



STATE OF VERMONT  
*Agency of Natural Resources*

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# Aboveground Storage Tank Rules

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Waste Management and Prevention Division  
Department of Environmental Conservation  
One National Life Drive, Davis 1  
Montpelier, VT 05620-3704  
(802) 828-1138

Copies of these rules and other information are available  
at the Vermont Storage Tank Program website at:

<http://dec.vermont.gov/waste-management/storage-tanks>

**ABOVEGROUND STORAGE TANK RULES  
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***Subchapter 1: GENERAL PROVISIONS***

**§ 9-101 AUTHORITY**

These rules are adopted by the Secretary of the Agency of Natural Resources pursuant to the authority granted by **10 V.S.A. Chapter 59 Section 1929a** and **10 V.S.A. Chapter 159**.

**§ 9-102 PURPOSE AND APPLICABILITY**

These rules are intended to protect public health and the environment by establishing standards for the design, installation, and inspection of aboveground storage tank systems used to store any of the following petroleum products: gasoline, diesel, kerosene, used oil, or heating oil.

**§ 9-103 RELEASE PROHIBITION; REPORTING; EMERGENCY RESPONSE**

- (a) Release prohibition. The release of hazardous materials, including from spills or tank overflows, into the surface or groundwater, or onto the land of the State is prohibited.
- (b) Releases and suspected releases. Any person required by **10 V.S.A. § 6617** shall immediately report a release or suspected release that meets any of the following criteria to the Secretary:
  - (1) A release of any petroleum product that exceeds 2 gallons;
  - (2) A release of any petroleum product that is less than or equal to 2 gallons and poses a potential or actual threat to human health or the environment;
  - (3) A release of any hazardous material other than petroleum; or
  - (4) A suspected release of hazardous material as indicated by the following:
    - (A) An unusual loss of product from the aboveground storage tank;
    - (B) Strong petroleum vapors present in the vicinity of the aboveground storage tank; or

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- (C) Other environmental conditions present in the vicinity of the tank, the facility, or off the facility site that indicate that a release may have occurred (e.g., dead vegetation around the tank system).

**Note:** Reporting under this subsection shall be directed to:

Monday through Friday, 7:45 AM to 4:30 PM:

Waste Management & Prevention Division at (802) 828-1138.

Anytime: Division of Emergency Management at (800) 641-5005.

**Note:** Under the Federal Water Pollution Control Act, certain spills of oil and/or hazardous substances are prohibited and shall be reported pursuant to the requirements of **40 CFR Part 110 / Discharge of Oil**. Certain spills of hazardous substances shall also be reported pursuant to CERCLA. In both cases, the National Response Center shall be notified at (800) 424-8802.

- (c) Site investigation; corrective actions. Any person responsible for a release or suspected releases pursuant to **10 V.S.A. § 6615** shall perform an investigation and corrective action measures to address the release in accordance with **10 V.S.A. § 6615b** and any other regulations and procedures adopted by the Agency for the investigation and clean-up of contaminated properties.
- (d) Emergency response.
  - (1) Notwithstanding the requirements of **subsection (c) of this section**, the Secretary may require an emergency response when the Secretary determines that a release may cause an immediate and serious threat of harm to human health or the environment.
  - (2) When undertaking emergency responses pursuant to this subsection, notification to the potentially responsible party pursuant to **10 V.S.A. § 1283** in advance of undertaking an emergency response is not required, unless:
    - (A) The Secretary determines that there is need for additional investigation of the release to determine the impact to sensitive receptors and to human health and that it is appropriate for the potentially responsible party to conduct the investigation; or

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- (B) The Secretary determines that an additional response is necessary to address short-term impacts to sensitive receptors and impacts to human health, and that it is appropriate for the potentially responsible party to conduct the additional response.
- (3) The Secretary shall conduct or direct the potentially responsible party to conduct a limited site investigation to determine if the release requires further site investigation or corrective action. As used in this subsection, “limited site investigation” means the steps the Secretary deems necessary to determine whether additional site investigation or corrective action is necessary to respond to the release.

### **§ 9-104 SEVERABILITY**

The provisions of these rules shall be severable. If any provision of these rules is invalid or if any application of these rules to any person or circumstance is invalid, the invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

### **§ 9-105 INCORPORATION BY REFERENCE**

When reference is made herein to CFR titles, their parts, subparts, or sections, the reference is to titles of the Code of Federal Regulations as they existed on the effective date of these rules.

### **§ 9-106 VARIANCES**

- (a) The Secretary may grant a variance for one or more of the specific provisions of these rules provided that the person requesting the variance can demonstrate to the satisfaction of the Secretary that compliance with the rules from which the variance is sought would produce serious hardship without equal or greater benefits to the public and the proposed new or alternative technology, method, or application (e.g. equipment, designs, practices or methods) will protect human health and the environment in a manner that is at least equivalent to the regulatory provision(s) for which a variance is sought.

