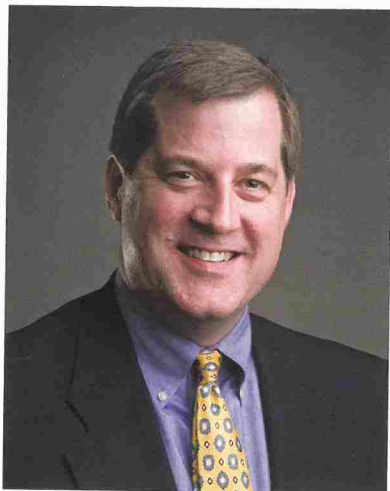


Understand Liabilities with Underground Tanks

By Mark E. Dreyer, Conner & Winters, P.C.



Mark Dreyer

Editor's note: With this issue of IPGA News, we begin including occasional articles written by Mark Dreyer, a partner in the law firm of Conner & Winters, concerning propane litigation cases. Mark has litigated cases since 1988. Headquartered in the firm's Tulsa, Okla., office, his practice includes representing different segments of the gas fuels industry. Mark has defended propane retailers, wholesalers, and tank manufacturers in personal injury, wrongful death, and property damage claims in 20 states, as well as provided counsel regarding regulatory compliance matters. He has also represented gas utilities in personal injury and property damage claims.

Mark is a past member of the Parent Child Center of Tulsa Board of Directors, a past president of the University of Tulsa College of Law Alumni Association, and is currently a Fellow of the Litigation Counsel of America. He is listed in *The Best Lawyers in America* publication (Commercial Litigation) and is also recognized in the *Super Lawyers* publication. Mark has also been selected as a "Local Litigation Star" in the commercial and insurance categories for multiple years by *Benchmark Litigation*.

He received his B.A. from Washington University in St. Louis, and his J.D. from the University of Tulsa College of Law.

We are all familiar with the sight of brightly colored propane tanks installed in residential yards. Some consumers, however, opt to receive their propane service from underground tanks. One major benefit of underground tanks, of course, is aesthetic: they do not detract from a home's landscaping, and they do not take up the same yard space as an aboveground tank. One might think that an underground installation is simply safer because the tank, being buried, is naturally protected by its environment. However, underground installations present their own challenges and potential hazards.

For example, consider one case my office handled that involved an unintended release of gas from an underground tank. Some months before the accident, a homeowner installed a 1,000-gallon underground tank at his home to provide propane to a pool heater and gas barbecue grill. The tank was equipped with a multivalve that was part of the tank's riser. The multivalve was protected by a metal fitting housing that was about two feet tall and had a hinged metal lid that could be opened in order to service the tank. Once the tank was installed, several inches of the top of the fitting housing, as well as the entire dome lid, were visible above ground. The accident occurred when a worker and his 13-year-old son were grading an area near the tank. At some point during the work, the worker allowed his son to drive

a truckload of dirt away from the work site. As he did, the young driver struck the dome and caused the riser pipe to partially separate from the tank. Fugitive gas quickly escaped and was ignited by the truck's motor¹. The boy died of burns at the scene; the father survived but suffered third-degree burns over 80% of his body and incurred medical expenses exceeding five million dollars.

One of the parties that was sued in this case was the propane retailer. How can a retailer be responsible for a young driver running over a tank dome? The reason is that there are provisions in chapter 6 of NFPA 58 that determine where underground tanks can and cannot be located, and whether those installations must be protected against vehicles. The requirements are usually based upon locations near roads or structures, but not all of them are. For example, the current version of NFPA 58 includes depth requirements in Sections 6.8.6.1(A) and (B) which are dependent upon whether the tank is installed in areas with no vehicular traffic versus areas that are within 10 feet of a "public vehicle thoroughfare" or designated parking location. Underground tanks also cannot be installed under buildings. Significantly, the Code also provides in Section 6.8.6.1(E) that "the installation of a buried container shall include protection for the container and piping against physical damage from vehicular traffic." Prior to 2011, subsection (E) stated that "any party

involved in construction or excavation in the vicinity of a buried container" was responsible for protection of the tank from vehicular traffic. The revised text does not specify what party(ies) are responsible for providing protection, or exactly what kind of protection is required.

