

## **Revised Cleanup Action Plan**

Bellevue Corner Property 10605, 10619, and 10635 Northeast 8<sup>th</sup> Street Bellevue, Washington

**Prepared For:** 

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## **ATTACHMENT**

Attachment A Opinion on Proposed Cleanup Action dated September 8, 2014 by Washington Department of Ecology

#### 1.0 INTRODUCTION

Environmental Partners, Inc. (EPI) has prepared this Revised Cleanup Action Plan (RCAP) on behalf of Bosa Development US, LLC (BOSA) for the property located at 10605, 10619, and 10635 NE 8th Street in Bellevue, Washington (Subject Property). The Subject Property is currently owned by BOSA and consists of the King County Tax Parcels 154410-0221 (10605 NE 8<sup>th</sup> Street), 154410-0216 (10619 NE 8<sup>th</sup> Street), and 154410-0215 (10635 NE 8<sup>th</sup> Street). Parcels 154410-0221 and 154410-0216 are collectively identified as the Bellevue Corner Property. The location of the Subject Property is shown on Figure 1. Boundaries of the Subject Property are shown relative to surrounding properties and physical features on Figure 2.

The Subject Property was previously owned by Sterling Realty Organization (SRO). During its ownership SRO identified that the Subject Property had been contaminated by historic releases of dry cleaning solvent from the Former Thinker Toys Site located across NE 18<sup>th</sup> Street at 10610 NE 18<sup>th</sup> Street. The Former Thinker Toys Site is identified as Cleanup Site ID No. 2206 and as Ecology Voluntary Cleanup Site No. NW2338. SRO subsequently reported the Subject Property to Ecology as being an affected property from the Former Thinker Toys Site. SRO enrolled the Subject Property into the Voluntary Cleanup Program (VCP) as Site No. NW2817 and Facility/Site ID Number 5569973.

In preparation of redevelopment of the Subject Property SRO requested an Advisory Opinion on its Cleanup Action Plan, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8<sup>th</sup> Street, Bellevue, Washington (CAP) dated July 7, 2015 prepared by GeoEngineers (GeoEngineers CAP). Ecology provided an opinion on GeoEngineers CAP titled Opinion on Proposed Cleanup Action dated September 8, 2014 (Ecology 2014; see Attachment A). The Ecology 2014 letter provided an opinion that, if implemented, the CAP would likely lead to an NFA determination for the Subject Property. However, the Ecology 2014 opinion also stipulated some modifications and additional content for a revised CAP. The Subject Property was subsequently retired from the VCP by Ecology on January 16, 2016 due to inactivity.

As a component of its purchase of the property from SRO, BOSA has agreed, under the final Environmental Cost Recovery Agreement (ECRA) dated October 17, 2016, to continue to work to attain a No Further Action determination for the Subject Property. BOSA has agreed to re-enroll the Subject Property into the VCP and to address the requirements of the Ecology 2014 opinion letter.

This RCAP is presented as a revision to the GeoEngineers CAP, which was previously accepted by Ecology. The RCAP is based largely on the GeoEngineers CAP but incorporates the current redevelopment plans of BOSA, which differ somewhat from those previously presented to Ecology. The primary difference is that the BOSA redevelopment will extend only to a depth of about 50 feet below grade compared to the prior development which extended to a planned depth of about 75 feet below grade. This RCAP also incorporates additional elements and planning documents stipulated as requirements under the ECRA.

This RCAP describes implementation of the revised cleanup action, which will be implemented as a component of the future redevelopment action. BOSA's objective is to obtain a property-specific No Further Action (NFA) determination for the Subject Property. That NFA determination will include the use

of engineering controls and an Environmental Covenant. The engineering controls and EC are necessary since neither BOSA nor SRO control the source of the contamination on the Former Thinker Toys Site and that contamination continues to migrate beneath the Subject Property solely through passive migration. Neither SRO nor BOSA are potentially liable persons (PLPs) for the Former Thinker Toys Site and the remediation on the Subject Property is intended to address the effects of the Former Thinker Toys Site contamination.

The purpose of submitting this RCAP to Ecology under the VCP is to request an Advisory Opinion similar to that provided in 2014, but with acknowledgment that the additional documentation requested in that opinion have been provided and that the currently planned redevelopment continues to be likely to attain an NFA determination.

On the basis of data compiled and presented in the *Remedial Investigation and Feasibility Study, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, Washington,* December 15, 2014 prepared by GeoEngineers (GeoEngineers RI/FS), it is understood that soil and groundwater in portions of the Subject Property are contaminated by tetrachloroethene (PCE) and associated chlorinated volatile organic compounds (CVOCs), including trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE). The source of the PCE and associated compounds has been identified as a former dry-cleaner that operated between 1976 and 1986 at 10610 NE 8th Street, directly north of the Subject Property, across NE 8th Street (Figure 2). This source property is identified as the Former Thinker Toys Site. PCE and TCE are present in soil at concentrations exceeding MTCA cleanup levels in portions of the Subject Property at depths ranging from approximately 12 to 65 feet below ground surface (bgs). Samples from shallow, perched groundwater encountered from approximately 25 to 35 feet bgs beneath some portions of the Subject Property also contained PCE and TCE at concentrations exceeding MTCA cleanup levels.

Residual concentrations of petroleum hydrocarbons exceeding MTCA Method A cleanup levels are present in shallow soil in some areas on the Subject Property, resulting from releases at a service station that operated there from 1958 to 1991. A partial cleanup of petroleum-contaminated soil was performed in 1991 and 1992 during underground storage tank (UST) removal activities.

EPI acknowledges that this RCAP incorporates much of the text and graphics previously provided in the GeoEngineers CAP. EPI has modified the document to the extent necessary to address Ecology's prior comments, to accurately reflect how the remedial action will be incorporated into the redevelopment currently planned by BOSA, and to address the requirements within the ECRA. For the regulatory audience, EPI has included in this RCAP, a re-presentation of the summary information and data obtained from multiple historic environmental reports prepared by other consultants for the Subject Property and adjacent properties. EPI has reviewed the chemical data, tables, figures, appendices and text of the GeoEngineers CAP and made independent interpretations and conclusions based on that information to prepare this RCAP. A list of the reports used by GeoEngineers is presented in the References Section of this document.

## 1.1 Purpose of Document

The purpose of this RCAP is to satisfy Ecology VCP requirements and the requirements of MTCA for planning and implementing a remedial action. The objectives of the RCAP are to:

- Present the results of the RI/FS.
- Present proposed cleanup requirements for the property, including cleanup levels and points of compliance.
- Present the revised cleanup action plan, to be completed concurrently with Subject Property redevelopment by BOSA, to address soil and groundwater contaminated by PCE and TCE exceeding MTCA cleanup levels, and soil contaminated by petroleum hydrocarbons exceeding MTCA cleanup levels.
- Present the revised cleanup action plan on the Subject Property to address potential vapor intrusion into the planned building and the control of groundwater within footing drains at completed redevelopment.

Table 1 presents an overview of the project roles and responsibilities.

## 1.2 Project Description and Future Land Use

It is anticipated that the Subject Property will be redeveloped within 1 to 5 years with a mixed-use building including up to five levels of underground parking. This land use is consistent with City of Bellevue zoning. A conceptual design for BOSA's redevelopment is shown on Figure 3.

The preliminary subgrade portion of BOSA's planned redevelopment includes:

- A lot-line-to-lot line excavation with maximum depths equal to elevation 104 above mean sea level (AMSL). This equates to a depth of excavation below adjacent grade of about 50 feet to accommodate the building foundation and underground parking.
- Limited excavations for elevator pits to approximately elevation 102 (approximately 52 feet bgs).
- Shored excavation and foundation construction using a combination of soil nails and soldier piles.
- The installation of footing drains to control hydrostatic pressure on the completed foundation walls.

## 1.3 Document Organization

This document is organized into the following sections:

- Section 2 Site Background summarizes information presented in the GeoEngineers RI/FS and GeoEngineers CAP regarding current and historical land use, environmental setting, investigations completed on the Subject Property and nearby properties, cleanup actions completed or in process, and the Conceptual Site Model.
- **Section 3 Cleanup Standards** presents the cleanup standards for the Subject Property including cleanup levels, points of compliance, and additional regulatory requirements.
- Section 4 Selected Cleanup Action presents rationale for selecting the cleanup action and an overview of the selected cleanup action.
- Section 5 Cleanup Action Objectives presents the property-specific cleanup action objectives of the proposed redevelopment with the overall objective of completing a cleanup action compliant with MTCA and protective of human health and the environment.
- Section 6 Cleanup Action Implementation and Sequence presents the primary elements and sequence of the cleanup action.
- Section 7 Schedule provides a preliminary schedule for completing the cleanup action.
- **Section 8 Documentation** summarizes the documentation that will be completed in accordance with a MTCA-compliant cleanup action and the ECRA.
- Section 9 Limitations Provides the limitations to EPI's preparation of this RCAP.
- **Section 10 References** provides a list of the references used in preparing the GeoEngineers CAP and this RCAP.

#### 2.0 SITE BACKGROUND

This section summarizes information regarding current and historical land use, environmental setting, investigations completed on the Subject Property and nearby properties, cleanup actions completed or in process, and the Conceptual Site Model (CSM).

## 2.1 Site Description

The Subject Property is currently owned by BOSA and consists of King County Tax Parcels 154410-0221 (10605 NE 8<sup>th</sup> Street), 154410-0216 (10619 NE 8<sup>th</sup> Street), and 154410-0215 (10635 NE 8<sup>th</sup> Street) (Figure 2). The Subject Property does not include adjacent rights-of-way (ROW). Gravel- and asphalt-paved parking lots, a wood and masonry building with retail businesses and perimeter landscaping are present on the Property.

The Subject Property is primarily surrounded by commercial development including office buildings, retail businesses, and parking lots. According to the City of Bellevue's zoning map, the Property and adjacent properties are zoned Downtown-Office (DNTNO-1 and DNTNO-2; City of Bellevue 2013). This zoning eliminates the possibility of ground floor residential uses and therefore eliminates potential residential exposure to contaminants of concern (COCs) via the vapor intrusion pathway.

