

Memorandum

To: *Michael Popiwny (King County)*

From: *Ulf Gwildis, L.E.G. and John Newby, P.E. (CDM Smith)*

Date: *December 12, 2013*

Subject: *Brightwater Conveyance System – Ballinger Way Portal Site
Post-Construction Environmental Assessment
Pesticide Soil Contamination
Task 463*

King County requested that CDM Smith perform a post-construction assessment of the Ballinger Way Portal Site with respect to pesticide soil contamination identified before portal construction. This document summarizes pre-construction environmental site assessments performed at the site, describes the contaminated soils management procedure implemented during shaft construction, and provides our post-construction environmental assessment based on the construction records.

Pre-Construction ESAs

In 2004 and 2005, CDM Smith (formerly CDM) conducted two Phase II Environmental Site Assessments (ESA) of the Ballinger Way Portal Site located at 20031 Ballinger Way, Shoreline, Washington. Two reports describing the field investigation and providing analytical testing results were prepared. They were subsequently incorporated into the Central Contract Construction Documents as Geotechnical Data Report (GDR) Appendices 3G.2 and 3G.3:

- Phase II Environmental Site Assessment – Ballinger Way Portal Site – 20031 Ballinger Way N.E., Shoreline, Washington, September 3, 2004;
- Supplemental Phase II Environmental Site Assessment – Brightwater Conveyance System – Ballinger Way Portal – 20031 Ballinger Way NE, Shoreline, Washington, May 19, 2005.

The Phase II ESA findings included a detection of the pesticide 4,4-DDT in soil at a concentration above the Washington Administrative Code Chapter 173-340, Model Toxics Control Act (MTCA) Cleanup Regulation, Method A cleanup level. This detection was for a surface soil sample taken at the present-day Ballinger Way Portal shaft location (Sample A shown on the attached [Figure 2](#) from the Phase II ESA). Copies of the ESA documents were provided to the Washington State Department of Ecology (Ecology).

Shaft Construction

Specification Section 02111, Contaminated Soils and Groundwater, in the Central Contract Construction Documents specified procedures for removal of documented contaminated soil during installation of the Contractor designed excavation support for the portal shaft. This specification required the Contractor to monitor, excavate, stockpile, sample, transport, and dispose of contaminated soil. Ecology was provided copies of the specifications for review prior to construction.

Structures occupying parts of the Ballinger Way Portal site were demolished and removed in October 2006. Construction of the portal shaft and related construction activities took place between 2007 and 2012. The tunnel contractor, Vinci Parsons Frontier-Kemper (VPFK), selected ground freezing as the method for constructing the Ballinger Way Portal shaft and completed basic site grading in July 2007. Construction photos show soil stockpiled on site. Subsequently, freeze pipes were installed in August 2007 and ground freezing started soon afterwards. By January 2008, ground freezing had progressed sufficiently for the shaft excavation to begin.

Per contract specifications, VPFK was required to submit a Suspect Materials and Contaminated Soils and Groundwater Handling and Disposal Plan as well as test and disposal records for contaminated soils and groundwater. The submittals provided by VPFK relevant to the pesticide soil contamination are as follows:

- Soil and Groundwater Management Plan, prepared for Vinci/Parsons/Frontier Kemper JV by GeoEngineers, Inc., dated June 4, 2007, VPFK Submittal No. CS-02111-2 v2, June 13, 2007.
- BW Shaft Contaminated Soils Haul & Dump Report, VPFK Submittal No. CS-02111-4, February 4, 2008.
- Contaminated Soils Haul Report #2, VPFK Submittal No. CS-02111-6, February 27, 2008.

VPFK's Soil and Groundwater Management Plan ([Appendix A](#)) indicates that the contractor anticipated encountering surficial pesticide contamination and planned pesticide chemical analyses for soil to be removed from the site. VPFK's Contaminated Soils Haul & Dump Report ([Appendix B](#)) for soils excavated from 0 to 4 feet below ground surface at the shaft site indicates that testing was performed for organochlorine pesticides including 4,4 DDT prior to off-site disposal. The analysis results show that this soil did contain organochlorine pesticides, but the concentrations were below the MTCA Method A soil cleanup levels. The second Contaminated Soils Haul Report ([Appendix C](#)) for soils excavated from 4 to 15 feet below ground surface also includes test results for organochlorine pesticides including 4,4 DDT. This soil did not contain any detectible concentrations of the organochlorine pesticides tested. Stockpiled contaminated soils were disposed off-site in accordance with VPFK's Soil and Groundwater Management Plan. To our knowledge, construction submittals were not provided to Ecology.

Ecology Early Notice Letter

On November 16, 2012, Ecology sent King County an Early Notice Letter indicating that, based on available information in their files, Ecology added the Ballinger Way Portal Site to the list of sites known to be contaminated by hazardous substances. This decision was apparently due to the Non-Halogenated Pesticide contamination of soil confirmed by the pre-construction environmental assessments to be above the Cleanup Level. Ecology's files evidently did not contain any records of the cleanup actions taken during construction of the Ballinger Way Portal.

