

## MINI MART CITY PARK SUPPLEMENTAL PHASE II OFF-SITE GROUNDWATER ASSESSMENT, SEATTLE, WA

### Brownfields Assessment Fact Sheet # 2, September 2017

<b>Project Name</b>	Former Perovich/Mini Mart City Park Supplemental Phase II Environmental Site Assessment.
<b>Location</b>	6525 South Ellis Street, Seattle, WA 98108
<b>Site Description</b>	The site is a 0.12 acre lot located at the north end of Boeing Field in Seattle's Georgetown neighborhood. The former Perovich gas station, a small wood structure with canopy, was demolished in April 2016. The site is currently empty.
<b>Site History</b>	<p>According to City of Seattle Polk Directories, the site was owned by members of the Perovich family and used as a gasoline station and petroleum fuels distributorship from 1926 until the mid-1970s. It was vacant in 1976 and 1977, then occupied by a florist shop in the late 1970s. For a short time in the mid-1980s it was apparently a drop off/pick-up dry cleaner business. It was vacant again from the late 1980s until the mid -1990s when it was used as an office for T&amp;W Pumps. From 2002 to 2005, it was the office of a remediation contractor but has remained vacant since then.</p> <p>In 2008, the site was leased to an artist collaborative SuttonBeresCuller (SBC) who saw it as a redevelopment opportunity to create a neighborhood park to be called the Mini-Mart City Park. The King County Brownfields Program conducted Phase I and Phase II environmental site assessments (ESA) on the property in 2008 – 2009 and EPA conducted a Targeted Brownfield Assessment (TBA) in 2011.</p> <p>The Phase I ESA reported that the son of the original site owner said that his father may have installed four USTs of 10,000 to 20,000 gallons capacity in the 1930s. A tax record from the mid-1970s lists five USTs: a 1,380-gallon tank, a 10,000-gallon tank, a 12,000-gallon tank, a 300-gallon tank, and a 500-gallon tank. Photographs from 1985 show two large tanks being removed and a former owner reported that all USTs were removed in the 1980s.</p> <p>Phase II soil and groundwater sampling in 2009 revealed that the site has petroleum contamination above Washington State Department of Ecology MTCA Method A cleanup levels which was confirmed by the TBA sampling two years later. The groundwater table has been found between 8 and 13 feet below ground surface (bgs).</p> <p>Despite the potential liability issues, SBC formed a non-profit organization that purchased the property in April 2013.</p> <p>In December 2015, SBC won a King County 4Culture grant to fund initial development of the site. The following month, SBC met with King County Brownfields Program representatives to discuss a follow-up study of off-site groundwater contamination.</p>

	<p>In April 2016, SBC demolished the sole remaining structure on the site and the King County Brownfields Program submitted a Site Eligibility Worksheet to EPA requesting to use Brownfields grant funds to assess off-site groundwater contamination. In July 2016, EPA advised that the site might be considered as part of the Lower Duwamish Waterway (LDW) Superfund Site and as such, might not be eligible for Brownfields assessment assistance.</p> <p>The determination of Brownfields eligibility required consultations between EPA and the Washington State Department of Ecology that went on until March 2017 when Ecology sent a letter to EPA stating that:</p> <p style="padding-left: 40px;">“There is no feasible pathway for [site] contamination to the LDW given the fate and transport characteristics of the COCs [Contaminants of Concern] associated with the Perovich Property, the distance from the LDW (2600 feet), the property’s location within a CSO [Combined Sewer Outflow] area, and site characteristics that indicate that runoff is unable to reach the CSO system anyway.”</p> <p>With EPA’s April 2017 concurrence with Ecology that the site “is not currently a contributor of contaminants of concern to the Lower Duwamish Waterway Superfund site as identified in the Superfund designation,” planning for the off-site groundwater assessment project got underway.</p>
<p><b>King County Brownfields Program</b></p>	<p>The King County Solid Waste Division has received grant funds from the U.S. Environmental Protection Agency (EPA) to conduct environmental assessments on contaminated Brownfield properties. King County’s Brownfields Program uses the funds to hire consultants to conduct the assessments on behalf of public and nonprofit entities. For more information on the Brownfields Program visit the website at <a href="http://your.kingcounty.gov/solidwaste/brownfields/index.asp">your.kingcounty.gov/solidwaste/brownfields/index.asp</a>.</p>
<p><b>Assessment Description</b></p>	<p>King County’s consultant Hart Crowser conducted a supplemental Phase II site assessment in the summer of 2017 that included the following tasks:</p> <ul style="list-style-type: none"> <li>• Preparation of a Field Sampling/Quality Assurance Project Plan (FS/QAPP) that was reviewed and approved by EPA.</li> <li>• Securing City of Seattle street use permits for drill sites.</li> <li>• Mobilizing concrete cutting equipment and geo-probe drill machine to the site along with drill operators and geotechnical personnel.</li> <li>• Installing six new monitoring wells: HC-MW-6 on the northeast (upgradient) side of the property on the west side of Ellis Avenue S.; HC-MW-7 on the north side of S. Warsaw Street just off the southeast corner of the property; HC-MW-8 in the parking strip ROW of S. Warsaw Street just off the southwest (downgradient) corner of the property; HC-MW-9 also in the parking strip on the north side of S. Warsaw Street about 90 feet due west of MW-8; HC-MW-10 on the south side of S. Warsaw Street about 60 feet southwest (and downgradient) of MW-8; and HC-MW-11 on the south side of S. Warsaw Street about 40 feet south of MW-9.</li> <li>• Collecting 13 soil samples for laboratory analyses during the installation of these monitor wells.</li> <li>• Sampling groundwater from the six new wells and from five existing wells, MW-1 through MW-5.</li> <li>• The 13 soil and 11 groundwater samples were submitted to a Washington State accredited laboratory and analyzed for gasoline (TPH-G), diesel (TPH-D), heavy oil (TPH-O), and BETX compounds (benzene, ethylbenzene, toluene, xylene).</li> <li>• The laboratory results were compared with MTCA Method A soil cleanup levels for unrestricted use and Method A cleanup levels for groundwater. Results were also compared to previous sample data.</li> <li>• Prepared a report that characterizes contaminants found above MTCA cleanup levels and provided additional data to help SBC evaluate remedial system designs for cleanup and redevelopment of the site into the Mini Mart City Park.</li> </ul>