#### 2.2 Current and Historical Land Use

This subsection presents a summary of the current and historical land uses for the three-parcel Subject Property (parcel nos. 154410-0221, 154410-0216, and 154410-0215), former Thinker Toys PCE Source Property (parcel no. 068570-0055), and surrounding properties. Boundaries of the Subject Property are shown relative to surrounding properties and physical features on Figure 2

## 2.2.1 10605 Northeast 8<sup>th</sup> Street (Parcel No. 154410-0221)

Parcel No. 154410-0221 (10650 NE 8<sup>th</sup> Street), located on the southeast corner of the intersection of NE 8th Street and 106th Street was undeveloped until 1958, when a retail gasoline station was constructed. The original service station had several USTs for fuel and waste oil, a drywell, vehicle hoists, pump islands etc. The parcel was redeveloped in 1969 as a Union 76 station and retail gasoline sales and automotive repair activities continued on this parcel until 1991 when the station was demolished. The USTs, product lines, associated equipment and 500 cubic yards of soil were removed during the first phase of excavation in 1991. A second phase of excavation was performed in April 1992 and an additional 1,500 cubic yards of petroleum-contaminated soil (PCS) were removed. Chemical analysis of soil samples obtained from the final limits of the remedial excavations did not detect petroleum contaminants at concentrations exceeding cleanup levels (EMCON Northwest 1992). Subsequently, an NFA opinion regarding the cleanup status for petroleum hydrocarbons on the parcel was issued by Ecology (Ecology, 1992).

# 2.2.2 10619 Northeast 8<sup>th</sup> Street (Parcel No. 154410-0216) and 10635 Northeast 8<sup>th</sup> Street (Parcel No. 154410-0215)

Prior to 1953, parcel nos. 154410-0216 (10619 NE 8<sup>th</sup> Street) and 154410-0215 (10635 NE 8<sup>th</sup> Street) were part of a nine acre-parcel that was occupied by the Cheriton Fruit Gardens. In 1963, the existing retail building was constructed on these parcels. Tenants have included a music store, furniture store, women's apparel store, automotive parts store, insurance agency, and travel agency. The basic features and land use of the parcels have remained unchanged since 1963.

## 2.2.3 Former Thinker Toys PCE Source Property 10610 NE8th Street (Parcel No. 068570-0055)

This 0.3-acre parcel was initially developed in 1955 as a retail gasoline station and automotive repair facility. In 1968, the station was removed and replaced with a new retail gasoline station that operated until 1976. Between 1976 and 1986, a One-Hour Martinizing dry cleaning facility operated at the property. Between 1986 and 2007 the property was occupied by small retail businesses, including the Thinker Toys

store. In 2007, the remaining structures were demolished and the property was paved and developed as a private parking lot (Sound Earth Strategies, Inc., 2011).

This property is known as the Former Thinker Toys Site. This Site has been identified as the source of the chlorinated solvents (PCE and associated compounds) that have contaminated soil and groundwater on the Bellevue Corner Property. As discussed in the RI/FS, soil and groundwater investigations to delineate contamination on the Former Thinker Toys Site and on the Subject Property have demonstrated how CVOCs released at the 10610 NE 8th Street property migrated passively with groundwater to the Subject Property.

## 2.2.4 Additional Surrounding Properties

The south-adjacent parcel, King County Tax Parcel No. 154410-0214 (606 106<sup>th</sup> Avenue NE), is owned by SRO and houses a Barnes and Noble bookstore and a Church. These properties were farmland prior to being developed. The bookstore building was constructed in 1957 as a bowling alley. The Church building was originally constructed in 1961 as a theater. Parking areas were initially paved in 1963.

King County Tax Parcel No. 154410-0209 (10555 NE 8<sup>th</sup> Street) is located to the west, across 106<sup>th</sup> Avenue NE. This parcel is occupied by a Bank of America branch that includes a building and an asphalt-paved parking lot.

## 2.3 Remedial Investigation Summary

Multiple environmental studies and cleanups have been performed on the Subject Property and adjacent properties between 1991 to 2011. Tables 2 through 6 include the tabulated data for the Subject Property originally presented in the GeoEngineers CAP. Detailed information regarding these studies is presented in the RI/FS.

## 2.3.1 Environmental Setting

This section presents an overview of the environmental setting for the Property and surrounding area. Ground surface elevations at the Subject Property range from approximately 153 to 165 feet AMSL. Ground surface slopes gently toward the west and south (King County iMAP 2011). Lake Bellevue is located approximately 0.75 miles northeast of the Property. Lake Washington is located approximately 0.75 miles southwest.

The City of Seattle provides the main source of potable water for the City of Bellevue. The water is obtained from surface water from the Cascade Mountains (City of Bellevue 2005). Current water supply wells within the City of Bellevue serve less than 50 people a day on average and are located more than one mile from the Property. There are no designated aquifer recharge areas within one mile of the Property. Because of the availability of the municipal water supply there is a very low probability that this aquifer would be used as a potable water source.

## 2.3.1.1 Property Geology

Previous investigations on and adjacent to the Subject Property encountered approximately 5 to 7 feet of fill material consisting of loose to medium dense silty sand with gravel. Fill is expected to be thicker in areas where USTs and petroleum-contaminated soil were removed during cleanup actions in the early 1990s. Below the fill material, the Property is underlain by Vashon Till (Pacific NW Geologic Mapping, 2007), a unit of dense to very dense glacially compacted, poorly sorted and locally cemented silt, sand, gravel, and cobbles with localized sand-rich zones (Figure 4). The glacial till typically extends to depths of 35 to 40 feet bgs. Two- to 5-foot thick sand-rich zones within the glacial till were encountered at depths of about 20 to 30 feet. Shallow, perched groundwater is associated with these sand-rich zones. The glacial till is underlain by the more permeable sand and gravelly-sand deposits of the Vashon Advance Outwash. Outwash extends to depths of approximately 75 to 90 feet bgs (Terra Associates, 2008). Dense, silty sand to sandy silt was encountered beneath the Advance Outwash in the deepest explorations that extend to 101.5 feet bgs

## 2.3.1.2 Property Hydrogeology

Two water-bearing zones were identified beneath the Subject Property during previous investigations.

A shallow, discontinuous, perched water-bearing zone associated with sandy lenses within the Vashon Till was encountered from approximately 20 to 30 feet bgs. Seven shallow wells at the Subject Property are screened in this perched water-bearing zone. Based on May 2010 groundwater depth measurements in these wells and shallow upgradient wells located on the Former Thinker Toys Site, perched groundwater generally flows to the south with a gradient of 0.046 feet per foot. Depth to groundwater and groundwater elevations are presented in Table 2. Perched groundwater elevation contours and inferred groundwater flow direction in May 2010 are shown on Figure 5.

A deeper regional aquifer is located in the lower portions of the underlying Vashon Advance Outwash. Four deep wells at the Subject Property (URS-MW-8 [SB-11], B2/MW-2, B1/MW1, and B4/MW4) were installed to monitor groundwater in the Advance Outwash deposits. Depths to groundwater in these monitoring wells ranged between 68 and 93 feet bgs from 2008 to 2011. Based on groundwater depth measurements in October 2011, groundwater in the Advance Outwash is inferred to flow to the south-southeast as shown on Figure 6.

## 2.4 Chemical Analytical Results Summary for Soil and Groundwater

Tables 3 and 4 present soil and groundwater chemical analytical data obtained during site characterization and petroleum cleanup actions completed between 1990 and 1992. Chemical analytical data for soil and groundwater samples from environmental studies completed at the Property between 2000 and 2011 are summarized in Tables 5 and 6, respectively. Exploration locations and analytical results are shown on Figures 7 through 15.

#### 2.4.1 Soil Results

#### 2.4.1.1 Soil Results for 1990-1992

A preliminary environmental site assessment (PESA) was performed at UNOCAL Service Station 4511 in July 1990. The findings of the PESA are presented in a report to UNOCAL (Sweet-Edwards/EMCON Inc., 1990). Five exploratory soil borings were drilled and groundwater monitoring wells were constructed in each of the borings (MW-1 through MW-5) at the approximate depth of the perched water zone. Selected soil samples from the borings were submitted for analysis of benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH). One soil sample collected from boring MW-5 located adjacent to former and existing waste oil USTs and an oil/water separator, was analyzed for CVOCs.

None of the soil samples contained detectable concentrations of benzene, toluene, or ethylbenzene. Xylenes were detected in MW-2 and MW-3 (northwest corner of the Subject Property near fuel USTs) at concentrations less than the cleanup level. TPH was detected at concentrations less than current MTCA Method A cleanup levels in all 5 borings. CVOCs including PCE and TCE were not detected in the MW-5 soil sample from 7.5 feet bgs.

Supplemental site assessment and cleanup action activities were performed at the Subject Property in 1991 and 1992. Soil chemical data for these activities are presented and discussed in the UST Closure Assessment report (EMCON Northwest, 1992) and summarized below.

Soil samples collected during phase one of the cleanup action showed that soil near the east wall of the gasoline tank excavation, heating oil/waste oil tank, hydraulics hoist, and dry well excavations, and former gasoline tank complex contained volatile and/or semivolatile fuel hydrocarbons at concentrations exceeding MTCA Method A cleanup levels. Four of the soil samples collected beneath the former waste oil tank and near the dry well were analyzed for polychlorinated biphenyls (PCBs); PCBs were not detected. Thirteen samples collected in the vicinity of the hydraulic hoists, dry well and waste oil UST were analyzed for VOCs. Petroleum-related VOCs either were not detected or were detected at concentrations less than MTCA Method A cleanup levels in 11 out of 13 samples. BTEX compounds were detected at concentrations exceeding cleanup levels in two soil samples collected beneath hoists. CVOCS were not detected in these samples except for methylene chloride (a common laboratory contaminant) detections in several dry well samples. These data are evidence that the hoists, dry well and waste oil UST were not a source of the PCE detected on the Property in later studies. Several samples from the vicinity of the gasoline USTs and product lines were analyzed for lead; lead was not detected. Soil samples were collected from the base and sidewalls of the remedial excavations following Phase two removal of the PCS to confirm that remaining soil met MTCA Method A cleanup levels. Petroleum contaminants either were not detected in these samples, or were detected at concentrations below cleanup levels.

#### 2.4.1.2 Soil Results for 2000-2011

Chemical analytical results for PCE in soil samples obtained from exploratory borings drilled on the Subject Property ranged from not detected (or detected at estimated trace concentrations less than the 0.01 to 0.02 milligrams per kilogram [mg/kg] reporting limit) to 2.30 mg/kg. PCE was detected at concentrations exceeding the MTCA Method A cleanup level of 0.05 mg/kg in a portion of the soil samples obtained from 12 to 65 feet bgs. Most of the soil borings in which PCE concentrations exceeded the MTCA Method A cleanup level were located in the northwest portion of the Subject Property (Figure 12). TCE was detected at concentrations exceeding the MTCA Method A cleanup level of 0.03 mg/kg in two samples obtained at depths between 47 and 50 feet bgs, and was co-located with soil samples containing PCE at concentrations exceeding cleanup levels. DCE, vinyl chloride, and other CVOCs were not detected in soil samples at concentrations exceeding MTCA cleanup levels.

