



Gasoline Spill, Centreville, Virginia

Facility

Underground gasoline pipeline located in residential neighborhood.

Problem

Rupture of gasoline pipeline during construction of housing subdivision; release of about 15,000 gallons of gasoline; seepage of an unknown amount of gasoline to the underlying water table with most of it held in the unsaturated zone.

SSP&A's Role

Conduct soil-gas and ground-water investigations to determine the extent and distribution of contamination in the unsaturated and saturated zones.
Design, install and operate a vacuum-extraction system to remediate the unsaturated zone.
Monitor the water table and recover any gasoline detected floating in monitoring wells.

Remedy Goals

Eliminate any gasoline found on the water table; remediate soils and the unsaturated zone until vapor concentrations are at levels safe for residents of the subdivision.

Implemented Remedy

Remediation of highly contaminated soils from the spill area by dry farming.
Installation and operation of three vacuum-extraction systems consisting of 50 vent wells.
Monitoring of potential health risks to residents by frequent sampling of 66 soil-gas monitoring tubes installed around residential units.

Status

Fairfax County authorities declared the site fully remediated after all monitoring wells were free of gasoline and the vacuum-extraction system had operated for about two years removing the equivalent of over 5,000 gallons of gasoline.