Coffee Break Training – Fire Protection Series

Hazardous Materials: Aboveground Tank Locations for Motor Vehicle Fuel Dispensing

No. FP-2012-7 February 14, 2012

Learning Objective: *The student shall be able to identify the separation requirements for aboveground storage tanks for motor vehicle fuels.*

Environmental regulations intended to protect ground water and prevent pollution provide a challenge for fire safety advocates. While it has long been recognized that underground tanks are a safer option for fire protection, if they deteriorate over time or are damaged, they can cause significant environmental harm.

One solution that pairs environmental protection with convenience is the advent of what are known as "protected" aboveground storage tanks—like the one shown today—that have been tested to withstand severe fire conditions. These tanks are a popular option for small vehicle fleet operators and other industries where motor vehicle fueling operations are required.

In order to prevent significant fire exposure in the event of a leak or spill occurring during refueling operations, all aboveground tanks (including protected tanks, fire-resistant tanks, tanks in noncombustible vaults, and nonrated tanks) must be located so that fire dangers are minimized.

This protected aboveground storage tank should be located at least 5 ft (152 cm) from the building.

The following table summarizes the separation requirements between these tanks and other exposures. There are differences between the model codes, so be certain to reference the legally-adopted code for your jurisdiction.

Tank Type and Liquid Class	Individual Tank Capacity (gal (L))	Minimum Distance From Nearest Important Building on Same Property (ft (cm))	Minimum Distance From Nearest Fuel Dispenser (ft (cm))	Minimum Distance From Lot Line That Is or Can Be Built on, Including the Opposite Side of a Public Way (ft (cm))	Minimum Distance From the Nearest Side of Any Public Way (ft (cm))	Minimum Distance Between Tanks (ft (cm))
Class I, II, and III protected aboveground tanks	≤ 6,000 (22,740)	5 (152)	25* (762)	15 (457)	5 (152)	3 (91)
	>6,000 (22,740)	15 (457)	25* (762)	25 (762)	15 (457)	3 (91)
Tanks in vaults (*International Fire Code*)	0–20,000 (0–75,800)	0	0	0	0	Separate compartment for each tank
Tanks in vaults (National Fire Protection Association (NFPA) 1)	0–15,000 (0–56,850)	0	0	0	0	Separate compartment for each tank
Other tanks	All	50 (1,524)	50 (1,524)	100 (3,048)	50 (1,524)	3 (91)

*At fleet vehicle motor fuel-dispensing facilities, no minimum separation is required.

For additional information, refer to *International Fire Code*®, Chapter 22, or NFPA 1, *Uniform Fire Code*, Chapter 42.