Gasoline- or oil-range petroleum hydrocarbons were detected at concentrations exceeding MTCA Method A cleanup levels in four soil samples collected from 0.5 to 9 feet bgs in four soil borings located in the west-central portion of the Property (Figure 12). Three of the four samples were collected from less than two feet bgs at these locations. Petroleum either was not detected or was detected at concentrations well below cleanup levels in 66 out of 70 soil samples that were tested. The residual petroleum hydrocarbon impacts appear to be relatively shallow and localized on the Property. BTEX, 1,2-Dichloroethane (1,2-DCA) and methyl tert-butyl ether (MTBE) were not detected in soil samples at concentrations exceeding MTCA cleanup levels.

#### 2.4.2 Groundwater Results

#### 2.4.2.1 Groundwater Results for 1990

Groundwater samples from four of the monitoring wells installed in 1990 were analyzed for volatile and semivolatile hydrocarbon analyses. BTEX and TPH were not detected in the groundwater samples from wells MW-1, MW-2 and MW-4. TPH was not detected in the groundwater sample from MW-3. BTEX compounds were detected in the groundwater sample from MW-3 at concentrations less than MTCA Method A cleanup levels. Groundwater at the Subject Property was encountered approximately 23 feet bgs; perched groundwater flow direction was interpreted to the southeast. Groundwater at the Property was not sampled during the supplemental site assessment and cleanup activities in 1991-1992.

#### 2.4.2.2 Groundwater Results for 2000-2011

Chemical analytical results for groundwater samples collected from select monitoring wells on the Subject Property between 2000 and 2011 are presented in Table 6. Compounds analyzed included:

- PCE, TCE, cis-1,2-DCE, 1,1,1-Trichloroethane (1,1,1-TCA) and 1,2-Dichloroethane (1,2-DCA);
- BTEX, MTBE and naphthalenes; and
- Gasoline-, diesel-, and oil-range hydrocarbons.

The highest concentrations of PCE in groundwater samples from the perched zone were collected from monitoring well URS-MW-1 and ranged from 114 to 430 micrograms per liter (µg/L), exceeding the MTCA Method A cleanup level of 5 μg/L. Monitoring well URS-MW-1 is located in the northwest corner (upgradient portion) of the Subject Property closest to the Former Thinker Toys Site. PCE was detected in groundwater samples from several monitoring wells installed in the perched groundwater zone in the western portion of the Subject Property including B-3/MW-3 (up to 88 μg/L), MW-19 (33 μg/L), MW-20 (4.6 μg/L), and URS-MW-3 (3.9 μg/L). PCE was detected in groundwater samples from nearby off-Property monitoring wells MW-17 (14 µg/L) and MW-18 (830 µg/L), located to the west, within the 106th Avenue NE right-of way in August 2010. TCE and cis-1,2-DCE also were detected in groundwater samples from these off-Property monitoring wells. Concentrations of PCE generally were highest in groundwater samples collected from shallow monitoring wells in the northern portion of the Property, and lowest in groundwater samples collected from the shallow monitoring wells in the southern portion of the property. TCE and cis-1,2-DCE typically were detected in groundwater samples in which PCE exceeded the MTCA Method A cleanup levels. However, with the exception of TCE in the groundwater sample from monitoring well URS-MW-1, the concentrations were less than the MTCA Method A or B cleanup level. PCE was not detected in groundwater samples collected from monitoring well URS-MW-2, in the north-central portion of the Subject Property.

Chemical analytical results for PCE in groundwater samples collected from deep monitoring wells screened in the Advance Outwash on the Subject Property ranged from not detected in monitoring wells B1/MW-1 and URS-MW-8 to 1.9 to 2.0  $\mu$ g/L in the groundwater samples from B2/MW-2 and B4/MW-4. The low level PCE detections in groundwater samples from B2/MW-2 and B4/MW-4 occurred in 2008. PCE was not detected in samples from wells B2/MW-2 and B4/MW-4 during more recent sampling events in 2010 and 2011. PCE either was not detected or was detected at estimated concentrations less than laboratory reporting limits in groundwater samples collected from deep soil borings URS-SB-9 and URS-SB-21. Concentrations of PCE detected in groundwater samples from the Advance Outwash aquifer are less than the MTCA Method A cleanup level of 5  $\mu$ g/L. However, the PCE detections in two deep wells in 2008 indicate there is hydraulic connection between the shallow perched water and the deeper groundwater and that the regional aquifer has been impacted by PCE to some extent.

BTEX, and gasoline-, diesel-, and oil-range hydrocarbons were not detected in groundwater samples collected from monitoring wells on the Subject Property between 2000 and 2011. Naphthalene was detected at an estimated concentration less than laboratory reporting limits in a deep groundwater sample collected from URS-SB-15. MTBE was detected at a concentration (1.0  $\mu$ g/L) well below the MTCA cleanup level (20  $\mu$ g/L) in a sample from deep well URS-MW-8 (SB-11).

## 2.5 Previous Cleanup Action

Remedial action to address PCS at the Subject Property was performed on parcel 154410-0221 (10605 NE 8<sup>th</sup> Street) in 1991 and 1992. USTs, associated piping, equipment, and 500 cubic yards of PCS were removed in 1991. Following UST removal and follow-up explorations, an additional 1,500 cubic yards of PCS were removed in 1992 (EMCON Northwest, 1992). Subsequently, an NFA opinion regarding the cleanup status for petroleum hydrocarbons on the parcel was issued by Ecology (Ecology, 1992).

An air sparging-soil vapor extraction (AS/SVE) system is operating on the Former Thinker Toys Site, located on the northeast corner of the intersection of NE 8th Street and 106<sup>th</sup> Avenue NE. We understand the system is operating as an interim cleanup action to prepare that property for a subsequent cleanup action that includes excavation and off-site disposal of PCE-contaminated soil. The Former Thinker Toys Site is being cleaned up by other parties under the Ecology VCP. BOSA has no indication of the start date for implementing the subsequent cleanup action at that property.

## 2.6 Conceptual Site Model

The CSM includes a discussion of contaminant sources, chemicals and media of concern, fate and transport of those chemicals, and potential exposure pathways that could affect human health or the environment. The Subject Property qualifies for an exclusion from a Terrestrial Ecological Evaluation (TEE) because less than 1.5 acres of contiguous undeveloped land is located on, or within 500 feet of, the Subject Property. The CSM was the basis for developing cleanup options and selecting the preferred cleanup action.

Explorations performed on the Subject Property and surrounding properties indicate that PCE and associated chlorinated solvent contamination of soil and groundwater beneath the Subject Property resulted from releases at the dry cleaning facility that operated on the former Thinker Toys property between 1976 and 1986. The CVOCs released on the former Thinker Toys PCE source property migrated passively to the south with groundwater and resulted in contamination on the Subject Property.

PCE has been detected at the Subject Property in soils at depths ranging between 12 and 65 feet bgs and in perched groundwater from approximately 20 to 30 feet bgs, and historically at low concentrations in the deeper regional aquifer. The distribution of PCE in soil and groundwater indicates that the source of PCE at the Subject Property is the upgradient former Thinker Toys property. The former use of the Subject Property as a service station does not appear to have contributed to the PCE detected in soil and groundwater.

PCE detections in soil at URS-MW-4 in the southeast portion of the Subject Property represent a minor data gap that will be evaluated further during the cleanup action. During the cleanup action soil samples will be collected from the final sidewall of the construction excavation. Those samples will be used to characterize the lateral and vertical extent of any exceedances of cleanup levels within the vertical plane of the property boundary. Those samples will be representative of conditions on the southern adjacent SRO-owned property since the redevelopment of the Subject Property will be lot line-to-lot line.

The dense glacial till and silty outwash soil overlying the Advance Outwash aquifer has relatively low permeability and appears to act as an aquitard to limit contaminant migration to the deeper groundwater at the Subject Property. However, PCE detected at low levels in groundwater samples from two deep wells in 2008 indicate there may be a minor degree of hydraulic connection between the shallow perched water and the deeper groundwater in the regional aquifer. The source of those impacts is the Former Thinker Toys Site and those impacts are present on the Subject Property solely as a result of passive migration. The potential still exists for the regional aquifer at the Subject Property to be further contaminated in the future if effective remedial action is not taken at the Former Thinker Toys Site.

Petroleum releases from historic USTs and other gas station facilities impacted shallow soil at the Subject Property. USTs, associated facilities, and the vast majority of PCS were removed during cleanup actions completed in 1991 and 1992. Residual PCS on the Subject Property appears to be relatively shallow and localized.

With the exception of very low concentrations of naphthalene and MTBE, groundwater at the Subject Property has not been impacted by petroleum hydrocarbons since the early 1990s cleanup.

The COCs for the Subject Property include potentially hazardous or toxic compounds that have a history of use at or upgradient of the Subject Property, or which were detected in environmental media during previous investigations. Based on these criteria, the COCs for the Subject Property include PCE and its related degradation products (TCE, cis-1,2-DCE, trans-1,2-DCE and vinyl chloride), BTEX, MTBE 1,2-dichloroethane, lead, and gasoline-, diesel-, and oil-range petroleum hydrocarbons.

Soil, groundwater, and soil vapor are the media of concern at the Subject Property. Potential pathways of exposure from PCE-contaminated soil include volatilization and potential inhalation of PCE-contaminated air, dermal contact, and ingestion. Dermal contact/ingestion also is a potential exposure pathway for the residual petroleum-contaminated soil. Another potential pathway is leaching of PCE/PCE daughter compounds, petroleum and petroleum-related VOCs from contaminated soil to groundwater. However, the potential for petroleum and related VOCs leaching from soil to groundwater is relatively low, in our opinion. This is due to the shallow nature of the remaining soil contamination, data that shows petroleum has not been detected in groundwater at the Subject Property, and the low concentrations of petroleum-related VOCs. Potential pathways of exposure from PCE-contaminated groundwater include volatilization and subsequent exposure through the vapor pathway, direct contact, or ingestion. These potential pathways were considered in the GeoEngineers RI/FS. Workers handling soil and groundwater with PCE levels exceeding MTCA cleanup levels, and petroleum-contaminated soil exceeding cleanup levels, will need to be Hazardous Waste Operations and Emergency Response (HAZWOPER) trained. The need for HAZWOPER training also will apply to workers who periodically maintain the wall drain groundwater capture system that is a long-term engineering control for the project.