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- (b) Requests for a variance shall be made in writing. Such requests shall identify the manner in which the proposal varies from the provisions of these rules, and the basis for finding that the proposal provides a level of protection as required in **§ 9-106(a)**. The Secretary may require that additional information be submitted by the person requesting the variance.
- (c) In granting a variance the Secretary may impose specific conditions necessary to assure a level of protection of human health and the environment at least equivalent to that provided under these rules.
- (d) The Secretary may grant a variance for a particular class or category of innovative or alternative technology in accordance with the requirements of this section.

***Subchapter 2: DEFINITIONS***

All terms not defined herein shall have the meaning given them in **10 V.S.A. chapter 59**:

**“Aboveground storage tank system”** means the aboveground storage tank and all associated piping, vent and fill pipes, vent alarm and whistle, fuel filter and shut-off valves; that is used to store any of the following petroleum products: gasoline, diesel, kerosene, used oil, or heating oil. For the purposes of these rules, mobile and semi-mobile skid tanks are not included in this definition of aboveground storage tank system.

**“Agency”** means the Vermont Agency of Natural Resources.

**“Biodiesel”** means a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, or designated B100.

**“Bulk storage tank facility”** means any facility:

- (a) that stores heating fuel or motor fuel in an aboveground tank system and the principal purpose of the storage is:
  - (1) in the case of heating fuel, for distribution to a fuel carrier for further distribution to consumer homes, or
  - (2) in the case of motor fuel, for distribution to a person selling motor fuel to consumers;
- (b) with a total aboveground storage capacity of greater than 1,320 gallons; and
- (c) that is stationary and located at a fixed location.

**“Bulk storage tank”** means any aboveground storage tank that meets the definition of **10 V.S.A. § 1922(14)**.

**“Carrier”** means a person who transports and transfers heating fuel, motor fuel, or used oil from a bulk liquid transport vehicle to an aboveground storage tank system.

**“CERCLA”** means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601 et. seq., as amended (also known as “Superfund”).

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**“Compatible”** means that two or more substances maintain their respective physical and chemical properties upon contact with one another under conditions encountered within or around an aboveground storage tank system for the design life of that system.

**“Existing tank”** means an aboveground storage tank system installed before the effective date of these rules (August 1, 2024).

**“Facility”** means all contiguous land, structures, other appurtenances, and improvements on the land where an aboveground storage tank system is located.

**“Flood prone area”** means any area that is susceptible to flooding by any source and is adjacent to lakes, streams and rivers that are prone to recurring flooding. For the purposes of these rules, flood prone area shall have the same meaning as “flood hazard area” under **10 V.S.A. § 752**.

**“Hazardous material”** means all petroleum and toxic, corrosive, or other chemicals and related sludge included in any of the following:

- (a) Any substance defined in **CERCLA § 101(14)**;
- (b) Petroleum, including crude oil or any fraction thereof;
- (c) Hazardous waste, as defined in **10 V.S.A. chapter 159** and the **Vermont Hazardous Waste Management Regulations**; or
- (d) A chemical or substance that, when released, poses a risk to human health or the environment or other living organisms and that is listed by the Secretary by rule.

**Note:** “Hazardous material” does not include herbicides and pesticides when applied consistent with good practice conducted in conformity with federal, state and local laws and regulations and according to manufacturers’ instructions. Nothing in this subsection shall affect the authority granted and the limitations imposed by **10 V.S.A. § 6608a**.

**“Heating fuel”** means heating oil, kerosene, or other dyed diesel fuel that is typically used to heat a structure and not used to propel a motor vehicle. “Heating fuel” includes any blend of petroleum and biodiesel used to heat a structure.



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**“In Service”** means a condition in which an aboveground storage tank system remains connected to a heating source and stores heating fuel that is required by the heating unit or remains connected to a distribution system for a motor fuel tank. This definition applies to systems that use an alternative fuel (e.g., wood) as a primary heat source, and utilize heating fuel as a backup heating source. This definition also applies to aboveground storage tank systems at bulk storage tank facilities that store fuel for distribution.

**“Interstitial space”** means the space between the primary and secondary barriers of a secondarily contained system (e.g., the interstitial space of a double-walled tank is the space between the two walls of the tank).

**“Liquid-tight”** means impervious to the passage of water and/or regulated liquid substance.

**“Marina”** means a shoreline property that:

- (a) contains a dock or basin to provide secure moorings for pleasure or commercial boats; and
- (b) that has an associated fueling dock or aboveground storage tank.

**“Motor fuel”** means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any blend containing diesel fuel, or any grade of gasohol, or any other regulated substance typically used in the operation of an engine. “Motor fuel” includes any blend of petroleum and biodiesel used to propel a vehicle.

**“New tank”** means an aboveground storage tank system installed on or after the effective date of these rules (August 1, 2024). This term shall include the installation of a tank that is reused or used to replace an existing tank.

**“NFPA”** means the National Fire Protection Association.

**“NORA”** means the National Oilheat Research Alliance.

**“Out-of-service”** means a condition in which an aboveground storage tank system is disconnected from a heating source or distribution system or is not in service.

**“Owner”** means any person who owns an aboveground storage tank system.

**“Person”** means any individual, partnership, company, corporation, association, unincorporated association, joint venture, trust, municipality, the State of Vermont, or any agency, department or subdivision of the State, federal agency, or any other legal or commercial entity.

