

December 29, 2015

Washington State Department of Ecology Attn: Patti Carter 4601 North Monroe Street Spokane, Washington 99205-1295

Re: VCP Project Number EA0187 - Request for No Further Action Site Designation Geiger Heights Housing Area (Windsor Crossing), Grove & Hallett Road, Spokane, WA

Dear Ms. Carter:

In November 2013, Fulcrum Environmental Consulting, Inc. (Fulcrum) was retained by Greenstone Management, LLC (Greenstone) to conduct quarterly sampling of a single on-site monitoring well at Geiger Heights Housing Area (currently Windsor Crossing housing development) located at Grove and Hallett Road in Spokane, Washington. The site is registered with the Washington State Department of Ecology (DOE) as Facility/Site Number 21455, Voluntary Cleanup Program (VCP) Project Number EA0187. It is Fulcrum's understanding that the site has progressed through the VCP program with the only outstanding requirement being achievement of four (4) consecutive quarters of acceptable groundwater sample results from the single on-site groundwater well.

Background

Following is a summary of background information provided to Fulcrum for the site. The Windsor Crossing development is located at the southeast corner of Hallett Road and Grove Road in Spokane County, Washington. The housing development was constructed to provide base housing for Fairchild Air Force Base (FAFB) in the 1950s. Each housing unit was heated by fuel oil stored in 300-gallon, single-walled steel Underground Storage Tank (UST). In 1994, all USTs were removed as heating for all housing was changed to natural gas. Nine of the removed USTs were found to have leaked and approximately 600 cubic yards of petroleum-impacted soil was removed from the site as part of the remedial action. In 2000, a Preliminary Remedial Investigation was completed by Dames and Moore to assess soil impact. In 2004, site remediation activities began under the direction of URS Corporation (URS). Remediation was achieved at eight of the nine locations. One location (current subject site) was identified with remaining contamination. A groundwater monitoring well was installed and sampled for diesel- and oil-range petroleum hydrocarbons on a quarterly basis between March 2009 and June 2010. All quarterly analytical results consistently exceeded groundwater cleanup levels. Elevated hydrocarbon levels were believed to be caused by petroleum-contaminated soil beneath the structure. In 2010/2011 the housing unit at the site was demolished and approximately 500 cubic yards of petroleum-contaminated soil were removed. The excavation site was backfilled in September 2011. A new monitoring well was installed and monitored for four consecutive quarters during 2012-2013. Analytical results for the first three quarters identified diesel- and heavy oil-range hydrocarbon levels to be either non-detect or below cleanup standards. Analytical results for the fourth quarter identified heavy oil-range hydrocarbon levels to be non-detect and diesel-range hydrocarbon levels to be above cleanup standards.



Scope of Work

Fulcrum's scope of work was limited to collection of quarterly collection of a groundwater sample from the single on-site well, sub-contract analytical services, and preparation of a summary report for each monitoring event. Groundwater sampling was conducted by Amanda Johnson, a geologist-in-training (GIT) under the direction of Travis Trent, a Washington State Licensed Hydrogeologist. Analytical services were subcontracted to TestAmerica. Relevant professional certifications are presented as Attachment 1.

Groundwater Monitoring

Quarterly monitoring conducted by Fulcrum in 2013/2014 documented diesel range petroleum hydrocarbons above regulatory thresholds. Starting with the 4th Quarter 2014 sampling event, quarterly sampling has documented four consecutive quarters for the site with groundwater concentrations below the Washington State Model Toxics Control Act (MTCA) Method A regulatory threshold of 500 parts per billion (ppb) for diesel. Quarterly groundwater monitoring reports dating back to the start of Fulcrum services are presented as Attachment 2.

On November 16, 2013, Fulcrum completed the quarterly groundwater sampling for the 4th Quarter 2013 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 501 ppb, which is above the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On March 27, 2014, Fulcrum conducted the 1st Quarter 2014 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 359 ppb, which is below the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On May 28, 2014, Fulcrum conducted the 2nd Quarter 2014 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 998 ppb, which is above the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On September 24, 2014, Fulcrum conducted the 3rd Quarter 2014 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 1,340 ppb, which is above the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On January 19, 2015, Fulcrum conducted the 4th Quarter 2014 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 400 ppb, which is below the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.



On March 25, 2015, Fulcrum conducted the 1st Quarter 2015 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 370 ppb, which is below the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On May 28, 2015, Fulcrum conducted the 2nd Quarter 2015 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 250 ppb, which is below the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit.

On September 15, 2015, Fulcrum conducted the 3rd Quarter 2015 groundwater sampling event. Analytical results for the groundwater sample detected Diesel Range Petroleum Hydrocarbons at 280 ppb, which is below the MTCA Method A cleanup level of 500 ppb. Heavy Oil was not detected in the groundwater sample at the analytical method detection limit

A summary of analytical results for Fulcrum's quarterly groundwater monitoring is presented in Table 1.

Table 1 – Windsor Crossing Quarterly Groundwater Monitoring Results 2013-2015

Sampling Event	Diesel (ppb)	Oil (ppb)
4 th Qtr 2013 – November 16 th	501	ND
1 st Qtr 2014 – March 27 th	359	ND
2 nd Qtr 2014 – May 28 th	998	ND
3 rd Qtr 2014 – September 24 th	1,340	ND
4 th Qtr 2014 – January 19 th (2015)	400	ND
1 st Qtr 2015 – March 25 th	370	ND
2 nd Qtr 2015 – May 28 th	250	ND
3 rd Qtr 2015 – September 15 th	280	ND
MTCA Method A Cleanup Level*	500	500

Bold – Groundwater analyte detected at levels above regulatory threshold.

Recommendations

Based on the quarterly testing results documenting four consecutive quarters with diesel range petroleum carbons below the MTCA cleanup threshold, Fulcrum, on behalf of Greenstone Management, respectfully requests a No Further Action determination for the site.

ND – Analyte not detected at method detection limit.

^{*}Groundwater regulatory threshold for Method A of the Model Toxics Control Act as established by the Washington State Department of Ecology.



If you have any questions, feel free to contact me at 509.459.9220.

Sincerely,

Travis Trent, PG, CIH Managing Principal

2 attachments