According to current Ecology guidance (Cleanup Levels and Risk Calculations; April 6, 2016), PCE concentrations in groundwater exceeding 22.9  $\mu$ g/L, or in soil vapor beneath a building structure exceeding 321 micrograms per cubic meter ( $\mu$ g/m3), have the potential to impact indoor air at a level that exceeds the indoor air cleanup level for ground floor residential land uses. While ground floor residential uses are not possible at the Subject Property the potential vapor intrusion exposure pathway was considered during evaluation of remedial cleanup alternatives.

## 3.0 CLEANUP STANDARDS

This section presents the cleanup standards for the Subject Property including cleanup levels, points of compliance, and additional regulatory requirements.

## 3.1 Terrestrial Ecological Evaluation

As previously noted, the Subject Property qualifies for an exclusion from a TEE because less than 1.5 acres of contiguous undeveloped land is located on, or within 500 feet of, the Subject Property.

#### 3.2 Contaminants of Concern

The COCs for the Subject Property include:

- PCE;
- TCE;
- Cis-1,2-DCE;
- Trans-1,2-DCE;
- Vinyl chloride;
- BTEX:
- MTBE;
- 1,2-dichloroethane;
- Lead;
- Gasoline-range petroleum hydrocarbons;
- · Diesel-range petroleum hydrocarbons; and
- Oil-range petroleum hydrocarbons.

## 3.3 Cleanup Levels

Cleanup levels for the cleanup action at the Subject Property were selected to address PCE and related daughter compounds, BTEX, MTBE, 1,2-DCA, lead and petroleum compounds. Cleanup levels to be used for soil characterization and confirmation sampling and compliance groundwater monitoring are presented in Table 7. The proposed soil cleanup levels are MTCA Method A for Unrestricted Land Use, except for the DCE isomers, vinyl chloride and 1,2-DCA that do not have Method A cleanup levels. Cleanup levels for these CVOCs are Method B based on protection of groundwater. The proposed groundwater cleanup levels are MTCA Method A, except for chlorobenzene and the DCE isomers that do not have Method A cleanup levels. The proposed cleanup levels for chlorobenzene and the DCE isomers are Method B Standard Formula for drinking water (non-carcinogen) from Ecology's CLARC database.

## 3.4 Points of Compliance

Points of compliance are the points on the Subject Property where soil and groundwater cleanup levels will be attained.

#### 3.4.1 Point of Compliance for Soil

The standard point of compliance for direct contact with soil is from the ground surface to 15 feet bgs (per WAC 173-340-740[6](d)). However, because contaminated groundwater is present at the Subject Property, the point of compliance for soil is throughout the Subject Property to all depths. Current redevelopment plans indicate that soil in the portion of the Subject Property where PCE- and petroleum-contaminated soil has been identified will be removed to maximum depths equivalent to an approximate elevation of 104 feet AMSL.

It is possible that soil containing COCs at concentrations above the selected cleanup levels will remain on-Property after the completion of the remedial action. Those soils will be beneath the floor slab of the lowest level of the parking garage. The presence of those soils with COC concentrations exceeding cleanup levels after the completion of the remedial action will be addressed through an Environmental Covenant. The potential for vapor intrusion risks posed by those soils will be addressed through an engineering control consisting of a vapor barrier, which will also be incorporated into the Environmental Covenant.

#### 3.4.2 Point of Compliance for Groundwater

The point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be impacted by the COCs (WAC 173 340-720[8]. The point of compliance for the Subject Property is applicable to groundwater within the property boundaries for the full vertical extent of groundwater impacts.

It is likely that groundwater containing COCs at concentrations above the cleanup level will remain at the Subject Property after completion of the remedial action. Groundwater is likely to be present beneath the lowest level of the parking garage and, since the source property for groundwater contamination (i.e., Former Thinker Toys Site) has not been remediated, contamination from that property will continue to migrate beneath the Subject Property through passive migration.

The presence of groundwater with COC concentration exceeding cleanup levels will be addressed through an Environmental Covenant. Additionally, the potential for vapor intrusion will be addressed through the same vapor barrier installed for the presence of residual soil contamination. The footing drains for the western portion of the parking garage will likely collect PCE-contaminated groundwater. That groundwater will be collected separately from other footing drain water and discharged to the sanitary sewer. If necessary based on VOC concentrations that water will be treated prior to discharge. Both the vapor barrier and segregated footing drains and sanitary sewer discharge (with or without treatment) will be incorporated as engineering controls within the Environmental Covenant.

## 3.4.3 Point of Compliance for Soil Vapor

Cleanup standards and points of compliance for soil vapor have not been established in Washington State. However, Ecology has published draft guidance that includes screening levels (Ecology, 2015) above which there is the potential for vapor intrusion at levels that may exceed the MTCA Method B Indoor Air Cleanup Levels for residential uses. The screening levels exist for sub-slab/shallow soil vapor, deeper soil vapor and for COCs dissolved in groundwater.

At the completion of the remedial action there may be COCs in soil beneath the lowest level of the garage at concentrations exceeding cleanup levels and which could result in soil vapor exceeding the screening levels. There may also be impacts to soil beyond the lateral limits or sidewalls of the garage that could result in exceedances of the shallow or deep soil gas screening levels. The groundwater beneath the Subject Property may also exceed the groundwater screening level protective of vapor intrusion.

As noted above a vapor barrier will be installed beneath the portion of the building affected by COCs in soil and groundwater. Additionally, a vapor barrier will be installed on the portion of the northern and western sides of the building that may be in contact with soil impacted with COCs. The vapor barrier will serve as an engineering control to address potential vapor intrusion risks and will be incorporated into the Environmental Covenant.

## 3.5 Applicable, Relevant and Appropriate Requirements (ARARs)

As required by WAC 173-340-710, the selected cleanup action for the Subject Property will comply with applicable local, state and federal laws and regulations. MTCA (173-340 WAC) represents the primary regulation that establishes cleanup standards, cleanup levels and other requirements for cleanup of the Subject Property.

In addition to MTCA, key requirements that are applicable to the cleanup action at the Subject Property include:

- Washington Dangerous Waste Regulations; Chapter 173-303 WAC.
- Solid Waste Management Act; Revised Code of Washington (RCW) 70.95; WAC Chapters 173-304 WAC and 173-351 WAC.
- Occupational Safety and Health Administration (OSHA) Regulations, 29 CFR Parts 1910 and 1926.
- Washington Department of Labor and Industries Regulations, Chapter 296 WAC.
- Washington Minimum Standards for Construction and Maintenance of Wells, Chapter 173-160 WAC.
- City of Bellevue and King County regulations and codes.

## 3.6 Summary of Evaluated Cleanup Alternatives

Based on the results of the RI, the following remedial alternatives, solely or in combination, were considered for the Subject Property to address soil and groundwater contaminated with chlorinated solvents and petroleum:

- 1. No action.
- 2. Excavation of contaminated soil exceeding MTCA cleanup levels with on-site treatment and reuse.
- 3. Excavation of contaminated soil exceeding MTCA cleanup levels with off-site disposal at a permitted facility.
- 4. Capture and treatment (if necessary) of contaminated, perched groundwater using perimeter wells and permitted water discharge.
- 5. Capture and treatment (if necessary) of contaminated, perched groundwater using subsurface wall drains, and permitted water discharge.
- 6. Soil vapor extraction and treatment system at the perimeter of the Property.
- 7. Installation of a vapor barrier on subsurface, perimeter building walls and concrete slab at bottom of the underground parking structure.

An evaluation of remedial alternatives was completed by comparing alternatives 1 through 7 against MTCA-specified threshold requirements and screening criteria. Based on the remedial alternatives evaluation, alternatives 1, 2, 4 and 6 would not achieve the cleanup action objectives, meet the Threshold or Other Criteria specified in MTCA, or satisfy the MTCA requirements for cleanup actions. Therefore, alternatives 1, 2, 4, and 6 were eliminated from further consideration.

## 4.0 SELECTED CLEANUP ACTION

This section presents rationale for selecting the cleanup action and an overview of the selected cleanup action. Section 6.0 presents the primary elements and sequence of the cleanup action.

## 4.1 Alternatives Analysis and Cleanup Action Selection Rationale

Based on the evaluation of remedial alternatives, the selected cleanup action consists of the following components, which are a combination of alternatives 3, 5, and 7 with the additional use of institutional controls:

• Excavation and off-site disposal of PCE- and petroleum-contaminated soil encountered throughout the redevelopment excavation at a permitted facility;

- Capture of contaminated, perched groundwater with subsurface wall drains and treatment (if necessary) followed by permitted water discharge;
- Installation of a vapor barrier on the subsurface perimeter walls and concrete slab at bottom of the underground parking structure; and
- Institutional controls in the form of an Environmental Covenant that formalizes the
  requirement for the engineering controls (vapor barrier and perimeter groundwater capture),
  including maintenance requirements for engineered controls, groundwater monitoring,
  restrictions on groundwater use and other standard provisions of the current Environmental
  Covenant template provided by Ecology.

This cleanup action was selected because it meets MTCA requirements for a permanent, protective cleanup action and can be implemented concurrently with redevelopment of the Subject Property. Components of the selected cleanup action alternative have been implemented at other similar sites and are technically feasible within the redevelopment framework. Reasonably accessible soil and shallow groundwater with contaminant concentrations that exceed MTCA cleanup levels will be removed from the Subject Property. Contaminated soil and groundwater on the Subject Property, but beneath the building will remain in place and soil and groundwater contamination beyond the property boundaries will remain in place. That soil and groundwater is present at the Subject Property solely as a result of passive migration and BOSA is an affected property owner, not a PLP for the source property (i.e., Former Thinker Toys Site). A vapor barrier will be installed to minimize potential intrusion of volatile organic vapors into the building. Additionally, perimeter footing drains will capture PCE impacted groundwater migrating to the Subject Property and that water will be treated (if necessary) and disposed to the sanitary sewer. Through these actions BOSA retains its protections under the "Plume Clause" of MTCA [70.105D RCW (22)(b)(iii)] and cannot be considered a PLP for the Former Thinker Toys Site.

The proposed cleanup action does not result in a significant amount of additional short-term risk beyond what is typical for a large construction project in an urban setting. Except for long-term operation and maintenance (O&M) of the vapor barrier, perimeter groundwater capture system and post-cleanup compliance groundwater monitoring, the cleanup action is expected to be completed within a reasonable restoration timeframe of 1 to 2 years after construction of the proposed redevelopment begins.

The proposed cleanup action is protective of all current and future potential exposure pathways at the Subject Property and fully complies with all requirements of MTCA and its implementing regulations.

