

SPRING VALLEY USTS, Federal Way, WA

Brownfields Assessment Fact Sheet #2

August 2011

Project Name	Spring Valley Underground Storage Tank (UST) Removal and Assessment.
Location	37000 Pacific Highway South, Federal Way, WA, 98003.
Site Description	The site is an undeveloped parcel located on the east side of Pacific Highway South within the upper drainage of Hylebos Creek. The city of Federal Way wishes to protect and preserve the property as open space.
Site History	Historical tax records on file at the Puget Sound Regional Archives indicate that a small gas station was operating on this property from 1930 until it was torn down in the 1960s. Since that time the property has been vacant and undeveloped. In 2007, the city of Federal Way purchased the site as part of a larger 20 acre acquisition of wetland and stream habitat known as the Spring Valley Ranch and Restoration site. In 2008, highway workers clearing brush along Pacific Highway South uncovered a concrete pad, pump island, and fill pipes for two underground storage tanks (USTs) from the former gas station. Tax records show that the former gas station had two USTs of 550 gallons each. In 2009, the city contacted the King County Brownfields Program for advice and direction on how to remove the USTs. The Brownfields Program provided a work plan that outlined the steps to remove the USTs under Washington State's Underground Storage Tank regulations. In 2010, King County was awarded an EPA community-wide assessment grant for petroleum sites and notified the city of Federal Way that it could now fund a site assessment, including most of the costs for UST removal. The Brownfields Program and the city have now removed the USTs and conducted a Phase II assessment of the site.
King County Brownfields Program	The King County Solid Waste Division has received grant funds from the U.S. Environmental Protection Agency (EPA) to conduct environmental assessment on contaminated Brownfield properties. King County's Brownfields Program uses the funds to hire consultants to conduct the assessment work on behalf of public and nonprofit entities. For more information on the Brownfields Program visit the website at your.kingcounty.gov/solidwaste/brownfields/index.asp .

<p>Assessment Description</p>	<p>King County’s consultants prepared a Quality Assurance Project Plan (QAPP), a Cultural Resources Assessment (CRA) and an Endangered Species Act (ESA) analysis that were reviewed and conditionally approved by EPA on May 25, 2011.</p> <p>On June 14, 2011, the two 550 gallon USTs were cleaned and removed from the site by a licensed UST service provider under contract with the city of Federal Way. Prior to removal, the city had taken out the concrete pad/pump island that overlay the UST pit. The tank shells were in poor condition and had numerous holes up to two inches in diameter. There was no evidence of product or sludge in either of the USTs, only water.</p> <p>Under the direction of King County’s geotechnical consultant CDM, soil samples were collected from the north, east, south and west sidewalls of the excavation at approximately 5 to 6 feet below ground surface (bgs). Soil samples were also collected from beneath the USTs and from stockpiled soil removed to expose the tanks.</p> <p>Two days following UST removal, CDM directed the excavation of 7 test pits around the perimeter of the UST area. Test pits were dug east, north, west, and south sides of the of the tank pit. Field screening of soils from pits east of the tanks identified volatile organic compounds (VOCs), so additional pits were excavated toward the east and southeast with the furthest being 60 feet from the UST site. Soil samples were collected from each of these pits.</p>
<p>Reason for Assessment</p>	<p>The principal reason for the assessment is to determine the risk posed to adjacent wetland resources by the presence of two historic underground storage tanks. In order to characterize potential for petroleum hydrocarbon contamination from the tanks, they must be removed. Additionally, if there has been a release from the USTs, additional sampling in the direction of the wetland will provide information vital to planning cleanup and remediation of the area.</p>
<p>Results</p>	<p>Petroleum hydrocarbon impacts were noted in both soil samples collected from beneath each UST. Both samples, and one from the west sidewall of the UST excavation, contained concentrations of gasoline-range total petroleum hydrocarbon (TPH-G) exceeding the Model Toxics Control Act (MTCA) Method A cleanup level; one sample also contained benzene slightly greater than the cleanup level. A sample collected from a test hole dug to 14 feet bgs beneath the south UST contained no hydrocarbons at or above laboratory detection limits. This information suggests the soil contamination extends not deeper than 14 feet bgs in the former UST area.</p> <p>Soil samples collected from the test pits east of the removed USTs also contained concentrations of TPH-G exceeding the MTCA Method A cleanup level. The sampling results also indicated the hydrocarbon contamination in soil extends no deeper than 14 feet bgs. Soil samples collected from the test pits to the north, south and west of the UST excavation did not contain TPH-G or BTEX at concentrations exceeding the PQLs. Although groundwater was not found in the UST excavation, groundwater seeps were encountered between 4 and 12 feet bgs in the test pits east and south east of the UST site. These seeps were visibly impacted by petroleum sheen.</p>
<p>Conclusions/ Next Steps</p>	<p>Following removal of the USTs, gasoline range petroleum hydrocarbons were found in soils beneath the tanks and in the west wall of the tank pit in excess of MTCA Method A cleanup standards. Follow-up test pit sampling indicates that the petroleum contamination may persist as much as 60 feet east and south east of the UST site where it may also have impacted groundwater.</p>

	Further sampling and analysis of soil and groundwater will be required to define the limits and characteristics of this “plume” east and southeast of the former UST location.
Contact Information	<p><u>City of Federal Way Contact</u>: Fei Tang, SWM Project Engineer, City of Federal Way, Phone: 253-835-2751, fei.tang@cityoffederalway.com.</p> <p><u>King County Contact</u>: Lucy Auster, Senior Planner, King County Solid Waste Division, 206-296-8476, lucy.auster@kingcounty.gov.</p>

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