<b>Reason for Assessment</b>	Earlier sampling programs in 2009 and 2011 established that petroleum contamination above MTCA Method A levels is present in soil and groundwater on the site. This assessment project will collect the off-site soil and groundwater data required to extend knowledge of overall environmental site conditions necessary to formulate an overall site cleanup plan.
<b>Results</b>	<p>Soil with petroleum contamination above MTCA Method A levels was found in only one boring in HC MW-8 at 13 to 14 feet bgs. Diesel contamination was detected at 13,000 mg/kg, gasoline at 6,200 mg/kg (estimated) and benzene at 0.26 mg/kg. Method A cleanup levels for these contaminants are 2,000 mg/kg, 30 mg/kg, and 0.03 mg/kg respectively.</p> <p>Groundwater with petroleum contamination above MTCA Method A levels was found in HC MW-7 at 9.5 feet bgs, and in HC MW-8 at 9 feet bgs. Diesel was detected in MW-7 at 1.1 mg/L and in MW-8 at 4.2 mg/L. Gasoline was detected in MW-8 at 2.2 mg/L.</p> <p>Diesel, gasoline and xylenes in excess of MTCA Method A cleanup were also found in groundwater from existing on-site wells MW-3, MW-4, and MW-5. Diesel contamination in these wells was between 1.0 and 11.0 mg/L, gasoline was between 0.56 and 15.0 mg/L, and total xylene in MW was up to 3700 mg/L. The MTCA cleanup level for xylene is 1000 mg/L.</p>
<b>Conclusions/ Next Steps</b>	<p>Off-site drilling and sampling of soil and groundwater demonstrated that there is no evidence of consequential on-site migration of petroleum from an upgradient source. Petroleum contaminated soil in excess of MTCA Method A clean up levels from on-site sources may extend to about the middle of S. Warsaw Street from the southwest corner of the property. Similarly, the off-site plume of petroleum contaminated groundwater does not appear to reach the south side of S. Warsaw Street and may be limited to the area around HC MW-8.</p> <p>A comparison between analyses of groundwater samples taken in 2010 and in 2017 from the five existing wells shows that petroleum levels are relatively stable. The lack of significant reduction in petroleum contamination over seven years suggests that natural attenuation will be unlikely to achieve site cleanup within a reasonable time frame and that a supplemental treatment system will be required to achieve MTCA cleanup compliance.</p> <p>SBC hopes to start construction on the new Mini Mart City Park as soon as city permits are issued in 2018. Integral to this will be the installation of a vapor barrier and mitigation/treatment system at the appropriate stage of construction. The data provided by this Phase II Site Assessment will be incorporated into the design and implementation of this system.</p>
<b>Contact Information</b>	<p><u>SuttonBeresCuller (SBC) Contact</u>: John Sutton, 206-234-6139, <a href="mailto:mail@suttonberesculler.com">mail@suttonberesculler.com</a>.</p> <p><u>King County Contact</u>: Lucy Auster, Senior Planner, King County Solid Waste Division, 206-477-5268, <a href="mailto:lucy.auster@kingcounty.gov">lucy.auster@kingcounty.gov</a>.</p>

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