GeoEngineers

Memorandum

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To:	Tim Mullin, SWRO Washington State Department of Ecology
From:	Steve Woodward, GeoEngineers
Date:	October 9, 2017
File:	0186-774-04
Subject:	Proposed geotechnical investigation – 320 Columbia Street, Olympia, Washington

This memorandum describes plans to complete two geotechnical borings on the property located at 320 Columbia Street in Olympia, Washington. Predecessors of Puget Sound Energy (PSE) previously owned and operated a manufactured gas plant (MGP) on the property. PSE completed a cleanup on the property in 2012 to address contamination related to the former MGP.[1] In general, the cleanup removed contaminated soil to a depth of approximately 6 feet below ground surface (bgs) within the property boundaries. The Washington State Department of Ecology (Ecology) issued a property-specific "no further action" (NFA) determination in 2015. An environmental covenant is in place to address contaminated soil that remains beneath the property at depths greater than 6 feet. The purpose of this memorandum is to notify Ecology of the planned geotechnical investigation activities as required by the environmental covenant.

Two geotechnical borings will be completed in the northeast and southwest portions of the property (see attached figure). These borings will be completed by Landau Associates on behalf of the property owner and developer, The Rants Group. These borings will be completed to depths of approximately 120 feet bgs to evaluate pile design for a future on-site structure. The general plan is to advance the borings to a depth of approximately 20 feet bgs using hollow-stem auger (HSA) drilling equipment. A bentonite plug will then be placed at the bottom of the HSA borings. The HSA auger flights will be left in place and the borings will be completed to their final depth (120 feet bgs) using mud rotary drilling equipment. We are proposing this approach to isolate contaminated soil behind the HSA augers, thereby reducing the risk of carrying contaminated soil from shallower to deeper depths. The deeper part of the boring (20 feet to 120 feet bgs) will be backfilled with bentonite chips prior to removing the HSA auger flights, followed by a similar backfilling of the shallower part of the boring. No environmental sampling is planned in the borings.

Based on a review of analytical data in GeoEngineers' *Data Summary Report* (October 25, 2011), concentrations of carcinogenic polycyclic aromatic hydrocarbons (cPAHs), lead and mercury remain in soil at concentrations exceeding Model Toxics Control Act (MTCA) cleanup levels for unrestricted land use beneath the base of the former remedial excavation at some locations. Nearly all of these cleanup level exceedances, however, were encountered at depths less than about 10.5 feet bgs. The deepest cleanup level exceedance was encountered in the southeast corner of the property at a depth of 20.5 feet bgs. Neither of the geotechnical borings are proposed in this area. Based on this information, we anticipate that soil contamination exceeding cleanup levels, if encountered in the geotechnical borings, will be at depths shallower than 20 feet bgs. This depth interval will be isolated behind the HSA augers. The upper 6 feet of the borings should encounter clean

[1] The cleanup was conducted under Ecology's Voluntary Cleanup Program (VCP number SW0984). The cleanup site identification number is 6851.

backfill that was placed in the 2012 remedial excavation. Non-aqueous phase liquids (NAPLs) have never been observed at the property, either during site investigation or cleanup.

Drilling fluids and cuttings generated by the drilling operations will be placed in labeled and sealed 55-gallon drums. Composite samples of the investigation-derived waste (IDW) will be collected and submitted for analysis of chemicals detected at the site at concentrations exceeding MTCA cleanup levels, plus any other analyses that may be required by disposal facilities. The number of samples collected will depend on the volume of IDW generated and requirements of the disposal facilities. The IDW will be transported off-site for appropriate disposal depending on the results of the analytical tests.

We request Ecology's approval to complete the geotechnical borings as described above, and acknowledgement that these activities will not violate the terms of the environmental covenant or jeopardize the status of the NFA. We would appreciate a response as soon as your schedule allows because the geotechnical borings are scheduled to be completed in approximately two weeks, during the week of October 23, 2017.

As a reminder, we are scheduled to meet with you on October 19, 2017 to discuss broader redevelopment activities that are planned for 2018. We look forward to meeting with you.

