

WISCONSIN FARM TANKS USED TO STORE OR DISPENSE PETROLEUM PRODUCTS

As a measure to protect our environmental and groundwater resources and to provide fire safeguards, federal and state regulations were implemented for the storage of petroleum product

Until 1991 farms in Wisconsin historically have been excluded from the more comprehensive building and operational fire codes that commercial industry and business must comply with. Vehicle fuel storage on farms can pose a significant exposure factor in fire situations or potential environmental impairment in the event of a release (which has been documented numerous times over the past years). The rural location and additional time required for fire department response will have significant impact on efficient or effective fire control. The fact that the water source on most farms, and subsequently the livelihood of the farm, is a potable well fed by underground aquifers demonstrates the need to protect the water supply.



Underground Tanks for Heating Fuel of 4,000-Gallon or Less Capacity:

Underground heating fuel tanks, 1,100 gallon or less capacity and installed prior to 1998, which provide fuel to the residential home are not required to have a leak detection method implemented. Tanks installed after that date must be installed under the supervision of a certified installer and must have a leak detection method approved by the department.

Underground tanks for heating any non residential building must comply with the periodic leak detection requirements in the code. For most underground heating fuel tanks this will be bi-annual tightness testing.

Underground Tanks for Motor Vehicle Fueling:

Corrosion Protection

All tanks and piping must meet the corrosion protection requirements of Comm 10:

- Tank and/or pipe constructed of noncorrosive material, or
- Upgrade with interior lining if performed prior to Dec 1998, including periodic internal inspection, or
- Upgrade with cathodic protection if performed prior to Dec 1998

Spill and Overfill Protection

Underground tank must be provided with Department of Safety & Professional Services (DSPS)-approved devices or designs to prevent spilling associated with transfer hose detachment from the fill pipe during product transfer to the UST system.

Underground tank must be provided with DSPS-approved device to alarm or prevent the filling of the tank more than 95% of capacity.

Leak Detection

All underground tanks greater than 1,100-gallon capacity and all pressurized piping are required to have DSPS-approved leak detection.

Tank Closure

When any underground petroleum product storage tank on a farm is discontinued in service the tank must be closed, either by removal or closure in place. Both activities must be under the supervision of a certified contractor. Closure in place must be requested by the owner and authorized by the department.

The closure of underground tanks 1,100 gallon capacity and larger used for motor vehicle fueling and USTs 4,000 gallon and larger used for heating fuel must be accompanied by a closure assessment. The assessment must be performed by an individual certified for tank closure assessment.



Tanks on Wheels



The Comm 10 code requires that tanks on wheels (tank wagons) meet specific design requirements for the tank and the chassis. Specific requirements are in Comm 10.610(1) which includes:

- Tank specifications
- Chassis requirements
- Nozzle requirement
- Labeling / signage requirement

Existing non compliant tank wagons shall be in compliance no later than Feb 1, 2014.

Aboveground Tanks for Vehicle Fueling

The type of storage tank system allowed on farms is dependent upon the distance of the tank from a building and/or size of the tank. It is important to understand that tanks designed for the storage of flammable or combustible liquids must meet specific design standards to meet the inherent fire and explosion concerns from heat or flame exposure. Tanks designed for use underground shall not be used aboveground as the underground tank design standard factors in the perimeter forces from the surrounding soil. This same tank used aboveground lacks counter balancing external force. Tanks designed for aboveground use require emergency and atmospheric venting capacities which are not required on underground tanks.

There are four types of aboveground tank configurations typically used and allowed for farm applications:

- Gravity feed from tank on elevated supports
- Double wall tank with suction pump mounted on tank or in the dispenser (Photo to the right)
- Single wall tank in containment dike with suction pump mounted on tank or in the dispenser
- Skid mounted single wall tank with suction pump mounted on tank



All aboveground (≥ 110 gal.) and underground (≥ 60 gal.) tanks must be installed under the supervision of a certified installer. Many farm petroleum suppliers have AST installer certification. All tank installation and upgrade requires pre-installation plan approval. All tanks must be registered with DSPS.

Aboveground Tanks for Vehicle Fueling Located Within 40 ft. of a Building or Greater Than 1,100-Gallon Capacity:

Tanks in this setback and size category must be double-wall or single-wall within a containment dike. The containment dike must have a capacity to hold 125% of the capacity of the largest tank in the dike. Minimum setback distance must be maintained as expressed in the table below. **(NOTE:** Grain bins and silos are “structures;” “buildings” include: tobacco sheds, machinery storage, barns and other buildings providing shelter.)

Aggregate Capacity (gallons)	Distance to Nearest Building, Haystack or Combustible Structure or Nearest Side of Any Public Way	Distance to Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way
275 or less	5 feet	5 feet
276-750	5 feet	10 feet
751-12,000	5 feet	15 feet
12,001-30,000	5 feet	20 feet

Aboveground Tanks for Vehicle Fueling Located More Than 40 ft. From a Building:

Tanks within this setback and size category must be less than 1,100 gallon capacity unless they are in secondary containment.

For farming operations using a tank without secondary containment, the tank and the fueling operation shall be placed outside of a building and at least 40 feet from the near side of a public way and from a building or structure used for any of the following purposes:

1. Human occupancy.
 2. Housing of any livestock.
 3. Storage or repair of any motor-driven vehicle or machine.
 4. Storage of chemicals, pesticides or other fuels.
 5. Storage of hay or similar crops susceptible to spontaneous combustion, if stored in a combustible building or structure.
- (NOTE:** This is the only farm setback restriction to a “structure.”)



Effective February 1, 2009 all new or replacement ASTs on farms must have an emergency vent.

The Wisconsin Comm 10 Code can be accessed on the Internet at: <http://www.legis.state.wi.us/rsb/code/comm/comm010.pdf> and the Code Compendium at: http://commerce.wi.gov/ERpdf/bst/CommCodes10_5_2_48/ER-BST-Comm10CodeCompendium.pdf