**“Pipe” or “Piping”** means a conduit made of a petroleum-compatible material used to convey petroleum to and from an aboveground storage tank system.

**“Public water system”** means any system or combination of systems owned or controlled by a person that provides drinking water through pipes or other constructed conveyances to the public and that has at least 15 service connections or serves an average of at least 25 individuals daily for at least 60 days out of the year. A “public water system” includes all collection, treatment, storage, and distribution facilities under the control of the water supplier and used primarily in connection with the system. “Public water system” shall also mean any part of a system that does not provide drinking water, if use of such a part could affect the quality or quantity of the drinking water supplied by the system. “Public water system” shall also mean a system that bottles drinking water for public distribution and sale.

**“Public community water system”** means a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

**“Public non-transient, non-community (NTNC) water system”** means a public water system that is not a public community water system and that regularly serves at least 25 of the same persons daily for more than six months per year. Examples: schools, factories, office buildings.

**“Public transient, non-community (TNC) water system”** means a public non-community water system that is not a non-transient, non-community system. Examples: restaurants, motels, campgrounds.

**“Red Tag”** means a visible tag that specifies that an aboveground storage tank system is noncompliant and shall not be filled with petroleum products.

**“Release”** means any intentional or unintentional action or omission resulting in spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an aboveground storage tank system into groundwater, surface water, or onto the lands in the State, or into waters outside the jurisdiction of the State when damage may result to the public health, lands, waters, or natural resources within the jurisdiction of the State.

**“Residential”** or **“residence”** means, for the purposes of these rules, a building or structure where one or more person(s) live, whether year-round, seasonally, or temporarily. Examples of a residence include, but are not limited to single family dwellings, duplexes, apartment buildings, mobile home parks, dorms, residential condominiums, and residential accessory units. A residence may include a commercial operation if the commercial operation is owned or operated by an occupant that resides in the same building.

**“Secondary containment system”** means a liquid-tight physical barrier that is either:

- (a) a double-wall tank that is designed to:
  - (1) contain any regulated substance that leaks from the primary containment barrier of an aboveground storage tank system; and
  - (2) allows access to the interstitial space for monitoring and maintenance; or
- (b) a single-wall tank system within an enclosure that is designed to contain at least 110 percent of the storage capacity of the tank.

**“Secretary”** means the Secretary of the Vermont Agency of Natural Resources or the Secretary’s duly authorized representative.

**“Sensitive receptor”** means any natural or human-constructed feature which may be adversely affected when contacted by a regulated substance. Examples of sensitive receptors include public or potable water supplies, surface waters, wetlands, sensitive ecological areas, outdoor and indoor air, and enclosed spaces such as basements, sewers, and utility corridors.

**“Skid Tank”** means a container with foundations attached (portable or semiportable containers with suitable steel “runners” or “skids” and popularly known in the industry as “skid tanks”) and are used to store any of the following petroleum products: gasoline, diesel, kerosene, used oil, or heating oil. For the purposes of these rules, skid tanks that are mobile or semi-mobile are not included in the definition of “aboveground storage tank system.” Skid tanks that are not used for mobile or semi-mobile use or are not moved from their original footprint within six months are not included in this definition of “skid tank” and are considered aboveground storage tank systems that are subject to regulation under this rule.

**“Structure”** means any assembly of materials that is intended for occupancy or use by a person and that has at least three walls and a roof.

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**“Used Oil”** means any petroleum product that has been refined from crude oil (in whole or in part), or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Used oil is a free-flowing liquid at standard temperature and pressure and has a flash point of greater than 100 degrees (F). Used oil includes oils used as lubricants, heat transfer fluids, hydraulic fluids, and for other similar uses; but does not include materials derived from crude or synthetic oils that are fuels (e.g., gasoline, jet fuel and diesel fuel), or as cleaning agents or solvents (e.g., naphtha or mineral spirits). Used oil is subject to regulation under subchapter 8 of the Vermont Hazardous Waste Management Regulations (VHWMR).

**“Yellow Tag”** means a visible tag affixed to an aboveground storage tank system that permits a temporary and conditional use of a noncompliant aboveground storage tank system located on and used to serve a residential property.

***Subchapter 3: DESIGN, INSTALLATION, AND INSPECTION  
STANDARDS FOR ABOVEGROUND STORAGE TANK SYSTEMS***

**§ 9-301 APPLICABILITY**

With the exception of tanks defined as bulk storage tanks in these rules, §§ **9-302 through 9-306** applies to all aboveground storage tank systems. § **9-307** applies only to bulk storage tank facilities and bulk storage tanks.

**§ 9-302 GENERAL REQUIREMENTS**

All new tanks shall be made of or lined with materials that are compatible with the substance(s) stored in them and shall be constructed as per one of the following designs:

- (1) Single-wall tank not less than 12-gauge in thickness in its entirety in accordance with Section 7.2.7 (Design Standards) of NFPA Part 31, effective January 1, 2020, as amended;
- (2) Double-bottom steel tanks with end-cover protection and interstitial space monitoring;
- (3) Double-wall tanks with polyethylene or other plastic polymer inner wall and metallic outer wall;
- (4) Double-wall non-metallic tank; or
- (5) Single-wall non-metallic tank for inside use only.

