



Gas Station Spills and Cleanups: What You Need to Know

By Sarah Blackman | June 13th, 2017

Gas stations utilize underground storage tanks to hold vast quantities of fuel in reserve for consumer purchase at the pump. With an estimated 660,000 underground storage tanks in the US, there's a lot of potential for something to go wrong.

A leaking underground storage tank can contaminate soil and underground water supplies. According to the New York State Environmental Protection Bureau, "oil spills from leaking underground storage tanks at homes and gas stations are the largest single threat to groundwater quality in the United States today."

What causes leaks and how can you prevent them?

Tanks installed prior to 1988 were commonly made from uncoated steel, which will rust and corrode with time. Pipes leading to and from the tanks can also rupture or corrode.

One pinhole-sized leak can leach 400 gallons of fuel into the ground each year, and a leak of just ten gallons of fuel is enough to contaminate over 10 million gallons of groundwater.

When there's a leak, fuel travels freely through the soil and contaminates groundwater. Over 50% of the population in the US relies on groundwater for drinking water, and the chemicals in fuel are extremely difficult to remove, even with extensive filtering.

Some of these 150 chemicals include:

- **Benzene:** a known carcinogen with no safe exposure limits
- **Toluene:** less toxic than benzene but causes nausea, tiredness, and weakness; not identified as carcinogenic by the EPA due to insufficient information
- **MTBE, or methyl tertiary butyl ether:** moves more quickly into water supplies, less likely to be absorbed by soil, breaks down more slowly, and may be carcinogenic; not listed as such due to inadequate data

A few notes: although now banned in the US, MTBE may still be lurking in soils years after spills have occurred. The EPA's safe limit for benzene in drinking water is 5 micrograms per liter, although many states have a stricter limit of 1 microgram per liter.

Fuel spills are financially unhealthy

Over 532,000 underground gas storage tanks have leaked as of September 2016, and although many sites have been cleaned, over 71,000 remain contaminated. An average cleanup costs \$131,000 while a leak that contaminates underground water systems often costs up to or over \$1 million.

Underground fuel tanks will exist as long as people are driving gas-powered cars – and cars aren't going away anytime soon. For gas station owners and those living near gas stations, understanding how to prevent and quickly take action for any underground leaks is key.

The first step is to monitor the tanks. Over 25% of all gas station storage tanks are currently out of compliance with EPA reporting regulations (and as noted above, many states have stricter requirements than the EPA). There are two notification forms that the EPA requires.

Within 30 days, gas station owners must notify the government when they put a tank into use, and must also notify the EPA when ownership of an underground tank transfers ownership. However, individual states may require the submission of further forms.

Better Living Through Tech

Tank monitoring can be costly, laborious, and difficult to standardize when owners are simply calling each station for a monthly report. Look for innovative new options that offer constant monitoring. You can connect to a wireless platform to quickly see real-time data on every storage tank.

Reliable, thorough monitoring ensures that any leaks are detected quickly so you can clean up faster and avoid environmental and financial impacts.