Evaluation

Construction records of the Brightwater Conveyance System Central Contract for the Ballinger Way Portal site indicate near-surface pesticide contaminated soils were excavated, temporarily stockpiled on site, tested for suspected contaminants including organochlorine pesticides, and then properly disposed off-site. Based on these records, it is unlikely any of the surficial soils contaminated by organochlorine pesticides identified in the pre-construction environmental assessments remain on site.

This evaluation and attached information can be submitted to Ecology as documentation that cleanup actions were taken in compliance with Washington State laws and regulations, which should allow them to update the site record.

Attachments

Figure - Figure 2, Ballinger Way Portal Vicinity Map and Site Plan

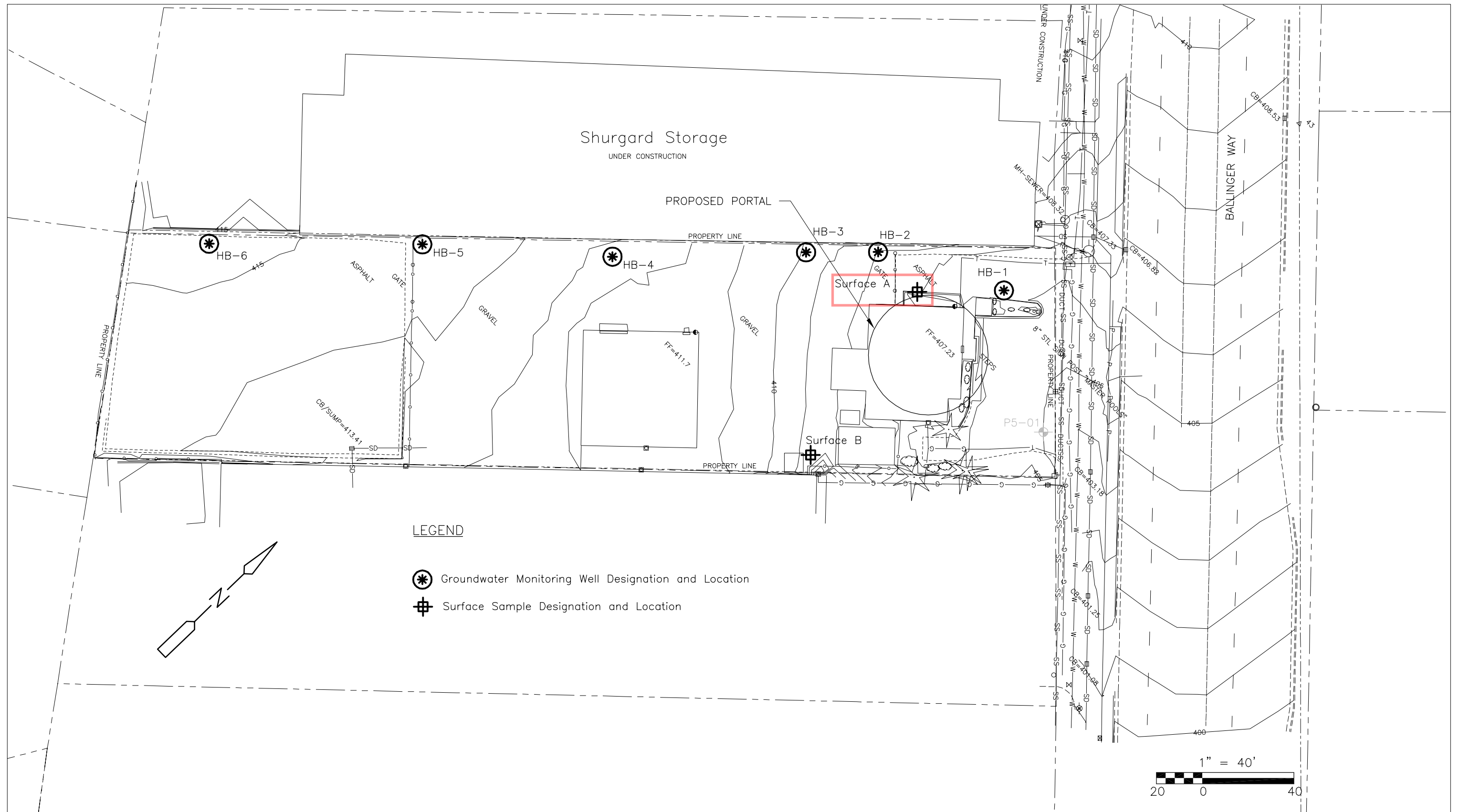
Appendices

Appendix A - Soil and Groundwater Management Plan (CS-02111-2 v2)

Appendix B - Contaminated Soils Haul & Dump Report (CS-02111-4)

Appendix C - Contaminated Soils Haul Report #2 (CS-02111-6)

cc: Rick Andrews, King County
Leon Maday, King County





Appendix A

Soil and Groundwater Management Plan (CS-02111-2 v2)

Appendix B

Contaminated Soils Haul & Dump Report (CS-02111-4)

Appendix C

Contaminated Soils Haul Report #2 (CS-02111-6)