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Memo To File

Summary of Cleanup Actions

To:Ecology’s File

Through:

 From: Andrew Smith, P.E., Cleanup Project Manager

 Date: July 12, 2018

Re:L&C Deli Vancouver, Facility Site ID No. 1035

**Project History**

In September 1987, gasoline product and vapors were encountered in a sanitary sewer line in a location near the L&C Deli site. In addition, gasoline product was discovered floating on the groundwater in a number of test pits excavated on the subject site. In November 1987, an extraction well and recovery system were installed by an Ecology contractor at the subject site to recover the free product floating on the groundwater. Subsequent integrity testing of the USTs and lines located on the subject property indicated that although the tanks appeared to be sound, the associated lines may have been leaking product. Ecology allowed the recovery system to be permanently shut down in February 1989. A total of 524 gallons of gasoline product was recovered during the operation of the recovery system.

In 1990, Vancouver Oil Co., Inc. (operators of L&C Deli) and The 205 Group (owners of L&C Deli) were issued Orders No. DE 90-S135 and DE 90-S138, respectively by Ecology to conduct a remedial investigation/feasibility (RI/FS) study of soil and groundwater potentially contaminated with petroleum products at the L&C Deli facility. In August 1991, a final RI and FS, defining the nature and extent of contamination and cleanup alternatives was received by Ecology. In January 1992, Ecology prepared a cleanup action plan (CAP) based on these documents.

In 1992, Ecology issued Enforcement Orders (EO) DE 92TC-S111 and DE 92TC-S112 to The 205 Group and Vancouver Oil Co., Inc., respectively, to implement the CAP for cleanup of the site. The preferred alternative in the CAP included: 1) the partial removal of contaminated soils: 2) the surface treatment of the excavated soils through bioremediation; 3) the in-situ degradation of the remaining soil contamination by natural processes; and 4) a modified pump and treat method for remediation of the shallow groundwater from the excavation pit.

The cleanup activities occurred in September 1992. Remedial excavation was conducted in areas identified during the RI/FS, which contained soil contamination at concentrations that exceeded the MTCA Method A cleanup levels. Approximately 800 cubic yards of gasoline-contaminated soil was removed and disposed offsite. The final depth of the soil excavation ranged from approximately 9 to 11 feet. The excavation of contaminated soil was completed in all directions except in the vicinity of underground utilities. Confirmation sampling indicated that the contaminated soil was removed to below regulatory cleanup levels except the east and southeast walls of the excavation where soil contamination was left in place.

Ecology performed a 5-year periodic review of the site in March 2010 and determined that the site was not protective of human health and the environment due to the potential presence of gasoline related contaminants in the soil and groundwater. In December 2010, Ecology requested that The 205 Group and Vancouver Oil Co., Inc. come into compliance with the requirements of Enforcement Order Nos. DE 92TC-S111 and DE 92TC-S112. This included installation of two new monitoring wells and confirmatory soil borings and collection of soil and groundwater samples to confirm contamination is below regulatory cleanup levels.

In March 2011, the Washington Department of Transportation performed 10 push probe borings and collected soil and groundwater samples to characterize property that was identified to be part of a road-widening project along 20th Avenue and 139th Street. Results of the soil and groundwater samples collected were above the regulatory cleanup levels in select wells in this area in the southeast corner of the site.

In April 2012, the underground storage tanks (USTs), piping and fuel dispensers were removed and disposed at an approved facility. Approximately 220 tons of petroleum-contaminated soil was excavated and disposed at an approved facility. Analytical results of soil samples collected from the limits of the UST excavation indicated that only one sample exceeded the regulatory cleanup level for diesel. Groundwater was encountered at a depth of 7 feet during removal of the USTs and excavation of contaminated soils. Prior to backfilling the excavation, the groundwater within the UST cavity and the sidewalls were treated with petrophyllic bacteria and BOS-200, an activated carbon product with nutrients, in order to promote biological degradation of the remaining contaminants. Two confirmation push probes and collection of groundwater samples were performed in the vicinity of the UST excavation and pump islands. Results of groundwater samples collected from these borings were below the regulatory cleanup levels.

