

Technical Memorandum

TO: Lou Kuffel, Beckwith & Kuffel, Inc.
FROM: Cody Johnson, PE
DATE: November 7, 2016
RE: **Cleanup Status Update
Beckwith & Kuffel, Inc. Site
1313 South 96th Street
Seattle, Washington**

Landau Associates, Inc. (LAI) has prepared this Technical Memorandum in response to the Washington State Department of Ecology's (Ecology) October 13, 2016 letter requesting information on the status of the cleanup at the Beckwith & Kuffel Inc. (B&K) site located at 1313 South 96th Street in Seattle, Washington (VCP Project No. NW2933). Ecology's letter was addressed to Mr. Edwin Ptak at Shannon & Wilson, Inc. (SWI) and was forwarded to us by Mr. Lou Kuffel on October 26, 2016.

Remediation activities at the site were temporarily suspended following the August 2014 groundwater sampling event documented in the Remedial Investigation/Interim Remedial Action (RI/IRA) Report dated October 21, 2014 by B&K's former consultant (SWI). It was intended that the sampling frequency would be reduced from quarterly to semiannually until significant reductions or rebound in contaminant concentrations were observed in samples collected from the halogenated volatile organic compound (HVOC) plume area at the southeast corner of the site. As described in the report, a substantial excavation was completed in the HVOC source in November 2013 and 1,100 pounds of 3DME vegetable oil-based electron donor substrate mixed with tap water to produce a 10 to 1 volumetric dilution was applied to the bottom of the excavation prior to backfill. However, the planned semiannual sampling was further delayed while B&K sought insurance coverage to fund further investigations and remediation.

B&K contacted SWI in April of this year to resume sampling at the site. However, before the sampling could be coordinated they became aware that environmental investigations were being conducted at the Dominic's Plaza site adjacent to the east of their property (9635 Des Moines Memorial Drive South – Ecology Facility/Site ID 22844). B&K subsequently contacted the site owner (SeaMar Community Health Centers [SeaMar]) and were informed that explorations at that site would include installation of monitoring wells in the vicinity of the HVOC plume to evaluate the potential for contamination from the B&K property to have affected the SeaMar property. B&K subsequently granted access to SeaMar's consultant (Riley Group) to sample wells on the B&K property as part of their investigation and delayed resumption of investigation activities until the new data could be reviewed.

At this time no new reports have been prepared that document cleanup at the B&K site. However, Riley Group's Phase II Environmental Site Assessment for the SeaMar site, which documents initial soil and groundwater sampling in the vicinity of the HVOC plume, is available on Ecology's website. The

Riley Group report shows very limited distribution of HVOCs in groundwater to the east of the B&K site property boundary.

Based on the new data from Riley Group, we intend, as B&K's new consultant, to conduct additional investigations to further evaluate the onsite extent of the HVOC plume so that a new remedial design can be prepared. We are currently reviewing the new Riley Group data to finalize a revised supplemental remedial investigation scope of work. We anticipate that the additional site investigations will be completed by the end of the year. In general, additional onsite investigation will include:

- Collecting groundwater elevation data from all accessible wells on both the B&K and SeaMar sites to provide a more complete groundwater gradient contour map;
- Completing a groundwater investigation that will include sampling of groundwater from direct-push borings to bound the vertical extent and the south, east, and north extents of the HVOC plume. The extent of petroleum hydrocarbons previously detected in the vicinity of the HVOC plume will also be further characterized;
- Conducting quarterly monitoring of the four monitoring wells within the HVOC plume (MW-6 through MW-9). The monitoring will be coordinated with Riley Group's monitoring of the SeaMar site wells so that temporally similar data may be shared between sites.

LAI will prepare a supplemental remedial investigation report to document the results of the additional investigation and subsequently remedial action work plan to present a plan for remediation for the site. In addition to addressing remediation of the HVOC plume, the work plan will include measures for evaluating potential impacts associated with petroleum hydrocarbon and polychlorinated biphenyls contamination previously encountered near the northwest end of the property, and cement kiln dust fill used as a soil amendment beneath the north end of the main site building. We will submit the draft report and work plan for VCP review prior to beginning the remediation activities. We anticipate that these documents will be provided by the end of March 2017, in anticipation of conducting remediation in summer 2017.

We look forward to working on this project with B&K. Please feel free to contact Cody Johnson at Landau Associates (425-778-0907) if you have questions regarding this Technical Memorandum.

LANDAU ASSOCIATES, INC.



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