**Note:** All tanks at public buildings (as defined in **20 V.S.A., § 2730**), including aboveground LP Gas tanks; with over 2,000 gallons liquid capacity; or with an aggregate capacity over 4,000 gallons; and aboveground flammable and combustible liquid tanks, shall have a permit from the Vermont Division of Fire Safety. Tank permit applications are available online at [www.firesafety.vermont.gov](http://www.firesafety.vermont.gov), or can be obtained by contacting any office of the Vermont Division of Fire Safety.

**§ 9-303 TANK SYSTEM DESIGN, INSTALLATION AND ALTERATION STANDARDS**

- (a) Specifications. Installation and alteration of all aboveground storage tank systems shall be performed in accordance with one of the following methods:

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- (1) NFPA 1 Uniform Fire Code (IFC); or
  - (2) NFPA Parts 30 & 31; or
  - (3) A similar method approved in writing by the Secretary.
- (b) Design. All new tanks shall be designed and constructed in accordance with Section 7.2.7 (Design Standards) of NFPA Part 31, effective January 1, 2020, as amended. For new tanks, all tank fill and vent piping shall be designed and constructed in accordance with Section 8.2.1.1 (Acceptable Piping) of NFPA Part 31, effective January 1, 2020, as amended. Tank fill and vent piping shall have male or female threaded ends that comply with a recognized thread specification, or press-connect ends listed to Underwriters Laboratories (UL) 180 Standard for Combustible Liquid Tank Accessories. Press-connect fittings shall be installed in accordance with the manufacturer's specifications with a tool recommended by the manufacturer.
- (c) Aboveground Storage Tank System Installation. All aboveground storage tank systems shall comply with the provisions of this subsection, as follows:
- (1) Tank Foundation.
    - (A) All aboveground storage tank systems shall be located on a stable foundation, such as a concrete pad, that is adequate to prevent the tank from tipping over. A stable foundation shall mean the tank is free-standing, measurements taken on the tank's length and width dimensions show the absence of the tank tilting, and there is no evidence of tank subsidence (i.e., no contact between the tank or tank legs and the ground surface).
    - (B) All new tanks shall be installed on a foundation that is made of a single continuous pad or bolted slabs made of concrete and is constructed to be at least 4 inches in depth and sized to have a footprint that exceeds the length and width dimensions of the tank by a factor of 10 percent (see Note below for example). A foundation of alternative material or size may be utilized with prior written approval by the Secretary.

**Note:** For a 275-gallon tank with dimensions of 44 inches (height) by 27 inches (width) by 60 inches (length), the foundation footprint shall measure at least 4 inches deep and 30 inches (width) by 66 inches (length).

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- (2) Overfill alarm. Any aboveground storage tank system that receives pressurized deliveries shall be equipped with an operational overfill vent alarm or “whistle” with a vent pipe that terminates near the fill pipe. Vent pipes shall terminate not more than 12 feet from the fill pipe and at a point visible from the fill port.
- (3) Shutoff valve. Any new aboveground storage tank system with a fuel line attached to the bottom portion of the tank shall be equipped with an accessible shutoff valve located within 12 inches of the fuel outlet of the tank system. Any new aboveground storage tank system which draws a regulated substance from the top of the tank system shall be equipped with a shutoff valve before the filter. The valve shall be a positive shutoff valve designed solely for the purpose of shutting off the supply of heating fuel, motor fuel, or used oil.
- (4) Fill and vent pipe.
  - (A) All aboveground storage tank systems shall have fill and vent pipes with a minimum inside diameter of 1¼ inches and that terminate outside the structure. The fill pipe shall be fitted with a liquid-tight cap and the vent pipe shall have a weatherproof and insect-proof cap. Fill and vent pipes shall be made from metallic material; PVC or other non-metallic materials are prohibited.
  - (B) All new tanks shall have fill and vent piping constructed in accordance with **§ 9-303(b)**. The fill pipe shall be fitted with a liquid-tight cap and the vent pipe shall have a weatherproof and insect-proof cap.
- (5) The aboveground storage tank system vent pipe shall be sized in accordance with the corresponding NFPA minimum diameter of tank vent opening.
- (6) Unused openings in all aboveground storage tank systems shall be fully and permanently closed or plugged. Threaded pipe plugs may be used to close openings to comply with this provision. Openings in aboveground storage tanks systems that are temporarily taken out-of-service for maintenance or any other reason shall be plugged or tagged out to indicate the tank is out of service, and the fuel carrier shall be notified that the tank cannot receive deliveries.
- (7) All new tanks shall be equipped with a device to gauge fuel volume.
- (8) Piping and fuel lines.