## 4.2 Description of Selected Cleanup Action

The cleanup action will consist of the activities presented in the following subsections. Additional details regarding cleanup action implementation and sequencing are presented in Section 6.0.

#### 4.2.1 Soil Excavation

Based on BOSA's development plans, soil will be excavated and removed from the Subject Property during excavation for the building foundation and below-grade parking garage. The planned area of excavation for the redevelopment is shown on Figures 2 and 16. The redevelopment excavation will be from property line to property line on all four sides and will extend to an elevation of about 104 feet AMSL. The redevelopment includes four floors of underground parking and commercial uses at ground level. Shoring will be installed at the Subject Property boundaries to allow excavation and construction of the final walls of the subgrade parking structure. As noted, construction excavation is planned to extend from property line to property line. Contaminated soil encountered during the redevelopment will be transported to a permitted disposal facility, as discussed in Section 6.2.1, and in accordance with an Environmental Materials Handling Plan (EMH Plan) to be prepared under separate cover and submitted to Ecology for review and approval under the VCP. The remedial excavation portion of the redevelopment excavation will include performance and compliance monitoring at the limits of the remedial excavation to demonstrate compliance with cleanup levels or to document COC concentrations that may remain beneath the bottom of the parking structure or beyond the property boundaries.

#### 4.2.2 Footing Drain / Groundwater Capture System

The property redevelopment necessarily includes a perimeter footing drain to control hydrostatic pressure on the building walls. The bottom 5 to 10 feet of the parking structure may be below the top of the local perched water table aquifer. Local groundwater conditions indicate that this shallow aquifer is of generally low yield. It is estimated that a footing drain for the entire perimeter of the building may yield up to 10 gallons/minute.

Impacted groundwater from the Former Thinker Toys Site is known to only affect about the western third of the Subject Property. To provide a reasonable factor of safety, the footing drain system for the western half of the Subject Property will be segregated from the remaining footing drain. That will include the footing drains on the western half of the north side of the property, the full western side of the property, and the western half of the southern side of the property.

The approximate location-extent of the portion of the perimeter wall drains that will capture the perched contaminated groundwater is depicted on Figure 16. The location of the contaminated groundwater capture system is based on existing chemical data that defines the extent of PCE-contaminated soil and groundwater at, and immediately adjacent to, the Subject Property. The lateral extent of the groundwater capture system is subject to revision based on chemical analytical results for soil characterization/confirmation samples collected during construction. The subsurface wall drains will operate for the life of the building.

Groundwater captured from this segregated portion of the footing drain will be discharged to the sanitary sewer under a Discharge Authorization from King County Industrial Waste (KCIW) and the City of Bellevue, subject to approval by the KCIW and performance of routine sampling and self reporting.

The maximum allowable KCIW PCE discharge limit is 240 µg/L. If water samples collected from the capture system during construction exceed the PCE discharge limit, water treatment, with technologies

such as granular activated carbon, will be required prior to discharge to the sanitary sewer. It is not currently anticipated based on available groundwater data that such treatment will be necessary. Regardless, the building will have design details that allow for the installation, operation, and maintenance of appropriate treatment equipment. Design details for the groundwater capture system will be presented in the project plans and specifications package.

It is expected that the source property, The Former Thinker Toys Site, will at some point in the future be remediated. Such remediation would eventually allow the water captured by the perimeter footing drain to be discharged to the storm drain system as is normal for footing drains. Such discharges will only be made after routine sampling demonstrates on-going compliance with freshwater surface water discharge limits established for PCE at that time. The current freshwater surface water discharge limit for PCE is  $0.69~\mu g/L$  (Clean Water Act) Until such limits can be demonstrated, the captured water will continue to be discharged to the sanitary sewer pending continued authorization by KCIW.

## 4.2.3 Vapor Barrier

A vapor barrier will be installed on the subsurface perimeter walls and the concrete slab at the base of the parking structure, as discussed in Section 6.2.3. The intent of the vapor barrier is to minimize potential vapor intrusion into the underground parking structure.

Available data indicate that VOC impacted soils and groundwater are present beneath about the western third of the building. To provide a reasonable factor of safety, the vapor barrier will be installed beneath the western half of the building and on the perimeter walls of the western half of the building foundation.

The vapor barrier will have fully welded seams with all penetrations sealed. The material will be specified by the installation vendor as being suitable for the concentrations of chlorinated solvents that have been identified at the Subject Property. Design details for the vapor barrier will be presented in the project plans and specifications package. The final cleanup action report will include the final specifications and material cut-sheets and the installation inspection report.

#### 4.2.4 Institutional Controls

Institutional controls will be used as part of the cleanup action to address contaminated soil and groundwater that are expected to remain at some locations on the Subject Property. Those institutional controls will consist of an Environmental Covenant that incorporates and formalizes the installation and O&M of the engineering controls, and other general requirements of an Environmental Covenant such as notifications to Ecology for change in ownership and land use and restrictions on groundwater use at the property, among others.

#### 5.0 CLEANUP ACTION OBJECTIVES

The overarching cleanup action objective is to complete a cleanup action, in conjunction with development of the planned high-rise commercial building, that is compliant with MTCA and protective of human health and the environment. The Cleanup Action described above is fully compliant with MTCA and is protective of all current or potential future exposure pathways at the Subject Property. It is also readily implemented during the planned redevelopment action.

The following Property-specific cleanup action objectives take into account the proposed Subject Property redevelopment and media of concern:

- Avoid generating Dangerous Waste as defined in WAC 173-303 by obtaining a Contained-In Determination from Ecology for soil containing low concentrations of PCE.
- Remove all accessible contaminated soil throughout the Subject Property, within the boundaries of construction excavation, to achieve cleanup levels for unrestricted land use.
- Properly handle and manage PCE-impacted groundwater that may enter the construction excavation. Depending upon the volumes encountered this may either involve off-property disposal or on-property treatment and discharge to the sanitary sewer under a KCIW discharge authorization.
- Implement engineered controls to collect, and if necessary treat, PCE-impacted perched
  groundwater that encounters the segregated footing drains of the planned development. The
  wall drain system, including the portion that will also act as the contaminated groundwater
  capture system, will be designed to function for the life of the building.
- Develop and implement engineered controls as needed at the Subject Property to mitigate risk of vapor intrusion into the proposed building and underground parking structure.
- Collect appropriate performance and compliance soil samples from the limits of the remedial excavation to demonstrate the success of the remedial action and to characterize soil conditions at the final limits of excavation.
- Appropriately document all on-property activities using the current standard of care and in a manner consistent with the requirements of Ecology.
- Obtain a Property-specific NFA opinion from Ecology.

#### 6.0 CLEANUP ACTION IMPLEMENTATION AND SEQUENCE

This section presents the primary elements and sequence of the cleanup action that will be performed concurrently with redevelopment of the Subject Property.

#### 6.1 Pre-Construction Actions

The following actions will be performed before construction activities begin on the Subject Property.

## 6.1.1 Contained-In Determination Request

In accordance with the ECRA, a Contained-In Determination will be requested from Ecology to authorize disposal of low level PCE-impacted soil excavated at the Subject Property at a Sub-title D landfill. A Contained-In determination is expected to be issued by Ecology for the cleanup because, as described in the GeoEngineers CAP, the highest concentrations of PCE detected in soil at the Subject Property do not warrant management as a Dangerous Waste, and because one such determination has been issued previously by Ecology for investigative-derived wastes from the Subject Property and is consistent with other such determinations which have been routinely provided by Ecology at other sites.

The Contained-In Determination will have specific requirements for contaminated soil handling and disposal such as being placed in lined trucks and direct transportation and disposal at the approved facility. The Contained-In Determination will specifically exclude off-loading and reloading of the soils, which must arrive at the disposal facility in the containers in which they were originally placed. This typically requires the use of "roll-off" bins or other similar devices.

### 6.1.2 Monitoring Well Decommissioning

Monitoring wells located within the footprint of the planned redevelopment excavation will be decommissioned in accordance with Ecology requirements (WAC 173-160-460) before installation of shoring or soil excavation. The following monitoring wells are within the planned excavation footprint (Figure 13):

- Shallow monitoring wells URS-MW-1 through URS-MW-4, B3/MW-3, MW-19 and MW-20
- Deep Monitoring Wells B1/MW-1, B2/MW-2, B4/MW-4 and URS-MW-8

In addition, several wells located outside of, but close to, the Subject Property boundary (MW-17, MW-18, URS-MW-5, URS-MW-6, and URS-MW-7) that were installed by SRO for investigation of the Subject Property, may require decommissioning to accommodate installation of soil nails or other shoring elements. The need for decommissioning these off-Property monitoring wells will be evaluated once design/construction details are available.

Monitoring well construction information and groundwater elevation information is presented in Table 2. Implementation of the remedial action will include a component of compliance monitoring for groundwater, as indicated in previous Ecology correspondence. All such wells will necessarily be located

off-Property in areas neither owned nor controlled by BOSA. BOSA will negotiate proposed monitoring well locations and sampling frequencies with Ecology and will work in good faith to gain access to those locations. BOSA can make no representations whether it will ultimately be granted access to such off-property locations for the purposes of monitoring well installation and routine sampling.

### 6.1.3 Building Demolition

The buildings and improvements located on the Subject Property will be demolished and removed before shoring installation and construction excavation begins. Environmental evaluations of the building materials and demolition procedures are expected to be within the normal range for such procedures and are not included in the scope of this document.

## 6.2 Cleanup Actions During Construction

Cleanup actions to be implemented during construction include excavation and off-site disposal of soil containing CVOCs and petroleum hydrocarbons, construction of a segregated perimeter footing drain system, and installation of a vapor barrier on the subsurface walls and bottom slab of the building.

#### 6.2.1 Soil Excavation and Off-site Disposal

Contaminated soil excavation and handling will take place during construction excavation for the subgrade parking garage and building foundation. Soil containing petroleum hydrocarbons and PCE will be excavated from the Subject Property and disposed at a permitted facility. It is currently estimated that approximately 20,125 tons of PCE-contaminated soil and 1,100 tons of PCS will be generated during excavation for the planned development. This estimate is based on chemical analytical results from previous environmental studies, interpretation of the lateral/vertical extent of the PCE plume and the planned redevelopment excavation. The 20,125 tons should be considered a preliminary estimate that is subject to significant change based on the results of supplemental soil sampling that will be conducted during excavation and changes in the construction plans for the Subject Property, if any.