In addition to 6.8.6.1(E), another important provision regarding protection of underground containers from vehicles is found in Section 6.8.1.2, which applies to containers installed within 10 feet of "public vehicular thoroughfares" and requires those installations to include "a means of vehicular traffic protection," defined as "a system or method to provide physical protection for LP-Gas storage areas or installations from vehicular incursion." There are no set rules for exactly how such a system could be designed. Instead, the Code states whatever method is used should take into account local conditions and the kinds of traffic that could reasonably be expected. So, for example, the Code would likely not require an 8-inch-thick and 6-foot-tall concrete barricade where the only vehicles in the area are expected to be golf carts. In fact, the Code provides that the protection can be as simple as a ditch or 6-inch tall sidewalks, or as strong as steel bollards or jersey barriers. Installers may want to contact local authorities to determine if their locality has specific requirements.

Note that the term "vehicle" and "public

vehicular thoroughfares” are not defined in the Code but instead are given their commonly understood meaning(s), which raises other issues. For example, is a golf cart or a vehicle specifically designed for “off-road” travel (but which could still be driven on a city street) a “vehicle”? And if it is, then what might constitute a “public vehicular thoroughfare”? Does a “designated parking location” include one that is commonly used out of convenience, even if it is not graded, paved, or marked with stripes or a sign? Does the “thoroughfare” have to be a named street, or can it include a commonly used unpaved pathway used by vehicles? What if, over time, such a pathway shifts until it is within 10 feet of an underground installation? In the case example given above, the argument was made that protection was required because the tank was located by an unpaved path over grass, even though the path’s location changed from year to year due to the seasonal nature of the business that used the path.

The Code also imposes duties that arguably extend to the landowner or its designees. In Section 6.8.6.1(F), NFPA 58 provides that “prior to digging, the location of underground...containers and piping in the vicinity of construction and excavation activities shall be determined and the installation shall be protected from damage.” Because it is written in the passive voice, the provision is not clear who is responsible for determining the location(s) of a propane tank or who is responsible for providing protection. It seems reasonable that, for this provision to attach to a retailer, the retailer would have to know or at least have reason to know of the digging. On the other hand, the landowner is in the best position to know about activities on his/her property, and therefore this provision appears to place a duty on a property owner to either notify the retailer of the planned work, or otherwise take precautions to guard against damage to the tank. Landowners may be surprised to learn they have such an obligation, but South Carolina citizens are presumed to know the state’s laws. *Temple v. McCay*, 174 S.E. 23, 31 (S.C. 1934)

In addition to the potential hazard of an improperly installed tank, the phenomenon of “odor fade” can also potentially occur in underground installations. In the event the tank has a leak, adequately odorized gas inside the tank can migrate through the soil. “Scrubbing” by the soil can sometimes cause the ethyl mercaptan odorant to lose its



effectiveness. If the gas happens to migrate along the service line to a home’s basement or crawlspace, the inadequately odorized gas can then collect or pool. In one case we handled, this scenario played itself out twice within a matter of days at a resort in Idaho. Fugitive gas was allegedly deodorized after passing through soil, and it purportedly entered the resort’s basement where a below grade water heater was located. After two fires within one week that injured two propane service technicians, investigators found that a likely source of gas was a pinhole leak on one of the tank’s round seams. One way retailers can reduce the risk posed by such pinhole leaks is to soap test the tank’s weld seams prior to installation.

Finally, another important consideration in underground tank installations is tank corrosion. The Code addresses this issue by requiring cathodic protection, as well as protecting the exterior tank surface with a special coating that helps to ward off corrosion. Section 5.2.1.11 provides that underground containers “shall be coated with a material recommended for the service that is applied in accordance with the coating manufacturer’s instructions.”

These two methods of protection work hand in hand. In the event the coating somehow fails over time or is damaged during transport or installation, then the cathodic protection should preclude tank corrosion. Periodic testing of the cathodic protection is mandated by Code. See Section 6.19. If a sacrificial anode is used, the testing is done within 180 days of installation and every 12-18 months after that. See Section 6.19.3.2. To help your customers and your service technicians better understand some of the special considerations applicable to underground tanks, retailers can use this link: <https://propane.com/resource-catalog/resources/underground-propane-tank-ownership-brochure-2/> or order the brochure from PERC. Retailers should be familiar with all the provisions of NFPA 58 related to the location and protection of underground installations.

¹ PERC’s website includes a safety presentation addressing underground propane tank fires. See <https://propane.com/resource-catalog/resources/propane-emergencies-scenarios-13-underground-propane-tank-fire/>.