

**CHAPTER 33.1-24-08 TECHNICAL STANDARDS AND CORRECTIVE ACTION
REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS**

33.1-24-08-25. Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.

1. Owners and operators of underground storage tank systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment:
 - a. Spill prevention equipment, such as a catchment basin, spill bucket, or other spill containment device, and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following:
 - (1) The equipment is double walled and the integrity of both walls is periodically monitored at a frequency not less than the frequency of the walkthrough inspections described in section 33.1-24-08-26. Owners and operators shall begin fulfilling paragraph 2 of subdivision a of subsection 1 and conduct a test within thirty days of discontinuing periodic monitoring of this equipment; or
 - (2) The spill prevention equipment and 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;

NOTE: Owners and operators may use this option only if the manufacturer has developed requirements.
 - (b) Code of practice developed by a nationally recognized association or independent testing laboratory; or
 - (c) Requirements determined by the department to be no less protective of human health and the environment than the requirements listed in subparagraphs a and b of paragraph 2 of subdivision a of subsection 1.
 - b. Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in subsection 3 of section 33.1-24-08-10 and will activate when a regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in subparagraphs a through c of paragraph 2 of subdivision a of subsection 1.
2. Owners and operators must begin meeting these requirements as follows:
 - a. For underground storage tank systems in use on or before April 1, 2018, the initial spill prevention equipment test, containment sump test, and overfill prevention equipment inspection must be conducted not later than April 1, 2021.
 - b. For underground storage tank systems brought into use after April 1, 2018, these requirements apply at installation.
3. Owners and operators must maintain records as follows, in accordance with section 33.1-24-08-24, for spill prevention equipment, containment sumps used for interstitial monitoring of piping, and overfill prevention equipment:

- a. All records of testing or inspection must be maintained for three years; and
- b. For spill prevention equipment and containment sumps used for interstitial monitoring of piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

NOTE: To paragraph 2 of subdivision a of subsection 1 and subdivision b of subsection 1 the following code of practice may be used to comply with paragraph 2 of subdivision a of subsection 1 and subdivision b of subsection 1: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

History: Effective January 1, 2019.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-26. Periodic operation and maintenance walkthrough inspections.

1. To properly operate and maintain underground storage tank systems, not later than April 1, 2021, owners and operators shall meet one of the following:
 - a. Conduct a walkthrough inspection that, at a minimum, checks the following equipment as specified below:
 - (1) **Every thirty days** (Exception: spill prevention equipment at underground storage tank systems receiving deliveries at intervals greater than every thirty days may be checked prior to each delivery):
 - (a) Spill prevention equipment - Visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it is securely on the fill pipe; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area; and
 - (b) Release detection equipment - Check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present, and ensure records of release detection testing are reviewed and current; and
 - (2) **Annually:**
 - (a) Containment sumps - Visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area; and
 - (b) Hand-held release detection equipment - Check devices, such as tank gauge sticks or ground water bailers for operability and serviceability;
 - b. Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to subdivision a of subsection 1 of section 33.1-24-08-25; or

NOTE: The following code of practice may be used to comply with subdivision b of subsection 1 of section 33.1-24-08-26: Petroleum Equipment Institute Recommended Practice RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems".

- c. Conduct operation and maintenance walkthrough inspections developed by the department that checks equipment comparable to subdivision a of subsection 1.
2. Owners and operators shall maintain records, in accordance with section 33.1-24-08-24, of operation and maintenance walkthrough inspections for one year. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every thirty days due to infrequent deliveries.

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General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-27. [Reserved].

33.1-24-08-28. [Reserved].

33.1-24-08-29. [Reserved].

33.1-24-08-30. General release detection requirements for all underground storage tank systems.

1. Owners and operators of underground storage tank systems must provide a method, or combination of methods, of release detection that:
 - a. Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;
 - b. Is installed and calibrated in accordance with the manufacturer's instructions;
 - c. Beginning on April 1, 2021, is operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or requirements determined by the department to be no less protective of human health and the environment than the two options listed above. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:
 - (1) Automatic tank gauge and other controllers: test alarm, verify system configuration, and test battery backup;
 - (2) Probes and sensors: inspect for residual buildup, ensure floats move freely, ensure shaft is not damaged, ensure cables are free of kinks and breaks, and test alarm operability and communication with controller;
 - (3) Automatic line leak detector: test operation to meet criteria in subsection 1 of section 33.1-24-08-34 by simulating a leak;
 - (4) Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and
 - (5) Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

NOTE: The following code of practice may be used to comply with subdivision c of subsection 1: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

- d. Meets the performance requirements in sections 33.1-24-08-33, 33.1-24-08-34, 33.1-24-08-70, 33.1-24-08-71, or 33.1-24-08-72, as applicable, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods listed in subsections 2, 3, and 4 of section 33.1-24-08-33; subsections 1 and 2 of section 33.1-24-08-34; and sections 33.1-24-08-70, 33.1-24-08-71, or 33.1-24-08-72, must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule with a probability of detection of ninety-five hundredths and a probability of false alarm of five hundredths.
2. When a release detection method operated in accordance with the performance standards in sections 33.1-24-08-33 and 33.1-24-08-34; and either 33.1-24-08-70, 33.1-24-08-71, or 33.1-24-08-72 indicates a release may have occurred, owners and operators must notify the department in accordance with sections 33.1-24-08-40 through 33.1-24-08-43.
3. Any underground storage tank system that cannot apply a method of release detection that complies with the requirements of this section must complete the closure procedures in sections 33.1-24-08-60 through 33.1-24-08-64. For previously deferred underground storage tank systems described in sections 33.1-24-08-01, 33.1-24-08-02, or 33.1-24-08-03; and 33.1-24-08-70, 33.1-24-08-71, or 33.1-24-08-72, this requirement applies after the effective dates described in paragraphs 2 and 3 of subdivision a of subsection 1 of section 33.1-24-08-01 and subsection 1 of section 33.1-24-08-71.