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- (A) All existing tanks with piping and fuel lines that are buried underground, including in concrete flooring, shall be installed with a plastic coating or a continuous protective sleeve made of a non-corrodible material. The protective sleeve shall start and terminate aboveground. Fittings shall not be installed underground in any piping, coating, or sleeve.
- (B) All new tanks with piping and fuel lines in direct contact with earthen materials or concrete shall be installed with a plastic coating and sleeved with crush resistant conduit that is in a continuously protective sleeve made of non-corrodible material. Fittings shall not be installed underground in any piping, coating, or sleeve. Having an unprotected pipe or piping buried or in direct contact with earthen materials or concrete is prohibited.
- (9) For aboveground storage tank systems located inside a structure, the tank shall be located on the lowest floor of the structure unless the installation meets an exception recognized by a method in **§ 9-303(a)**.
- (10) All new tanks located outside a structure shall be protected from physical damage caused by snow or ice. Compliance with this subsection shall require location of an aboveground storage tank system either:
  - (A) on the gable end of a structure or away from the structure;
  - (B) in a secondary containment structure that is installed in accordance with **9-303(f)**;
  - (C) in or under a shelter or enclosure with a roof; or
  - (D) in accordance with another method approved by the Secretary.
- (11) Any aboveground storage tank system that includes more than one storage tank shall have, for each individual tank, a separate fill pipe, a separate fuel volume gauge, a separate vent pipe, and a separate vent alarm, each of which comply with the requirements of this section. The separate vents may be plumbed or manifolded together inside the building and tied into one outlet vent pipe that goes to the outside of the structure, provided that:
  - (A) the outlet pipe is at least one pipe size larger than the largest individual vent pipe connected thereto; and



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- (B) the point of connection between two or more vent pipes shall not be lower than the top of the fill pipe opening on the tank.
- (12) Any new tank shall have tank legs that are no longer than 14 inches, unless approved by the Secretary in writing prior to the tank's installation.
- (d) Date of installation. All aboveground storage tanks and tank systems installed on or after August 15, 2017, shall be visibly identified with the date of tank installation. The visible identification shall be in the form of a tag, sticker, or other marker that is permanently affixed to the tank and that clearly identifies the date of installation of the tank system. The tag or sticker shall be located on the tank such that it is clearly visible and unobstructed from view.
- (e) Tank systems at marinas. All aboveground storage tank systems located at marinas shall be installed and shall be operated in accordance with the Petroleum Equipment Institute's Publication PEI/RP 1000-09: "**Recommended Practices for the Installation of Marina Fueling Systems.**" All new tanks at marinas shall also employ secondary containment consistent with **§ 9-303(f)**.
- (f) Secondary containment systems.
  - (1) Applicability. Secondary containment systems shall be required for all new aboveground storage tank systems at marinas. Secondary containment systems may also be utilized as a method of compliance with **§ 9-303(c)(10)**.
  - (2) Requirements for installation and construction. Secondary containment systems shall be installed and constructed in accordance with manufacturer instructions and specifications.
- (g) Additional requirements for existing aboveground storage tank systems.
  - (1) Tank foundations. Not later than July 1, 2030, all aboveground storage tank systems shall comply with requirements of **§ 9-303(c)(1)(B)**.
  - (2) Fill and vent pipes. Not later than July 1, 2030, all aboveground storage tank systems shall have tank fill and vent pipes constructed in compliance with requirements of **§ 9-303(c)(4)(B)**.

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- (3) Tank piping and fuel lines. Not later than July 1, 2030, all aboveground storage tank systems where tank piping and fuel lines have direct contact with earthen materials or concrete shall comply with the requirements of **§ 9-303(c)(8)(B)**.
- (4) Tank legs. Not later than July 1, 2030, all aboveground storage tank systems shall comply with the requirements **§ 9-303(c)(12)**. A request for exemption from this requirement may be submitted to the Secretary in writing and will be considered on a case-by-case basis.
- (5) Tanks located outside a structure. Not later than July 1, 2030, all aboveground storage tank systems located outside a structure shall comply with the requirements of **§ 9-303(c)(10)**.
- (6) Tanks located in flood prone areas. Not later than July 1, 2030, all aboveground storage tank systems located in flood prone areas shall comply with the requirements of **§ 9-304**.
- (7) Tanks located at marinas. Not later than July 1, 2030, all aboveground storage tank systems located at marinas shall comply with the secondary containment requirements of **§ 9-303(f)**.

### **§ 9-304 INSTALLATION OF TANK SYSTEMS IN FLOOD PRONE AREAS**

- (a) In addition to meeting the requirements of **§§ 9-302 and 9-303**, all new tanks located in a flood hazard area as defined in **10 V.S.A. § 752** shall meet the following to prevent tank floating and to prevent releases in high water or flooding conditions:
  - (1) Tanks located inside a structure:
    - (A) The tank vent pipe shall be of sufficient length to extend above the level of a projected flood.
    - (B) The tank shall be anchored to the concrete pad or alternative foundation that has been approved by the Secretary through the use of one of the following methods:
      - (i) Foot flanges. For tanks with pipe legs on a foundation, foot flanges with threaded ends shall be connected to compatible pipe ends. Each foot flange shall be secured to the supporting surface with concrete bolts or screws;