## 6.2.1.1 General Soil Excavation Components

The following general soil excavation components will be implemented during construction:

- Implementation of erosion control and construction safety/security measures consistent with redevelopment permitting requirements.
- Shoring to facilitate the planned construction excavation. Current plans indicated that the
  building walls and shoring will incorporate vertical shoring elements and soil nails. This will
  allow unlimited access to PCS and PCE-impacted soil within the lateral limits of the Subject
  Property and the vertical limits of the construction excavation (Figure 16).
- Excavation of the upper 1 foot of soil/gravel from the gravel parking lot on parcel no. 154410-0221 (10605 NE 8<sup>th</sup> Street) and disposal as PCS based on existing data and the high likelihood of petroleum contamination from many years of vehicle oil drips.

- Excavation of soil from PCS hot spot areas at depths shallower than 17 feet bgs (approximately Elevation 140) based on existing soil data. Segregation of PCS and clean soil, as discussed in Section 6.2.1.2.
- Soil sampling and analysis beginning at approximately 15 feet bgs (2 to 3 feet bgs in the southeast margin of the Subject Property near MW-4) to refine the PCE-contaminated soil segregation approach as discussed in Section 6.2.1.3. Soil sampling during excavation will be guided by an approximately 20 feet by 20 feet sampling grid for each 5- to 6-foot vertical excavation 'lift' to maximum depths of approximately 50 feet bgs. Dimensions of the grid that will guide excavation and sampling, and the vertical lift thickness, may be revised based on input from the Developer's contractors; final grid cell dimensions will be identified in the EMH Plan.
- Soil sampling and analysis from the lateral limits of the excavation will be used to document attainment of cleanup levels, and if cleanup levels are not attained, the soil conditions present at the vertical plane of the property boundary. Cleanup levels will necessarily be attained throughout the lateral limits of the property because all soil will be removed. If contamination extends to the property boundary, those impacts will be clearly documented through sampling and analysis. Sidewall soil samples will be collected at approximate frequency of every 20 feet horizontally and every 5 to 6 feet vertically, starting at approximately 15 feet bgs. Each soil sample will be representative of about 100 to 120 square feet of excavation sidewall.
- Soil sampling and analysis from the final lateral and vertical limits of the remedial excavation.
  If PCE remains present at detectable concentrations at the vertical limits (bottom) of the
  construction excavation samples will be collected on the same grid spacing used for
  shallower soils. This will reliably establish soil conditions at the vertical limits of excavation
  and what will be present beneath the bottom of the completed structure.
- PCE has not been detected above depths of 17 feet bgs, except for a location in the southeast margin of the Subject Property near URS-MW-4 where PCE was detected at a depth of approximately 12 feet bgs. Excavation of soil below 17 feet bgs within the redevelopment area to maximum depths equal to elevation 104 feet AMSL (based on current project design), and segregation of PCE-contaminated soil and clean soil based on existing chemical data and supplemental chemical data that characterize the soil in the excavation grid cells.
- Temporary construction dewatering of the shallow perched zone may be performed below depths of about 20 feet bgs to reduce groundwater seepage from the excavation wall face and facilitate shoring installation and soil excavation. If temporary dewatering of perched water is needed, it is anticipated that vacuum well points installed in the shoring wall will be used. Procedures for managing and discharging groundwater during construction that may be contaminated with PCE will be described in the EMH Plan.

- Transportation of excavated contaminated soil and disposal of the soil at one or more off-Property, permitted facilities. Soil management requirements for PCE-contaminated soil will be included in the Contained-In Determination letter from Ecology and detailed in the EMH Plan.
- Transportation of excavated clean soil (soil with no detected concentrations of petroleum or CVOCs at or above laboratory reporting limits) for disposal at off-Property soil receiving facilities to be agreed upon by SRO and BOSA. Reporting limits specified in Ecology Publication No. 10-09-057 ("Guidance for Remediation of Petroleum-Contaminated Sites") will be used for the petroleum analyses (gasoline-range 5 mg/kg; diesel-range 25 mg/kg; oil-range 100 mg/kg). Reporting limits of 0.02 mg/kg will be specified for PCE-TCE soil characterization analyses. Additional testing requirements may also be imposed by the receiving facility.
- Management and permitted discharge of stormwater and groundwater during excavation and construction activities.
- Collection and analysis of confirmation soil samples during excavation to document soil
  conditions at the lateral and vertical limits (sidewalls and base) of the excavation at the
  Subject Property. Lateral confirmation samples will be collected at the limits of remedial
  excavations at depths where contamination was identified by previous environmental studies
  or identified during construction.

## 6.2.1.2 Shallow Petroleum-Contaminated Soil Excavation

Soil analytical results indicate that PCS will be encountered at concentrations greater than and less than MTCA cleanup levels at some locations on the Subject Property at depths ranging from approximately ground surface to as much as 20 feet bgs. The final limits of such excavation will be determined through sampling and analysis.

- Soil Exceeding MTCA Cleanup Levels. Soil with concentrations of petroleum hydrocarbons exceeding MTCA Method A cleanup levels has been detected in the central portion of the Subject Property in four soil samples (Figure 8):
  - Shallow soil samples from borings SRO-3 (1 foot), SRO-13 (0.5 foot), and SRO-17 (1.8 feet); and
  - Boring SRO-7 (9 feet).
- Soil Less Than MTCA Cleanup Levels. Soil with concentrations of petroleum hydrocarbons less than MTCA cleanup levels was identified at several locations on the Subject Property within or close to the footprint of the former service station. While concentrations may be below cleanup levels this soil cannot typically be disposed as "clean" and still requires handling and disposal as PCS.

The upper 1 foot of soil/gravel will be excavated from the gravel parking lot on parcel no. 154410-0221 (10605 NE 8<sup>th</sup> Street) and disposed of as PCS based on existing data and the high likelihood of petroleum contamination in surface soil from many years of vehicle oil drips. A significant amount of soil that will be excavated from the top 15 feet of the Subject Property does not appear to contain petroleum hydrocarbons or PCE and will be designated as clean based on the results of previous environmental studies.

Soil will be excavated from the PCS hot spot areas on parcel no. 154410-0221 (10605 NE 8<sup>th</sup> Street). The former service station operated on this parcel and analytical results for soil samples collected from the Subject Property indicate that PCS is limited to that area. Grid cells will not be used to guide excavation of the shallow petroleum-contaminated soil hot spots. Instead, visual observations and field screening methods will be used during excavation to assist with soil characterization/segregation. Soil samples will be collected from the sidewalls and base of the hot spot excavations and analyzed for petroleum hydrocarbons (NWTPH-Gx and NWTPH-Dx) and BTEX to document soil conditions at the excavation limits. Additional information regarding confirmation sampling procedures and rationale is presented in the EMH Plan.

Based on historic land use, it is possible that additional PCS hot spots will be identified during excavation in the upper 15 to 20 feet of the western parcel. Potential hot spot areas are often identified by petroleum odor, soil staining and/or field screening results. Characterization samples will be collected from previously unknown locations where field screening during excavation indicates the likely presence of contamination. After contaminated soil exceeding MTCA cleanup levels has been removed, confirmation samples will be collected directly beneath previously identified and previously unknown contaminated areas

## 6.2.1.3 PCE-Contaminated Soil Excavation

Based on existing data, excavation of PCE-contaminated soil is anticipated to start at approximately 10 feet bgs (elevation 144) in the vicinity of MW-4, and at 17 feet bgs (approximately elevation 140) in the remainder of the Subject Property. Additional soil sampling will be conducted during construction in the upper 12 feet bgs in the vicinity of MW-4 because shallow PCE data do not exist in this area. As excavation for shoring installation proceeds in approximate 5- to 6-foot lifts, soil characterized as containing PCE will be kept segregated from soil characterized as clean. For the purposes of this cleanup, soil excavation cells that are characterized by samples that do not contain PCE at concentrations equal to or above the selected laboratory reporting limit (0.02 mg/kg) will be considered clean. The majority of the PCE-contaminated soil is anticipated in the northwest portion of the Subject Property at depths of approximately 18 to 50 feet bgs within the construction excavation or at approximate elevations of 137 to 104 AMSL.

Soil samples for disposal characterization will be obtained using an approximately 20 feet by 20 feet grid before excavating each vertical lift, in accordance with sampling procedures to be presented in the EMH Plan. The target sampling depth will be two to three feet below the grid surface, or at about the physical center of the grid. The locations of soil disposal characterization samples will take into account existing chemical data and visual observations of soil conditions encountered during excavation. If existing soil analytical data are available within a grid cell, those data will be used to classify soil in that cell as

unimpacted or contaminated, and additional in-place soil characterization samples will not be collected. Grid cells that contain sample locations with both contaminated and clean chemical analytical results will be designated as contaminated for the purposes of soil segregation and disposal. If both petroleum—contaminated soil and PCE-contaminated soil are present in a grid cell, the soil from that cell will be disposed as PCE-contaminated.

Before excavating each vertical lift, the environmental consultant will mark grid cells where PCE-contaminated soil has been designated using methods such as stakes and survey tape and/or spray painting the ground surface. PCE-contaminated grid cells will be excavated first in each lift to avoid cross-contamination of clean soil. The contaminated soil will be trucked directly to a Subtitle D landfill or placed in steel containers that will be trucked to a local intermodal facility for transport by rail to a Subtitle D landfill. In any event, the soil handling and transportation procedures will meet the requirements of the Contained-In Determination.

In addition to excavated soil, drill cuttings generated below a depth of approximately 10 feet (southeast portion of Subject Property) to 15 feet (remainder of Subject Property) during installation of vertical shoring elements and soil nails in the PCE-contaminated area shown on Figure 16 will be designated as PCE-contaminated and require segregation, management, and permitted disposal at a Subtitle D landfill under the Contained-In Determination.

The remedial excavation will not extend beyond the limits of the construction excavation. Because PCE has migrated to the Subject Property from an upgradient source property, PCE-contaminated soil and perched groundwater are expected to remain in place at some locations on other parcels and right-of-way immediately adjacent to the Subject Property. Based on the preliminary development plans, it is likely that contaminated soil will remain at the vertical limits (bottom) of the excavation in limited areas of the Subject Property. Confirmation sampling will be completed at the base and sidewalls of the remedial excavations to document post- cleanup soil conditions. As discussed in sections 6.2.1.1 and 6.2.1.2, lateral confirmation soil samples will be collected at depths where PCE-contaminated soil has been identified previously or during construction. Vertical confirmation samples will be collected directly beneath areas where PCE-contaminated soil identified prior to and during remedial excavation has been removed.