History: Effective January 1, 2019.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199 § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199 § 19

33.1-24-08-31. Release detection requirements for petroleum underground storage tank systems.

Owners and operators of petroleum underground storage tank systems must provide release detection for tanks and piping as follows:

1. **Tanks.** Tanks must be monitored for releases as follows:
 - a. Tanks installed on or before September 28, 2018, must be monitored for releases at least every thirty days using one of the methods listed in subsections 4 through 9 of section 33.1-24-08-33 except that:
 - (1) Underground storage tank systems that meet the performance standards in section 33.1-24-08-10 or 33.1-24-08-11, and the monthly inventory control requirements in subsection 1 or 2 of section 33.1-24-08-33, may use tank tightness testing (conducted in accordance with subsection 3 of section 33.1-24-08-33) at least every five years until ten years after the tank was installed and tanks with capacity of five hundred fifty gallons [2081.98 liters] or less and tanks with a capacity of five hundred fifty-one to one thousand gallons which meet the tank diameter criteria in subsection 2 of section 33.1-24-08-33 may use manual tank gauging (conducted in accordance with subsection 2 of section 33.1-24-08-33).
 - (2) Tanks installed after September 28, 2018, must be monitored for releases at least every thirty days in accordance with subsection 7 of section 33.1-24-08-33.
2. **Piping.** Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:
 - a. Piping installed on or before September 28, 2018, must meet one of the following:
 - (1) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

- (a) Be equipped with an automatic line leak detector conducted in accordance with subsection 1 of section 33.1-24-08-34; and
 - (b) Have an annual line tightness test conducted in accordance with subsection 2 of section 33.1-24-08-34 or have monthly monitoring conducted in accordance with subsection 3 of section 33.1-24-08-34.
- (2) Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every three years and in accordance with subsection 2 of section 33.1-24-08-34, or use a monthly monitoring method conducted in accordance with subsection 3 of section 33.1-24-08-34. No release detection is required for suction piping that is designed and constructed to meet the following standards:
- (a) The below-grade piping operates at less than atmospheric pressure;
 - (b) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;
 - (c) Only one check valve is included in each suction line;
 - (d) The check valve is located directly below and as close as practical to the suction pump; and
 - (e) A method is provided that allows compliance with subparagraphs b through d to be readily determined.
- b. Piping installed or replaced after September 28, 2018, must meet one of the following:
- (1) Pressurized piping must be monitored for releases at least every thirty days in accordance with subsection 7 of section 33.1-24-08-33 and be equipped with an automatic line leak detector in accordance with subsection 1 of section 33.1-24-08-34; or
 - (2) Suction piping must be monitored for releases at least every thirty days in accordance with subsection 7 of section 33.1-24-08-33. No release detection is required for suction piping that meets subparagraphs a through e of paragraph 2 of subdivision a of subsection 2.

History: Effective January 1, 2019.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199 § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199 § 19

33.1-24-08-32. Release detection requirements for hazardous substance underground storage tank systems.

Owners and operators of hazardous substance underground storage tank systems must provide containment that meets the following requirements and monitor these systems using subsection 7 of section 33.1-24-08-33 at least every thirty days:

- 1. Secondary containment systems must be designed, constructed, and installed:
 - a. Contain regulated substances leaked from the primary containment until they are detected and removed;
 - b. Prevent the release of regulated substances to the environment at any time during the operational life of the underground storage tank system; and

- c. Be checked for evidence of a release at least every thirty days.

NOTE: The provisions of section 33.1-24-05-106 may be used to comply with this subsection for tanks installed on or before April 1, 2018.

2. Double-walled tanks must be designed, constructed, and installed to:
 - a. Contain a leak from any portion of the inner tank within the outer wall; and
 - b. Detect the failure of the inner wall.
3. External liners (including vaults) must be designed, constructed, and installed to:
 - a. Contain one hundred percent of the capacity of the largest tank within its boundary;
 - b. Prevent the interference of precipitation or ground water intrusion with the ability to contain or detect a release of regulated substances; and
 - c. Surround the tank completely (for example, it is capable of preventing lateral as well as vertical migration of regulated substances).
4. Underground piping must be equipped with secondary containment that satisfies the requirements of subsection 1 (for example, trench liners, double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with subsection 1 of section 33.1-24-08-34.
5. For hazardous substance underground storage tank systems installed on or before April 1, 2018, other methods of release detection may be used if owners and operators:
 - a. Demonstrate to the department that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in subsections 2 through 9 of section 33.1-24-08-33 can detect a release of petroleum;
 - b. Provide information to the department on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the underground storage tank site; and
 - c. Obtain approval from the department to use the alternate release detection method before the installation and operation of the new underground storage tank system.

History: Effective January 1, 2019.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199 § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199 § 19