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- (ii) Concrete anchors. For tanks with saddles or pipe legs for new surfaces in combination with hold-down straps, concrete anchors with a means for attaching the strap end shall be cast into the supporting surface. The anchors shall be positioned at +/- 4 inches of the tank support centerline and +/- 4 inches of the tank width or diameter centerline;
  - (iii) Earth augers. For tanks with saddles or pipe legs for undersized pads in combination with hold-down straps, earth augers with a means for attaching the strap end shall be installed under the concrete slab. The augers shall be positioned at +/- 4 inches of the tank support centerline and +/- 4 inches of the tank width or diameter centerline; or
  - (iv) Any other method recommended by the tank manufacturer or tank installer that is based on the tank installation type, supporting surface, and other appropriate considerations.
- (C) Hold-down straps used with a concrete anchor or earth auger methods specified in **§§ 9-304(a)(1)(B)(ii) or 9-304(a)(1)(B)(iii)** shall have a means at each end to connect to fixed attachment points and shall have a means to tighten the strap (e.g., a turnbuckle). Straps shall be positioned over the tank at the anchor points but shall not interfere with used openings.
- (2) Tanks located outside a structure. New tanks located outside a structure shall comply with the criteria for aboveground storage tank systems located inside a structure listed above in **§§ 9-304(a)(1)(A) through 9-304(a)(1)(C)** to prevent product loss and damage to the tank system. An exemption from this requirement may be requested from the Secretary and shall be approved on a case-by-case basis.

**Note:** Information pertaining to flood hazard areas and projected flood levels can be found at the FEMA Map Service Center (Flood Insurance Rate Maps) – <https://msc.fema.gov>. These maps can also be found on the ANR Natural Resources Atlas - <https://anrmaps.vermont.gov/websites/anra5/>. Visit the Agency website for guidance on making flood hazard area determinations.

**Note:** Where applicable, the Agency encourages contractors and other parties to refer to the **National Oilheat Research Alliance (NORA) Recommended Practice for Home Heating Oil Tank Flood Resistance** for guidance on the construction of anchoring systems and other work to aboveground storage tank systems located within a flood hazard area.

**§ 9-305 INSPECTION OF TANK SYSTEMS**

- (a) Applicability. With the exception of tank systems used for storing used oil, all storage tank systems shall be inspected by the fuel carrier in accordance with the requirements of this section.
- (b) Frequency of inspections. An aboveground storage tank system shall be inspected at the following times:
  - (1) Immediately after the installation of a new tank but prior to the initial delivery of fuel;
  - (2) Immediately after initial delivery of fuel to a new tank;
  - (3) Prior to the initial delivery of fuel to the aboveground storage tank system when the tank owner switches fuel carriers;
  - (4) If not otherwise required under **§ 9-305(b)(1), 9-305(b)(2), or 9-305(b)(3)**, the aboveground storage tank system shall be inspected once every four years; and
  - (5) Upon removal of a tank system under **§ 9-306**.
- (c) Inspection standards. Aboveground storage tank systems shall be visually inspected for compliance with the following standards:
  - (1) Tank foundation requirements of **§ 9-303(c)(1)**.
  - (2) Piping and fuel line requirements of **§ 9-303(c)(8)**.
  - (3) Overfill vent alarm or whistle requirements of **§ 9-303(c)(2)**.
  - (4) Tank vent and fill pipe size, design, and capping requirements of **§§ 9-303(c)(4) and 9-303(c)(5)**.

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- (5) The entirety of the tank surface and tank legs are free of any cracks and of significant corrosion or pitting, rust, and spores; tank is free of dents or bulges visibly impacting tank seams; and all tank fuel filter, fittings, and valves are free of drips or leaks and any other sign of an actual or suspected release of hazardous material.
  - (6) All unused openings are fully and permanently closed or plugged, in accordance with **§ 9-303(c)(6)**.
  - (7) The shutoff valve requirements of **§ 9-303(c)(3)**.
  - (8) The requirements of **§ 9-303(c)(12)** for tank leg length.
  - (9) The aboveground storage tank system is equipped with a device to gauge fuel volume in accordance with **§ 9-303(c)(7)**.
  - (10) For aboveground storage tank systems located outside a structure, the requirements of **§ 9-303(c)(10)** (for protection from damage from snow and ice).
  - (11) For aboveground storage tank systems located inside a structure, the requirements of **§ 9-303(c)(9)** (installation on lowest floor of structure).
  - (12) For aboveground storage tank systems that include more than one storage tank, requirements of **§ 9-303(c)(11)**.
  - (13) For aboveground storage tank systems located in flood prone areas, requirements of **§ 9-304(a)**.
  - (14) For aboveground storage tanks systems located at marinas, requirements of **§ 9-303(e)**.
- (d) Inspectors. Inspections of aboveground storage tank systems shall be conducted by an inspector that maintains one of the following:
- (1) NORA Gold, Bronze, or Silver certification;
  - (2) Vermont Oilheat Certificate of Fitness;
  - (3) a certificate of completion from an Oilheat Tank Seminar, which has been approved by NORA; or
  - (4) other training may be requested in lieu of **§§ 9-305(d)(1) through 9-305(d)(3)** and shall be reviewed and approved by the Secretary on a case-by-case basis.

