



# Controlling UST Cleanup Costs

## Fact Sheet 5: Understanding Contractor Code Words

Here are a limited number of definitions that are often used by contractors when they are cleaning up leaking underground storage tank sites. The definitions focus on cleanup technologies and terms associated with the chemical components of gasoline. The list does not currently include types of site investigation or cleanup equipment.

**Activated Carbon Adsorption** is a widely used method of cleaning groundwater. In it, particles of carbon are used to remove chemical compounds from water.

**Air Sparging** is a method of removing VOCs (see definition) from groundwater. Compressed air is forced through a well screen placed in the aquifer causing a bubbling effect in the groundwater. Contaminants in the groundwater are forced into the soils above the aquifer. These contaminants can then be removed by soil vapor extraction. Air sparging can enhance bioremediation.

**Air Stripping** is a method in which groundwater contaminated with petroleum is mixed with air. The mixing process removes the dissolved petroleum from the water by transferring it into the air. Local air pollution rules may prohibit using this method.

**Aquifer** is a water-bearing stratum (layer) of permeable rock, sand, or gravel.

**Bioremediation** is the natural process in which microorganisms (that is, bacteria) break down petroleum products in the soil. **Enhanced bioremediation** refers to the addition of microorganisms or chemicals to speed up the natural rate of breakdown of petroleum products in the soil.

**BTEX** is the abbreviation for **Benzene, Toluene, Ethylbenzene, and Xylene**, which are all chemical compounds in gasoline. Site investigations often measure the amount of these compounds in soil and groundwater; as such, they are often called indicator chemicals.

**Free Product** is the petroleum product that resides in the spaces between the soil particles or floats on top of the groundwater and is generally more accessible for removal or treatment.

**Groundwater** is the water within the earth that supplies wells and springs.

**Incineration** is the process of burning soils or sludges at a high temperature to destroy contaminants. Air pollution control devices are usually needed to comply with local or State regulations.

**In-Situ** means within place and is often used to refer to the location of activities (that is, in-situ soil treatment).

**Land Farming** is a method of removing petroleum compounds from soils. Contaminated soils are removed from the ground, spread over a given area, and periodically tilled to speed up the release of VOCs and breakdown of the contaminants.

**Monitoring Well (Observation Well)** is a hollow, perforated cylinder inserted into a special hole or boring in the ground for the purpose of obtaining ground-water samples.



**MTBE** is the abbreviation for **Methyl Tertiary Butyl Ether**, which is a blending agent added to gasoline.

**Permeability** is the quality or the state of being permeable (that is, of having pores or openings that permit liquids or gases to pass through). Sandy soils are permeable.

**Plume** is often used to describe the shape of the contaminated area, which is usually elongated. **Delineating the plume** refers to the act of determining the boundaries of the plume.

**Recovery Well** is a well installed for the purpose of pumping contaminated water or free product from an aquifer for treatment. Recovery wells are generally larger in diameter than monitoring wells.

**Remediation** is the process of cleaning up contamination.

**Site Investigation** is the process of confirming that a release of petroleum product has occurred; it can involve determining the extent of soil and ground-water contamination caused by that release.

**Soil Borings** are holes drilled in the ground to determine soil structure and/or to monitor for the presence of contaminants in the soil.

**Soil Vapor Extraction** draws (with a vacuum pump) fresh air into the ground and brings toxic contaminants up to the surface where they can be treated and safely discharged.

**Soil Vapor Survey** is a method used to collect and analyze volatile petroleum hydrocarbons from subsurface soils. Vapor samples are collected from a borehole using a hand or vacuum pump and analyzed in the field.

**Soil Venting** is a method used to remove gasoline vapors from soils without excavation. This method can be performed passively with vents that are open to the atmosphere or actively with the use of pressure or vacuum pumps.

**TPH** is the abbreviation for **Total Petroleum Hydrocarbons**. The level of TPH can be used to determine the amount of contamination at a site.

**VOCs**, **Volatile Organic Compounds**, are carbon-containing compounds that readily vaporize (that is, change from a liquid to a gas) at normal temperatures and pressures.

Fact Sheet 5 was developed by the Environmental Protection Agency's Office of Underground Storage Tanks in conjunction with State Fund Administrators. It is one of a series; the others are: *Hiring a Contractor*, *Negotiating the Contract*, *Interpreting the Bill*, and *Managing the Process*. For copies of these fact sheets or more information, contact your State Fund Administrator for USTs and/or your State Underground Storage Tank program.