In July 2012, two push probes were performed in the vicinity of PP-9 to verify whether Lube oil range petroleum hydrocarbons exist in that area. Analytical results of soil samples collected from a similar depth as the PP-9 contaminated soil indicated that diesel or lube oil petroleum was not detected.

Two monitoring wells were placed in the right-of-way of 20th Avenue and 139th Street to assess the groundwater in the areas downgradient of the site. Groundwater samples were collected from these wells in 2011 and 2012 to documented conditions in these areas. Analytical results of groundwater samples collected from these wells indicated contaminants were not detected in either well during three quarterly groundwater monitoring events.

Cleanup actions conducted at the site to date are documented in the reports listed below. These reports are as follows:

* A Report on Petroleum-Contaminated Soil Cleanup, dated May 14, 1993 by Hahn and Associates, Inc.
* Summary Report, I-5 Reconstruction Interchange at NE 134th, dated May 6, 2011 by Hart Crowser.
* Groundwater Monitoring Update Report, dated November 1, 2011 by BB&A Environmental.
* Groundwater Monitoring Update Report, dated February 27, 2012 by BB&A Environmental.
* Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and Confirmation Soil and Groundwater Sampling, dated June 14, 2012 by BB&A Environmental.
* Confirmation Soil Sampling at Former PP-9-9’ (WSDOT Investigation), dated August 8, 2012, by BB&A Environmental.

**Parcel Restriction for Adjacent WSDOT Right-of-Way**

In October 2016, WSDOT and Ecology entered into an Implementing Agreement to develop a process for documenting and notifying WSDOT workers of potential environmental contamination in WSDOT right-of-ways (ROWs). The document informing this process is called a Parcel Restriction Document and its purpose is similar to an environmental covenant, except that the Parcel Restriction Document cannot be recorded with the county because ROWs do not have parcel numbers, which is a requirement for recording. A Parcel Restriction Document was prepared for the ROW next to L&C Deli to document petroleum impacts in the WSDOT ROW. However, the document was not finalized because it was determined that contamination was not above the current regulatory cleanup levels.

**Compliance with the Enforcement Order**

In March 1992, Ecology issued Enforcement Order Nos. DE 92TC-S111 and DE 92TC-S112 with Vancouver Oil Co., Inc. and The 205 Group, respectively to implement a cleanup action plan (CAP) for the L&C Deli site. In March 2010, an Ecology 5-yr-review determined that the site was not protective and in December 2010, Ecology requested the PLPs perform additional remedial actions to satisfy the enforcement order. Additional work was performed and soil and groundwater samples were analyzed documenting compliance with the regulatory standards that were in effect at the time of implementation of the enforcement order for the CAP.

The contaminants of concern in the CAP were identified as total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene and xylenes (BTEX) and were subject to the MTCA regulatory standards at the time (1991). Analytical results of soil and groundwater samples collected indicated contaminant concentrations were below 1991 MTCA Method A cleanup standards except diesel (780 ppm) from an excavation sidewall sample. The 1991 MTCA Method A cleanup level for diesel was 200 ppm. However, the MTCA Method A standard for diesel was increased in 2001 to 2000 parts per million (ppm). Since diesel was not in the CAP attached to the enforcement order, it is not subject to the standards at that time. Therefore, diesel as compared to the current MTCA standards is in compliance with the diesel standard of 2000 ppm.

**Conclusions**

1. Remedial actions performed at the site meet the requirements of Enforcement Order Nos. DE 92TC-S112 and DE 92TC-S112 for cleanup of TPH as gasoline and BTEX in accordance with the 1991 MTCA Method A standards.
2. TPH as diesel (780 ppm) did not meet the 1991 MTCA Method A standard of 200 ppm. However, TPH as diesel was not a contaminant of concern in the CAP attached to the enforcement orders and therefore is not subject to the standards at that time. The concentration of TPH as diesel meets the current MTCA Method A cleanup standard for diesel of 2000 ppm.