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- (e) Inspection checklist and photo documentation of noncompliance.
- (1) Inspectors shall utilize an inspection checklist for performing each aboveground storage tank system inspection. The checklist shall be on the current form provided by the Secretary with the form effective date of August 2024 or later, or pre-approved by the Secretary, and shall be used by the inspector to document the age and condition of the aboveground storage tank system as of the time of the inspection. The checklist shall document any issues identified in the inspection which indicate an actual or suspected release of fuel and any noncompliance with the requirements and standards of **§ 9-305(c)** and shall include measures recommended by the inspector that are necessary to return the aboveground storage tank system to compliance.
  - (2) Within five business days of the date of inspection, the tank inspector shall provide a copy of the inspection checklist completed in accordance with **§ 9-305(e)(1)** to the tank owner.
  - (3) For aboveground storage tank systems determined to be noncompliant per **§ 9-305(f)(1)(B)**, the tank inspector shall photo document all noncompliant tank components.
- (f) Noncompliant tanks.
- (1) Existing tanks. If an aboveground storage tank system is determined to be noncompliant with the standards of **§§ 9-305(c)(1) through 9-305(c)(6)**, the inspector shall include such results in the inspection checklist and take the following measures:
    - (A) Red Tag. The inspector shall immediately affix a “Do Not Fill” red tag onto the aboveground storage tank system to indicate that the tank system is noncompliant with the requirements and standards of **§§ 9-305(c)(1) through 9-305(c)(6)** and shall not be filled. A red tag shall be affixed to the tank and the tank fill port and shall be clearly visible and unobstructed from view.
    - (B) Yellow Tag. The tank inspector may affix a “Conditional Fill” yellow tag in lieu of a red tag if the reason for noncompliance with the requirements and standards of **§§ 9-305(c)(1) through (c)(6)** does not constitute an immediate threat of a release of a petroleum product. The yellow tag shall be affixed to the tank and the tank fill port and shall be clearly visible and unobstructed from view.

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- (i) A yellow tag may be used only for noncompliance with the following aboveground storage tank system inspection standards:
  - I. Tank piping which is in contact with earthen materials or concrete is coated or sleeved to protect against corrosion and damage, per standards of **§ 9-305(c)(2)**.
  - II. For aboveground storage tank systems located outside a structure, the vent line is equipped with an operational overfill vent alarm or whistle, per standards listed in **§ 9-305(c)(3)**. Aboveground storage tank systems located indoors and lacking an operational vent alarm or whistle shall not be yellow tagged.
  - III. Fill and vent diameter is a minimum 1 ¼ inches, per standards of **§ 9-305(c)(4)**.
  - IV. The aboveground storage tank system is free of visible dents and bulges; the tank has no evidence of leak at the fill or vent pipe, and the tank and tank legs are free of moderate rust and pitting.
- (C) Affixing a yellow tag to any aboveground storage tank system found out of compliance with any items other than those listed in **§§ 9-305(f)(1)(B)(i)(I) through 9-305(f)(1)(B)(i)(IV)** is prohibited.
- (D) Aboveground storage tank systems with yellow tags may only be filled per conditions specified in **§ 9-305(i)**.
- (E) All yellow tags installed leading up to or during the current heating season will expire on the first day of May. Yellow tags shall not be renewed.
- (F) Upon the expiration of the yellow tag, the aboveground storage tank system is noncompliant with the requirements and standards of **§§ 9-305(c)(1) through 9-305(c)(6)** and may not be filled. Filling an aboveground storage tank system with an expired yellow tag is prohibited.
- (G) Yellow tags are applicable only to tanks located on and serving a residential property. Application of a yellow tag to a tank used for non-residential purposes is prohibited.

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- (2) New tanks. If a new tank is determined to be noncompliant with any standard of **§ 9-305(c)**, the inspector shall include such results in the inspection checklist and shall immediately affix a “Do Not Fill” red tag onto the new tank. A red tag shall be affixed to the tank and the tank fill port and shall be clearly visible and unobstructed from view.
- (3) Within five business days of the date of the inspection resulting in a red or yellow tag, the inspector shall enter the following information into the Secretary’s database for tracking aboveground storage tank compliance:
  - (A) Name of the aboveground storage tank system owner;
  - (B) Location of the aboveground storage tank system (physical address and city);
  - (C) Capacity of aboveground storage tank system inspected;
  - (D) Name, company, and contact information of technician that performed the inspection of the aboveground storage tank system;
  - (E) The date of inspection and date of application of the red or yellow tag;
  - (F) Reason for noncompliance;
  - (G) Measures recommended by inspector to address noncompliance; and
  - (H) For aboveground storage tank systems that have been affixed with a yellow tag, a written explanation documenting the grounds for being granted a yellow tag.

**Note:** The Secretary’s database for aboveground storage tanks is located at: <https://anrweb.vt.gov/DEC/ERT/AST.aspx>

- (g) Return to compliance; removal of visible designation.
  - (1) Existing tanks. A red or yellow tag required to be affixed to an aboveground storage tank system under this section may be removed if the results of a follow-up inspection demonstrate that the measures taken to address the identified noncompliance are sufficient to bring the tank system into compliance with **§§ 9-305(c)(1) through 9-305(c)(6)**.



