

APPENDIX G:

OLD OLYMPIA BREWERY

Introduction

In 1997, Tetra Tech, Inc. performed a Phase II Environmental Site Assessment (ESA). During the ESA, soil and groundwater samples were collected in the vicinity of a former underground storage tank (UST), the former paint shop, an electrical transformer pad, a subfloor drainage system, an above ground fuel storage tank (AST), road construction debris, and a former tannery.

Sample results indicated the presence of lead and arsenic in soil at concentrations that exceeded the Model Toxics Control Act (MTCA) Method A unrestricted cleanup levels, but below MTCA Method A industrial cleanup levels. Lead and arsenic were also detected in groundwater at concentrations that exceeded MTCA Method A cleanup levels.

In 2002, Arcadis conducted additional sampling at the Site. Twenty borings were advanced to collect soil samples, and three borings were advanced to collect groundwater samples. Several shallow soil samples contained lead and/or arsenic at concentrations above MTCA Method A cleanup levels. One groundwater sample contained arsenic at concentrations slightly above MTCA Method A cleanup levels.

Following this investigation, Arcadis installed several groundwater wells at the Site. Arsenic was not detected above MTCA cleanup levels for four consecutive quarters of groundwater sampling.

It was determined that the Site would be eligible for a No Further Action (NFA) determination by Ecology if institutional controls were used to limit groundwater and property use. Following sampling activities, a Restrictive Covenant was recorded for the Site in 2002. An amended Restrictive Covenant was recorded in 2003, following the termination of groundwater sampling requirements. The current Restrictive Covenant imposes the following limitations:

- The property shall be used only for industrial purposes unless residual concentrations of lead and arsenic are remediated below MTCA Method A or Method B residential cleanup levels.
- Any activity on the Site that may interfere with or reduce the integrity of the remedial action is prohibited.
- Any activity that may result in the release of a hazardous substance that remains on the property is prohibited.
- The owner of the Site must give written notice to Ecology of the owner's intent to convey any interest in the Site.
- The owner must restrict leases to uses and activities consistent with the Restrictive Covenant.
- The owner must notify and obtain approval from Ecology prior to any use of the Site that may be inconsistent with the terms of the Restrictive Covenant.

- The owner or successor owner shall grant Ecology the right to enter the Site at reasonable times.
- The owner or successor owner reserves the right to remove this Covenant with Ecology's approval.

As a result of the NFA and institutional controls for the Site, Ecology conducted a five-year Periodic Review as required by MTCA. The Periodic Review document, dated May 2011, states that based on the review, the Department of Ecology (Ecology) had determined that the requirements of the Restrictive Covenant are being met, but further action is warranted to achieve soil cleanup levels that comply with unrestricted land uses. The remedial option that had been selected for the Site was determined to not be protective of human health and the environment because of the current multi-use zoning of the Site, and the Site no longer qualified for use of MTCA Industrial cleanup levels. It is the property owner's responsibility to continue to inspect the Site to assure that the limitations of the Restrictive Covenant are being followed.

In 2012, Associated Environmental Group, LLC (AEG) conducted an interim soil remediation action that included the excavation and disposal of approximately 202 tons of metals-impacted soil from the eastern section of the former paint shop area, located adjacent to the southeast corner of the main warehouse complex. Soil samples were collected from several areas that were associated with the former paint shop. The potential constituents of concern (COCs) were initially determined to be petroleum hydrocarbons and heavy metals (cadmium, chromium, arsenic, lead, and mercury). The petroleum hydrocarbons were not detected in any of the samples. However, elevated concentrations of total lead, cadmium, arsenic, and chromium were detected in the shallow soils (0 to 1.5 feet below ground surface [bgs]). AEG's findings of heavy metals (lead, cadmium, chromium, and arsenic) at concentrations exceeding MTCA Method A cleanup levels throughout the Site is a confirmation of findings from previous soil sampling environmental investigations conducted by Arcadis and Tetra Tech, Inc.

Constituents of Concern (COCs)

Previous investigations have determined that heavy metals are Constituents of Concern (COCs). However, asbestos and lead paint are COCs because of the age of the buildings present on the Site. In addition, the Union Pacific right-of-way and railroad tracks run along the southeast and eastern boundary of the various parcels. Associated COCs of the tracks include petroleum hydrocarbons and carcinogenic polynuclear aromatic hydrocarbons (cPAHs).

Environmental Mitigation

Model Toxics Control Act (MTCA) Method-A unrestricted land use standard will apply to all three build out alternatives. The only variation in the mitigation detail is the number of soil samples and the sample locations, between Alternative 2 and Alternative 3. This is strictly based on the proposed square footage of the redevelopment area and the footprint of the new buildings.

Within all three alternatives, the COCs will need to be assessed and abated. The asbestos will need to be addressed throughout the buildings that will be re-developed. The metals will need to be characterized near the former paint shop area, as well as adjacent the old brewery warehouse and former brewhouse and storage building. Shallow boreholes or hand auger holes will need to be drilled adjacent the railroad tracks along the area that will be developed to determine if cPAHs and if total petroleum hydrocarbons (TPH) as gasoline, diesel, or heavy oil are present in this area.

One sample collected every 200 feet along the railroad tracks from Custer Way to the area northeast of the north warehouse would be approximately seven samples collected from the ground surface to approximately 2.5 feet bgs.

One sample would be collected every 100 feet along the north side of the North Warehouse for metals. This would total seven to eight samples collected from ground surface to approximately 2.5 feet bgs along the north side of the warehouse area. Two samples would be collected between the warehouse and the Deschutes River at approximately the same depths. Nine to ten samples would be collected along the south end of the warehouse between the river and the railroad right-of-way and analyzed for heavy metals. Another two shallow soil samples would be collected at the east end of the warehouse and analyzed for heavy metals. Figures 1 and 2 show the surveyed area of concern.

If concentrations are determined to be found above MTCA Method-A unrestricted soil cleanup levels, the material will be excavated and disposed of at a licensed landfill.

At least three groundwater monitoring wells will be installed to collect groundwater samples in the area of the Old Brewhouse. All samples will be analyzed for all COCs.

Analyses should be conducted using EPA Method 8260 for cPAHs, and NWTPH-HCID for petroleum hydrocarbons (and NWTPH-Gx, NWTPH-Dx extended if gasoline-range TPH or diesel/heavy oil-TPH is detected, respectively).