

Department of Natural Resources and Parks Solid Waste Division

## KING COUNTY BROWNFIELDS PROGRAM SIMON AND SONS DRY CLEANERS BROWNFIELDS ASSESSMENT FACT SHEET #2 April 2008

Project Name:	Former Simon and Son Dry Cleaners.
Location:	18107 Bothell Way NE, Bothell, WA 98011.
Site Description:	The site is a single story commercial building on a 0.62 acre lot just west of the main business district of Bothell. The former dry cleaner is at the west end of the building in a space currently occupied by a Quizno's sandwich shop. There are four other businesses in the building: a restaurant, a pizza take out shop, a physical therapist office and a hair salon. The site is bounded on the west by 98 <sup>th</sup> Avenue NE, on the north by residential property, on the east by an espresso stand and an auto supply store and on the south by Bothell Way NE, otherwise known as State Route 522. The tax parcel number is 2374200065.
Site History:	The site was used for farming until the late 1940s. It was an auto dealership in the 1960s and in 1988 it was developed commercially as a small retail strip. The dry cleaner business opened in 1990 and operated at this site for about 10 years. Sometime during this period, dry cleaning solvents were released in the vicinity of the dry cleaning machine at the back of the shop, possibly through a faulty floor drain.
	Soil and groundwater samples collected between December 1999 and July 2001 document solvent contamination well above Washington State Department of Ecology Model Toxics Control Act (MTCA) Cleanup Method A levels (0.05 mg/kg or parts per million for soil, and 5µg/l or parts per billion for groundwater).
	Soils contained tetrachloroethene (PCE) from non-detect (ND) up to 392 mg/kg at depths up to 9 feet below surface. Similarly, groundwater samples from monitor wells MW 1 through MW 7 taken in March and July 2001contained up to 30,000 µg/l PCE and 507µg/l trichloroethene (TCE).
	Several technologies have been employed at the site to reduce groundwater contamination. In 2001-2002, potassium permanganate was introduced via injection wells into the groundwater to reduce the PCE concentration by chemical oxidation. In 2005, hydrogen peroxide (another chemical oxidizer) was injected via five monitor wells. A soil vapor extraction (SVE) system was installed near the source area in 2004 to remove PCE vapor from the soil. In addition, liquid phase PCE has been removed by manual pumping from one monitoring well.
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 and cleanup on contaminated Brownfield properties. King County's Brownfields Program uses the funds to hire consultants to conduct the assessment and cleanup work on behalf of public and nonprofit entities. The Brownfields Program website is: <a href="http://www.metrokc.gov/dnrp/swd/brownfields/index.asp">http://www.metrokc.gov/dnrp/swd/brownfields/index.asp</a> .
Reason for Assessment:	The City of Bothell requested the assessment to document environmental issues that may impact long term redevelopment plans for their downtown Revenue Development Area (RDA).

Assessment Description:	An original proposed assessment to collect a round of groundwater samples from existing wells was deemed unnecessary when it was learned that the site owner is actively engaged in groundwater monitoring and cleanup. Instead, a Phase I site assessment was performed to document the site history and the current environmental conditions.
Results:	<ul> <li>The Phase I environmental site assessment revealed that the following Recognized Environmental Conditions (RECs) are associated with the site:</li> <li>1. PCE was used on the site by Simon &amp; Sons Fine Dry Cleaning. Spills were not reported, but solvent contamination has been found in soil and groundwater beneath the site.</li> </ul>
	2. The total extent of groundwater contamination downgradient from the site is unknown at present. Both PCE and TCE have been detected in groundwater east of the site on the Al's Auto/Wexler property, currently occupied by an espresso stand and Schuck's Auto Supply.
Conclusions/ Next Steps:	A former tenant on the property was a dry cleaner who apparently released solvents that have contaminated soil and groundwater. The site owner is actively pursuing cleanup using "in situ" (i.e. in place) technologies that so far have been partially successful. The most recent sampling by the owner's consultant in May 2007 shows PCE concentrations in groundwater ranged from 4.3- to 17,000- $\mu$ g/l. Future cleanup plans include installation of an additional six injection wells and eight injection points to stimulate reductive dechlorination through long-term biodegradation of PCE and its degradation compounds TCE, cis-1,2-DCE and vinyl chloride to non-hazardous by-products.
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