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- (2) New tanks. A red tag required to be affixed to an aboveground storage tank system under this section may be removed if the results of a follow-up inspection demonstrate that the measures taken to address the identified noncompliance are sufficient to bring the tank system into compliance with **§§ 9-305(c)**.
- (h) Prohibition of fuel delivery. No person shall deliver fuel to an aboveground storage tank system which has an affixed “Do Not Fill” red tag and/or has been reported to the State AST Red Tag database. No person shall deliver fuel to an aboveground storage tank system that has not been inspected per **§ 9-305(a)**.
- (i) Conditional fuel delivery. Fuel may be delivered to an aboveground storage tank system that has an affixed yellow tag only under the following conditions:
  - (1) Maximum of 100 gallons per delivery; and
  - (2) Fuel delivery at slow fill speed.
- (j) Recordkeeping requirements. Inspectors shall retain copies of all completed inspection checklists per **§ 9-305(e)(1)**, photo documentation per **§ 9-305(e)(3)**, and other records used to document aboveground storage tank system compliance in accordance with this section for a period of four years. Copies of inspection checklists, photo documentation, and other records maintained under this provision shall be made available to the Agency upon request.

### **§ 9-306 PROPER REMOVAL OF TANK SYSTEMS**

- (a) During the installation of an aboveground storage tank system, the installer shall ensure that the existing aboveground storage tank system is taken out-of-service and removed in accordance with one of the following methods:
  - (1) NFPA 1 Uniform Fire Code (IFC);
  - (2) NFPA Parts 30 & 31; or
  - (3) A similar method approved in writing by the Secretary.
- (b) Removal of out-of-service aboveground storage tank systems.

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- (1) Any aboveground storage tank system, including all piping, that is out-of-service for more than one year shall be removed. For tank systems located in a structure, the fill pipe to the tank system shall be fully and permanently removed from the structure to prevent delivery to a disconnected system. The removed tank and piping shall be properly disposed of unless reused in accordance with **§ 9-306(c)**.
  - (2) During the removal of an aboveground storage tank system, the tank system location shall be inspected for an actual or suspected release of the substance stored in the tank system. The inspection shall include any aboveground, subsurface or other areas where contamination is likely to exist. If an actual release or suspected release is discovered, the owner shall comply with the requirements of **§ 9-103**.
  - (3) If the owner of any aboveground storage tank system that serves a structure converts the type of fuel used for the structure so that the structure is no longer served for any purpose by the aboveground storage tank system, the owner shall have the aboveground storage tank system and any fill pipes removed at the same time as the heating type conversion in accordance with this section.
- (c) Reuse of tank systems. Any aboveground storage tank system taken out-of-service shall be rendered unusable unless the tank system is inspected pursuant to **§ 9-305** and is found to be in sound condition and otherwise compliant with these rules, in which case, the tank system may be put back in service.
  - (d) Upon written request, the Secretary may conditionally approve an aboveground storage tank system that meets the standards of **§ 9-302**, **§ 9-303**, **§ 9-304** (when a tank is located in a flood prone area), and the inspection requirements of **§ 9-305**, to remain out-of-service for more than one year.

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- (e) When installing a replacement tank system, the fuel in the tank being replaced shall not be pumped into the replacement tank unless the tank being replaced is leaking or is likely to cause a release. The fuel in the tank being replaced shall either be burned by the heating system prior to tank replacement or, if pumped into the replacement tank, shall be treated with a fuel conditioner that contains the following components: stabilizer (to keep fuel fresh during summer storage), dispersant (to arrest moisture and pre-existing sedimentation), corrosion inhibitor (to protect the storage tank and remainder of the fuel system) and metal deactivator (to protect against fuel blackening from contact with yellow metals).

**Note:** Unused fuel in tanks that are replaced that is not burned prior to new tank installation or is not treated by a fuel conditioner shall be managed in accordance with the Vermont Hazardous Waste Management Regulations.

### § 9-307 ADDITIONAL REQUIREMENTS FOR BULK STORAGE TANK FACILITIES

- (a) Prior to a new installation of an aboveground storage tank system at a bulk storage tank facility, the installer shall submit a **Vermont Aboveground Storage Tank Registration Form** (provided by the Secretary) completed in accordance with the form's instructions. Installers of aboveground storage tank systems at more than one bulk storage facility location shall file a separate form for each location.
- Note:** An installer may register multiple aboveground storage tank systems at one location using one form.
- (b) At the time a tank is taken out-of-service at a bulk storage tank facility, the owner shall conduct a site investigation consistent with the requirements of **Subchapter 3** of the Vermont Investigation and Remediation of Contaminated Properties Rule (IRule).
- (c) No aboveground bulk storage facility sited after 2011 shall be located:
- (1) Within the Source Protection Area of a public community water system or public non-transient, non-community (NTNC) water system using a groundwater source;

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- (2) Within Zone 1 or Zone 2 of a Source Protection Area of a public community water system or NTNC water system using a surface water source except that the Secretary may, on a case-by-case basis, make a determination that an aboveground storage tank may be sited in the Zone 2 of a source protection area of a water system using a surface water source;
- (3) Within 200 feet of a public transient, non-community (TNC) water system source;
- (4) Within 100 feet of any private drinking water supply source;
- (5) Within 25 feet of any public water distribution line; or
- (6) In any area designated as a Class I or Class II groundwater zone.