

## Petroleum Tanks at Municipal Facilities

The laws and regulations addressing the use, storage and management of petroleum products are complex and impose a significant burden on the owners/operators of petroleum storage tanks. The following questions and answers are designed to assist municipal officials in complying with the standards to minimize risks of spills, leaks, enforcement actions and legal liabilities arising from mismanagement.

### ***What is petroleum or oil?***

According to New York State Law §17-1003.5, petroleum is defined as:

- a. crude oil and any fraction thereof;*
- b. any mixture containing crude oil or any fraction thereof; and*
- c. synthetic forms of lubricating oil, dielectric oils, insulating oils, hydraulic oils and cutting oils.*

*Such term shall not include:*

- (1) hazardous waste defined pursuant to section 27-0903 of this chapter;*
- (2) substances meeting the definition of hazardous substance pursuant to section 40-0105 of this chapter;*
- (3) animal or vegetable oils that do not contain crude oil or fractions thereof; or*
- (4) substances that are gases at standard temperature and pressure.*

However, according to the United States Environmental Protection Agency (USEPA) regarding spills, oil is defined as:

- *oil of any kind or in any form, including, but not limited to:*
  - *fats, oils or greases of animal, fish or marine mammal origin;*
  - *vegetable oils, including oils from seeds, nuts, fruits or kernels; and,*
  - *other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse or oil mixed with wastes other than dredged spoil.*

With regards to tank storage, the USEPA regulates petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils.

Despite these varying definitions, gasoline, kerosene and oil are regulated under all of these definitions of petroleum and oil.

### ***What are containers and tanks?***

According to the New York State Law §17-1003.7, a “tank” is defined as “a stationary device designed to store petroleum, which is constructed of non-earthen materials that provide structural support. The term ‘tank’ includes all associated pipes, lines, fixtures and other ancillary equipment. The term ‘tank’ does not include septic tank; surface impoundment, pit, pond or lagoon; stormwater or wastewater collection system; flow-through process tank; or liquid trap or associated gathering lines directly related to oil or gas production and gathering operations.”

The USEPA regulations apply to:

1. aboveground containers (including tanks) of 55 gallons and larger
2. completely buried tanks
3. bunkered tanks
4. containers used for standby storage, seasonal storage or temporary storage.

***Who regulates petroleum storage?***

Petroleum storage tanks are regulated by the New York City Department of Environmental Protection (NYCDEP), the New York State Department of Environmental Conservation (NYSDEC) and the USEPA. Additionally, certain counties in New York State are delegated by the NYSDEC to regulate PBS storage tanks. The Occupational Health and Safety Administration (OSHA) regulates certain activities at petroleum storage locations.

**Are permits required?**

Above certain volume thresholds (1,100 gallons in aboveground storage tanks or 110 gallons in tanks that are more than 10 percent underground), an application for a NYSDEC Registration of Petroleum Tanks Certificate must be filed, must be modified when the facility changes, and must be renewed every five years. Also, every used oil tank must be registered even if the volume thresholds are not exceeded.

***What documents must be prepared to govern petroleum storage?***

In addition to the Registration of Petroleum Tanks Certificate described above, a Spill Prevention, Control and Countermeasure Plan (SPCC) Plan is required by the USEPA when the volume stored exceeds 1,320 gallons where a release might affect navigable waters.

***How often must tanks and containers be checked?***

Information from observations at tanks can be required at frequencies varying from daily to every five or 10 years.

For instance, tank inventory records must be kept daily for metered underground tank systems and must be reconciled every 10 days.

Tank monitoring systems must be monitored for leaks weekly and checked for operability monthly.

All aboveground storage tanks must be inspected monthly.

All aboveground storage tanks must be initially tested when 10 years old, and recurring tests must be every five years thereafter. Most unprotected underground tanks must be tightness tested when the tank is 10 years old and every five years thereafter.

Many other inspection and testing requirements apply. The monitoring and testing requirements in the regulations must be reviewed carefully.

***What signage or labeling requirements exist?***

All tanks and fill ports must be properly labeled. Each tank must be labeled with its design capacity, working capacity and a unique identification number on the tank and, if necessary to distinguish, at the gauge. Fill ports must be permanently marked to identify the product through the use of specific colors and symbols.

***What design standards exist?***

The designs of tanks must meet specific requirements depending on whether the tank is aboveground or underground, on the materials of construction, and must be based on the exposure to the elements. These design standards are too numerous to detail herein, but two points are especially important.

First, all ASTs installed after Dec. 27, 1986 must be constructed of welded steel and must meet or exceed one of the design and manufacturing standards listed in the regulations. Obtaining the proof of the manufacturer – and which standard the tank meets – are essential when buying a tank, whether new or used.

Second, certain requirements can be difficult to determine from a simple reading. For instance, double-walled tanks are not necessarily sufficient with regard to the secondary containment requirements. For tanks more than 10,000 gallons, the tank must have secondary containment and the NYSDEC interprets that the outer wall in a standard double-wall tank larger than 10,000 gallons does not meet the secondary containment requirement, even if it's equipped with a tank gauge and overfill alarm, because it does not provide infallible secondary containment for transfers into and out of the tank. Certain double-wall tanks with a special bay for secondary containment or secondary containment outside tanks have been interpreted to meet the requirement.

***What are the recordkeeping requirements?***

The following records concerning leak detection must be maintained for one year:

- tank leak detection records
- monthly operability checks for all leak detection systems
- weekly monitoring checks and results at groundwater wells when used as the method for leak detection
- monitoring records at vapor wells used for leak detection.

The following records must be maintained for five years:

- inventory records
- corrosion protection records
- pressure tests
- internal inspection records
- secondary containment inspection records.

***What kind of training must workers obtain?***

Obviously, all employees conducting inspections of tank systems must be trained on identifying deficiencies. All those correcting deficiencies must be trained on the proper manner to correct deficiencies and know when to seek outside expertise.

The OSHA requirements for training are required regarding recognition and entry of confined spaces and of lock-out/tag-out required protection areas. Also, inspectors of the internal surface of tanks and corrosion protection systems must be trained or knowledgeable to the consensus standards that they are using in their evaluation. Also, specific actions at tanks during fire or other emergencies should be integrated with training for those contingencies.

***Who inspects compliance with tank requirements, and how should a facility prepare?***

Either the USEPA or the NYSDEC can inspect petroleum tank compliance. However, the vast majority of such compliance inspections are conducted by the NYSDEC.

The best preparation is constant compliance through monitoring and inspection systems while simultaneously, communication occurs within the municipal organization to maintain compliance. Obviously, a combination of well-trained individuals operating within a system of well-reviewed standard operating procedures is helpful. Owners with more than 1,320 gallons of oil in tanks can ensure the SPCC Plan sets forth practices that will produce compliance with requirements. Some owners prefer to prepare an Operations and Maintenance (O&M) Manual to cover areas of operation not dictated by a SPCC Plan.

***What should a facility do during an inspection?***

If an inspection by the NYSDEC or USEPA has not occurred to date, then a review or audit by an outside expert can be helpful in finding, prioritizing and curing compliance issues before an inspection by the NYSDEC or the USEPA occurs.

If your facility is inspected, be cooperative, and after the inspection, ask for a copy of the inspection form. Also, ask the inspector for the corrections the inspector expects, if any.

***How should enforcement notices of violation be handled?***

Try to correct the enforcement issues as soon as possible, provided the corrections are clear. Obtain outside assistance if it appears helpful. Engineering consultants may know the technical solutions to compliance issues and may be familiar with the philosophies and personalities of the regional NYSDEC staff.

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