#### 6.2.1.4 PCE-Contaminated Water from Excavation

Water removed from the Subject Property during construction that may contain PCE will be contained in on-site tanks for testing. It is anticipated that this water will be discharged directly to the sanitary sewer in accordance with a KCIW Discharge Authorization. If water samples collected from the storage tanks during construction exceed the 240  $\mu$ g/L PCE discharge limit the water will be treated prior to discharge to the sanitary sewer. Water that may contain PCE includes:

- Stormwater that accumulates in the excavation and is in contact with PCE-impacted soils or mixes with PCE-impacted groundwater;
- Perched groundwater that seeps into the excavation;

- Perched groundwater pumped from temporary construction dewatering well points/sumps;
   and
- Groundwater generated from sumps used for limited dewatering of elevator pit and core footing excavations

## 6.2.2 Footing Drain / Groundwater Capture System

As noted above, the planned redevelopment requires the use of footing drains to control hydrostatic pressure on the building walls. A portion of this footing drain system will capture PCE-contaminated water originating from the Former Thinker Toys Site. That portion of the footing drain system will be segregated from the remaining portions of the footing drain to avoid placing PCE-contaminated water into the storm drain system. Estimated lateral extent of the proposed groundwater capture system is shown on Figure 16.

The segregated portion of the footing drain will be extended further to the east if soil characterization sampling during construction indicates the PCE plume extends further to the east than currently estimated. The capture system will collect contaminated water from the shallow perched water zone identified at depths of approximately 20 to 35 feet bgs at the Subject Property. The base of the construction excavation will not penetrate the aquitard layer and extend into the underlying regional aquifer. There is, therefore, minimal risk of vertical migration of dissolved-phase contaminants from the shallow to the deeper aquifer.

Based on the relatively low permeability of the glacial till and silty outwash soil, long-term flow rates of perched groundwater to the capture system are anticipated to be 10 gallons per minute or less. The possible need to treat captured groundwater with technologies such as granular activated carbon or air sparging prior to discharge in the sanitary sewer will depend on whether PCE concentrations in the captured water exceed KCIW's 240  $\mu$ g/L PCE discharge limit. The building design will include provisions for a water treatment area in the bottom floor of the parking garage where treatment equipment can be located, if necessary.

The footing drain system is expected to operate and discharge water to the sanitary sewer for the life of the building. Post-construction operation, maintenance, and monitoring requirements for the groundwater capture system are summarized in Section 8.3.

It is expected that at some time in the future the Former Thinker Toys Site will be remediated and groundwater quality beneath the Subject Property will improve as a result. Groundwater from the segregated portion of the footing drain system will continue to be discharged under the KCIW permit as long as necessary but may be re-routed to the storm drain system based on ongoing testing and demonstrated compliance with applicable discharge limits.

#### 6.2.3 Vapor Barrier

An interim cleanup action consisting of in-situ air sparging and soil vapor extraction treatment of PCE-contaminated soil and perched groundwater is reportedly currently taking place at the Former Thinker

Toys Site. We understand that a cleanup action involving excavation/removal of PCE-contaminated soil is planned during re-development at the source property by other parties. However, PCE-contaminated soil and groundwater with high levels of PCE are expected to remain in place beneath the rights-of-way of NE 8th Street and 106th Avenue NE for many years after the source property cleanup is completed. PCE concentrations in groundwater samples from several wells located on and immediately west of the Subject Property exceeded Ecology's current 22.9  $\mu$ g/L screening level for PCE levels in groundwater that represent a potential for vapor intrusion for a residential exposure. PCE is also present in groundwater at a concentration that would exceed a potential threat of vapor intrusion for a commercial worker scenario. Such a scenario could be established under Method B of MTCA using a reasonable maximum exposure for a commercial worker and would be considered a Remediation Level. That concentration would be 96.6  $\mu$ g/L. Since groundwater exceeds this higher value there is no benefit to using a Remediation Level and the associated additional provisions to the Environmental Covenant. A vapor barrier is equally protective of either vapor intrusion threat.

Soil and groundwater impacts at the subject property are limited to about the western third of the property. To provide a factor of safety, the vapor barrier will be installed in the western half of the property. The vapor barrier at the bottom of the building will be keyed into a 4-foot-deep trench that transects (north-south) the center of the property. This trench will be backfilled with controlled density fill (i.e., similar to concrete) and will serve to limit horizontal vapor migration to the east beneath the vapor barrier.

BOSA intends to install a vapor barrier on the perimeter walls of the western half of the building. This includes the full depth of the western half of the northern wall, the entire western wall, and the western half of the southern wall.

The vapor barrier will be designed and constructed to account for the following:

- Installation directly above the layer onto which the subslab is poured and behind subsurface perimeter walls, including portions of elevator shafts that extend below the subslab.
- Air-tight seal (fully sealed seams, sealing where utilities penetrate the concrete walls/slab etc.).
- Compatibility with CVOCs at concentrations exceeding the known maximum concentrations identified near the Subject Property (for example, an asphalt emulsion type geomembrane vapor barrier, such as Land Science Technology's Geo-Seal®), which can withstand degradation caused by CVOCs.
- Compatibility with the perimeter footing drain design.
- Possible preferential pathways for vapor that may be created by nearby subsurface utilities.
- A specialty subcontractor will install the vapor barrier in accordance with the design and project/barrier manufacturer's specifications. Vapor barrier design details and specifications will be prepared once designs for the building foundation and other subgrade features are completed.

#### 6.3 Post-Construction Action

Operation, maintenance, and monitoring of engineered controls, groundwater monitoring, and institutional controls following construction are described in the following sections.

### 6.3.1 Post-Construction Groundwater Monitoring

As part of the environmental covenant, Ecology has indicated that long-term groundwater monitoring will be performed near the Subject Property boundaries after construction to evaluate groundwater conditions in both the shallow, perched zone and the deeper Advance Outwash aquifer. It is anticipated that several off-Property shallow existing wells may be used to evaluate post-construction perched groundwater conditions near the Subject Property perimeter. Additional monitoring wells may be installed to supplement existing monitoring wells. Because the subsurface parking garage will extend lot-line to lot-line, post-cleanup groundwater monitoring wells will be installed several feet outside the perimeter of the Subject Property. Additionally, the drilling equipment necessary to access the deeper Advance Outwash aquifer cannot access the bottom floor of the parking garage.

New monitoring wells will be installed in accordance with Ecology requirements (WAC 173-160). Groundwater samples will be submitted for chemical analysis of PCE and its degradation products, BTEX, MTBE, 1,2-DCA, chlorobenzene and petroleum (gasoline-range petroleum hydrocarbons [GRPH], diesel-range petroleum hydrocarbons [DRPH] and oil-range petroleum hydrocarbons [ORPH]). Monitoring well installation and sampling will be conducted in accordance with a groundwater monitoring plan prepared under separate cover and which will be submitted to Ecology for review and approval under the VCP.

#### 6.3.2 Cap Monitoring and Maintenance

Cap monitoring and maintenance will be implemented following redevelopment. For the purpose of this cleanup action, the walls and bottom floor slab of the parking garage are considered a cap/barrier that isolates contamination remaining in place adjacent to and beneath the Subject Property. Cap monitoring and maintenance will be handled by BOSA or a subsequent ownership entity as part of the general housekeeping and maintenance of the Subject Property. The integrity of the cap and associated vapor barrier will need to be maintained consistent with standard building maintenance practices. Monitoring and maintenance activities will be described in detail in a "Post-Construction Environmental Management Plan" for the Property.

## 6.3.3 Groundwater Capture System Operation, Maintenance and Monitoring

Post-construction operation, maintenance, and monitoring will be required for the groundwater capture system. The following activities will be performed:

 Preparation of quarterly Discharge Monitoring Reports (DMRs) for submittal to KCIW in compliance with standard discharge authorization requirements. DMRs require tracking the volume of water discharged on a monthly basis and collection and analysis of water samples on a quarterly basis. Samples of water collected will be submitted for analysis of CVOCs to evaluate compliance with sewer discharge requirements; and

> O&M of groundwater treatment system components (if treatment of water from the capture system is required prior to sewer discharge).

Details regarding these activities will be presented in the Post-Construction Environmental Management Plan, which will be a component of the Cleanup Action Report.

#### 6.3.4 Environmental Covenant / Institutional Controls

The Environmental Covenant and institutional controls will be considered part of the cleanup action and will likely include:

- Requirements for notifications of changes in ownership or changes in land use;
- Cap-vapor barrier maintenance and inspections (i.e., maintaining the building walls and foundation);
- Post-remediation groundwater monitoring activities;
- Land use restrictions prohibiting the use of groundwater beneath the Subject Property for drinking water;
- Description of areas at the limits of the excavation where soil exceeding cleanup levels remains; and
- Post-cleanup soil handling protocols that building/facility management staff can use to advise future utility/excavation contractors on the presence of residual contamination.

The institutional controls and requirements for engineering controls will be memorialized and formalized in an Environmental Covenant. BOSA will draft the Environmental Covenant and submit that covenant to Ecology for review and approval. The covenant will then be recorded with the King County Recorder's office and attached to the title for the land.

#### 7.0 SCHEDULE

Construction for the planned redevelopment and concurrent cleanup is anticipated to begin within 1 to 2 years. Excavation activities for the redevelopment are anticipated to be completed within 6 to 12 months of the start date. Installation of the vapor barrier and segregated footing drain system will take place during building construction and are anticipated to be completed within 6 to 12 months of the construction start date. An environmental covenant will be prepared after the redevelopment is completed. Quarterly compliance groundwater monitoring will be performed for one year once construction of the building is completed. The frequency of long-term groundwater monitoring will be re-evaluated based on the results of the first four quarters of data and with the understanding that BOSA is not the PLP for the contamination at the property. The PLPs for that contamination are associated with the Former Thinker Toys Site. BOSA or a subsequent ownership entity will make the monitoring wells it installs accessible to the Former

Thinker Toys Site PLPs to allow them to monitor the extent and migration of contamination from their property.

#### 8.0 DOCUMENTATION

This section summarizes the documentation that will be completed in accordance with a MTCA-compliant cleanup action and the ECRA. Cleanup activities will be documented in field reports and a MTCA-compliant Cleanup Action Report (CAR). An O&M Plan for the Groundwater Capture System and a Post-Construction Environmental Management Plan will be prepared under separate covers following construction and will be presented as attachments to the CAR.