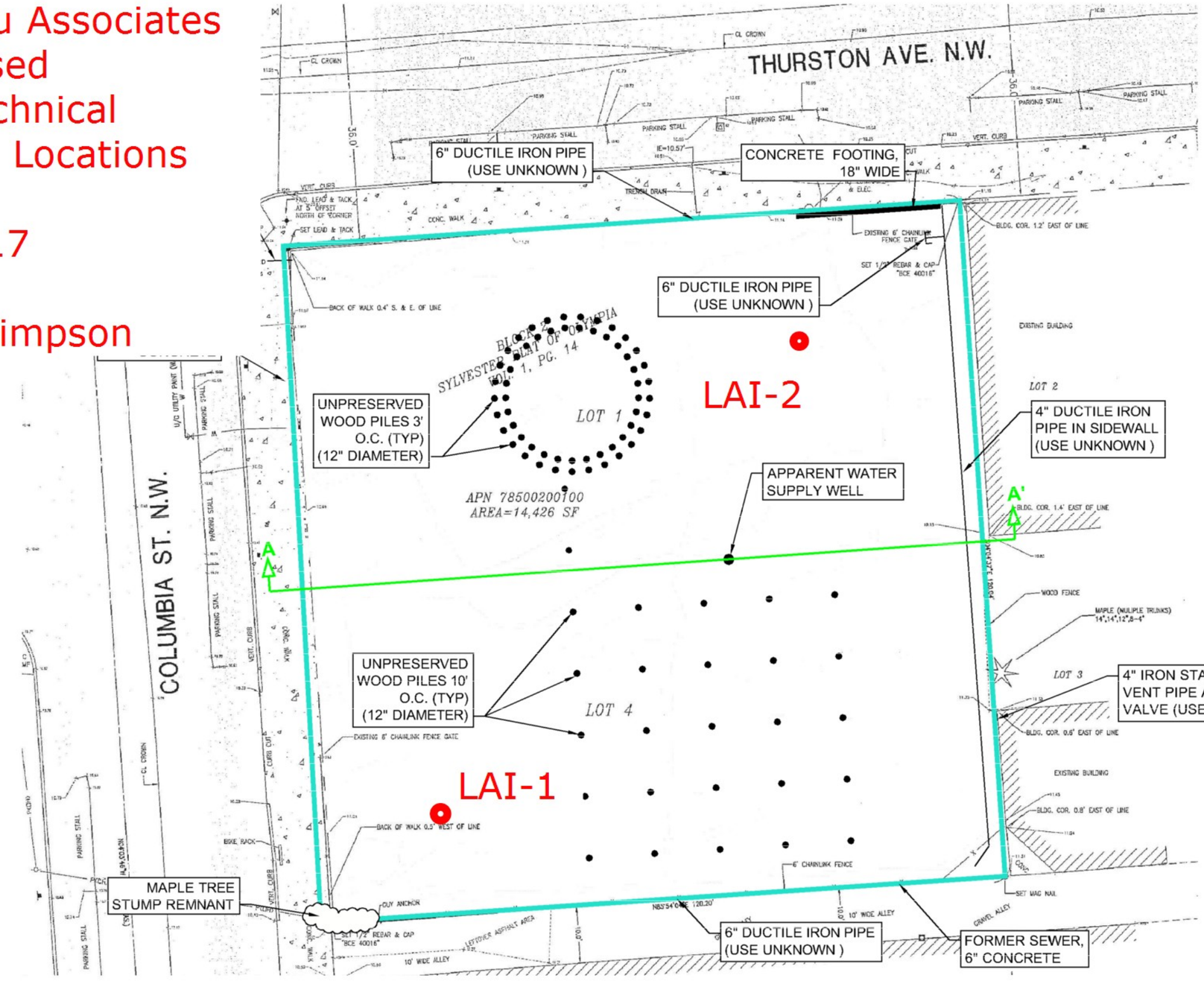
SCW:lw

Attachment:
Figure

Landau Associates Proposed Geotechnical Boring Locations

10/4/17

D.C. Simpson



Legend

- Property Boundary/ Excavation Limit
- Existing tree
- Existing sidewalk
- RD — Existing Roof Drain line
- W — Existing waterline
- P(OH) — Existing Overhead power
- O.C. — On Center
- TYP — Typical
- A — A' — Cross Section (see Figure 5)

N W E S

20 0 20
FEET

Notes

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. All locations are approximate.

Reference: Background image provided by Barghausen dated 3/27/2012.

Former MGP Utilities and Structures Remaining After Excavation

Former Olympia MGP Site
Olympia, Washington

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Figure 3