to the environment by meeting one of the following:

1) The containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid-tight by using vacuum, pressure or liquid testing in accordance with one of the following criteria:

A) Requirements developed by the manufacturer of the containment sump. Owners and operators may use this option only if the manufacturer has developed testing requirements;

B) Requirements developed by the manufacturer of the testing equipment; or

C) A hydrostatic test that meets the requirements of subsection (j); or

2) A triennial alternative test procedure for containment sumps with sensors is allowed subject to the following requirements.

A) This alternative test procedure shall be conducted as follows:

i) Sumps shall be inspected and must be free of debris and liquids and obvious structural damage prior to testing;

ii) A liquid level sensor is mounted at the lowest point in the sump and a periodic test is performed by adding liquid to a point that will ensure activation of the sensor;

iii) The submersible pump automatically shuts off when liquid activates the sensor; and

iv) The level of liquid and type of liquid used to ensure activation of the sensor conforms to the sensor manufacturer's specifications.

B) Written documentation from the manufacturer detailing the minimum amount of liquid and the type of testing liquid required to activate the sensor must be provided when OSFM requests it.

C) The following conditions shall disqualify sumps from this testing method:

i) Sensors found to be raised out of the required position for proper activation shall trigger an NOV requiring hydrostatic testing above the highest penetration or seam for the containment sump in question, if the containment sump has been tested using the alternative test procedure in this subsection (l)(3); and

ii) Those sumps with obvious structural damage, such as cracks or breaks in the walls or floor of the containment sump, shall require repair or replacement. Containment sumps shall be tested pursuant to subsection (j) following repair or replacement of sump.

F) Containment sumps shall be inspected prior to testing. Sumps must be free of debris and moisture prior to testing, and those sumps with obvious structural damage, such as cracks or breaks in the walls or floor of the containment sump, shall require repair or replacement. Containment sumps shall be tested pursuant to subsection (j) following repair or replacement of the sump.

m) Owners and operators must begin meeting the requirements for testing in subsection (l) as follows:

1) For UST systems in use on or before October 13, 2015, the initial testing for containment sumps used for interstitial monitoring of piping must be conducted not later than October 13, 2018.

2) For UST systems brought into use after October 13, 2015, these requirements apply at installation.

n) Owners and operators must maintain the following records for containment sumps used for interstitial monitoring of piping:

1) All records of installation shall be maintained for the life of the equipment; and

2) All records of testing must be maintained for three years.

(Source: Amended at 47 Ill. Reg. 6837, effective May 2, 2023)