## 8.1 Field Reports

Daily field reports will be prepared to document cleanup activities. Field reports will include the following:

- A description of soil characterization sampling activities (sample names, locations etc.), chemical analytical results, grid cell soil conditions, and final designation of each cell as contaminated or clean. The description will state whether the soil was contaminated with PCE, petroleum, or both.
- A description of cleanup activities including estimated quantities (cubic yards/tons) and locations (grid cells) where contaminated soil was removed from the Subject Property.
- Team members and their responsibilities.
- Time of arrival/entry on-property and time of departure.
- Other personnel present at the Subject Property.
- Summary of pertinent meetings or discussions with contractor personnel or regulatory agency staff.
- Photographs documenting cleanup actions.
- Deviations from sampling plans, Site safety plans, etc.
- Levels of safety protection (PPE).
- Calibration readings for vapor field screening equipment used and equipment model.

## 8.2 Cleanup Action Report

At the completion of the redevelopment, a MTCA-compliant CAR will be prepared consistent with the requirements of WAC 173-340-515(4)(a)-(b) and submitted to Ecology to document removal of contaminated soil and groundwater and installation of engineered controls. The report will include:

- A narrative of the actions performed, the findings of those actions, and the conclusions supported by those findings;
- Summary tables of all data collected;
- Graphical depictions of pertinent data;
- Final volumes of excavated and disposed contaminated soils and supporting documentation for disposal;
- Hardcopies of all laboratory analytical reports; and
- Other information pertinent to the findings and conclusions of the cleanup action.

As required by Ecology Policy 840 all chemical data generated during the cleanup action will be submitted to Ecology's Environmental Information Management (EIM) System database as required to obtain a property-specific NFA opinion from Ecology.

## 8.3 Compliance Monitoring Reports

Compliance monitoring reports summarizing O&M activities and water quality test results for the contaminated groundwater capture system will be prepared and submitted to Ecology on a routine basis. Reports will be prepared as required by the Environmental Covenant and the groundwater compliance monitoring plan.

Compliance monitoring data will also be submitted to Ecology's EIM.

### 9.0 LIMITATIONS

Ecology previously provided an affirmative opinion that an NFA determination was likely for the subject property if the GeoEngineers CAP were to be successfully implemented. This RCAP has been prepared in a manner responsive to the comments and requirements of Ecology as presented in its September 2014 opinion letter for the GeoEngineers CAP. EPI gives full attribution to GeoEngineers for its original work in preparing the CAP for the prior owner of the Subject Property, SRO. With the permission of GeoEngineers and SRO, EPI has modified the original GeoEngineers CAP to address Ecology's comments and to provide clarity regarding BOSA's current development plan and current Ecology policies and guidance. EPI's work has been performed pursuant to the standard of care in the environmental consulting industry for similar projects.

To the extent that EPI's services have required judgment, there can be no assurance that fully definitive or desired results will be obtained, or if any results are obtained, that they will be supportive of any given course of action. EPI's services may include the application of judgment to scientific principles; to that extent, certain results of this work may be based on subjective interpretation. EPI MAKES NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

### 10.0 BIBLIOGRAPHY

- City of Bellevue. 2013. "Generalized Zoning." <a href="http://www.ci.bellevue.wa.us/pdf/IT/zoning\_fb.pdf">http://www.ci.bellevue.wa.us/pdf/IT/zoning\_fb.pdf</a>, last accessed August 24, 2016.
- City of Bellevue. 2005. "City of Bellevue's Critical Areas Update, 2005 Best Available Science Review. http://www.ci.bellevue.wa.us/pdf/PCD/CAO BAS .pdf, last accessed August 26, 2016.
- Washington State Department of Ecology (Ecology). 2014. Letter to Sterling Realty Organization Company regarding Proposed Cleanup at 10605 and 10619 NE 8<sup>th</sup> Street, Bellevue, WA 98004. 8 September.
- EMCON Northwest (EMCON). 1992. "Underground Storage Tank Closure Assessment, UNOCAL Corporation, Service Station 4511, 106th Avenue and NE 8th Street, Bellevue, Washington, Prepared by EMCON Northwest, Inc.," May 21, 1992.
- Farallon Consulting, LLC (Farallon). 2010. Former Thinker Toys Data Summary Package for the July-August 2010 Supplemental Subsurface Investigation. October.
- GeoEngineers, Inc. (GeoEngineers). 2013. Proposal, Cleanup Action Plan Preparation, SRO Bellevue Corner Property, Bellevue, Washington. 6 August.
- GeoEngineers 2014. GeoEngineers, Inc., Remedial Investigation and Feasibility Study, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, Washington, December 15, 2014.
- GeoEngineers 2014. GeoEngineers, Inc., DRAFT Cleanup Action Plan, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, Washington, April 10, 2014.
- GeoEngineers 2015. GeoEngineers, Inc., Cleanup Action Plan, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, Washington, July 7, 2015.
- Hart Crowser, 2011. "Scope of Work and Rationale for Additional Environmental Services, Thinker Toys Site, 10610 NE 8th Street, Bellevue, Washington, 10-5-1100-075, Prepared by Hart Crowser, Inc.," June 29, 2011.
- King County iMAP, 2011. Current Appraisal Data for the Property, Adjoining Properties, and Surrounding Parcels. http://www.kingcounty.gov/operations/gis/Maps/iMAP.aspx, Accessed November 2012.
- Pacific NW Geologic Mapping, 2007. Geologic Map of King County, Washington. D.B. Booth, K.A. Troost, and A.P. Wisher, Compilers. Prepared by the Pacific Northwest Center for Geologic Mapping Studies, March.

- Sound Earth Strategies, Inc. (SES), 2011. "Remedial Investigation And Focused Feasibility Study Report, Former Thinker Toys Property, 10610 Northeast 8th Street, Bellevue, Washington 98004. Prepared by Sound Earth Strategies, Inc., April 8, 2011.
- Sweet-Edwards/EMCON Inc., 1990. "Preliminary Environmental Site Assessment, UNOCAL Service Station 4511, Bellevue, Washington, Prepared by Sweet-Edwards/EMCON Northwest, Inc.," September 5, 1990.
- Terra Associates, 2008. "Limited Phase II ESA, for SRO Site located at the Southeast Corner of Northeast 8th Street and 106th Avenue Northeast, Bellevue, Washington," Prepared by Terra Associates, Inc., July 17, 2008.
- URS, 2000. "Phase II Soil and Groundwater Investigation: Optimer Property, 10605 NE 8th Street, Bellevue, Washington, Prepared by URS Corporation (formerly URS-Greiner-Woodward Clyde)," April 13, 2000.
- URS, 2008. "Limited Phase II Site Investigation, SRO Bellevue Corner Property, NE 8th Street and 106th Avenue NE, Bellevue, Washington, Prepared by URS Corporation," October 10, 2008.
- URS, 2009, "Additional Site Investigation, SRO Bellevue Corner Property, NE 8th Street and 106th Avenue NE, Bellevue, Washington, Prepared by URS Corporation," March 11, 2009.
- URS, 2011. "Data transmittal from Data Gap Investigation, SRO Bellevue Corner Property, Southeast Corner of NE 8th Street & 106th Ave NE, Bellevue, Washington. Prepared by URS Corporation," 2011.
- Washington State Department of Ecology, 2013. Conversation between GeoEngineers, and Dean Yasuda Washington State Department of Ecology, February 2013.
- Washington State Department of Ecology, 2009. "Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Publication No. 09-09-47 (Draft), Prepared by Washington State Department of Ecology," October 2009.
- Washington State Department of Ecology, 1992. "Letter to Mr. Leigh Carlson, Re: Unocal #4511 Final Cleanup Status, Prepared by Annette Petrie, Leaking UST Inspector, Toxics Cleanup Program, Washington State Department of Ecology," July 2, 1992.

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## Project Roles and Responsibilities Revised Cleanup Action Plan

# **Bellevue Corner Property**

## 10605, 10619, and 10635 Northeast 8th Street, Bellevue, Washington

Organization	Roles / Responsibilities
Sterling Realty Organization	Former Property Owner. Previous Voluntary Cleanup Program participant.
GeoEngineers, Inc.	Environmental consultant for Sterline Realty Organization.
BOSA Development Washington, Inc.	Current property owner and developer.
Environmental Partners, Inc.	Environmental consultant for BOSA Development. Responsible for preparing Revised Cleanup Action Plan. On behalf of BOSA Development, will observe implementation of the Revised Cleanup Action Plan.

### Monitoring Well Groundwater Elevation Data, 2008 - 2011 Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

	Well	Top of						Gre	oundwater D	epth (feet, b	gs)							Ground	dwater Eleva	ition (feet, NA	VD 88)			
Monitoring Well	Screen Interval (feet, bgs)	Casing Elevation (feet above datum)	Date Installed	Well Screen Elevation (feet above datum)	6/26/08	7/7/08	9/10/08	11/21/08	3/16/10	3/17/10	5/3/10	8/23/10	10/19/11	10/21/11	6/26/08	7/7/08	9/10/08	11/21/08	3/16/10	3/17/10	5/3/10	8/23/10	10/19/11	10/21/11
URS-MW-1	20-30	157.87	8/25/2008	137.87 - 127.87	NI	NI	26.41	27.21	22.50	22.66	22.49	22.95	NM	24.53	NM	NM	131.46	130.66	135.37	135.21	135.38	134.92	NM	133.34
URS-MW-2	20-30	160.22	8/27/2008	140.22 - 130.22	NI	NI	Dry	Dry	24.64	25.05	24.45	25.89	NM	28.61	NM	NM	Dry	Dry	135.58	135.17	135.77	134.33	NM	131.61
URS-MW-3	20-30	153.98	8/26/2008	133.98 - 123.98	NI	NI	27.36	28.75	22.28	22.54	22.40	23.24	NM	25.52	NM	NM	126.62	125.23	131.70	131.44	131.58	NM	NM	128.46
URS-MW-4	20-30	152.99	8/26/2008	132.99 - 122.99	NI	NI	Dry	Dry	NM	29.87	29.85	30.08	NM	29.89	NM	NM	Dry	Dry	NM	123.12	123.14	122.91	NM	123.10
URS-MW-5 <sup>3</sup>	25-35	152.13	11/18/2008	117.13 - 127.13	NI	NI	NI	Dry	Dry	Dry	NM	Dry	NM	34.66	NI	NI	NI	Dry	Dry	Dry	NM	Dry	NM	117.47
URS-MW-6 <sup>3</sup>	34-44	152.67	11/18/2008	108.67 - 118.67	NI	NI	NI	Dry	Dry	Dry	NM	Dry	42.58	42.41	NI	NI	NI	Dry	Dry	Dry	NM	Dry	110.09	110.26
URS-MW-7 <sup>3</sup>	26-36	152.91	11/18/2008	116.91 - 126.91	NI	NI	NI	Dry	Dry	Dry	NM	Dry	34.78	35.27	NI	NI	NI	Dry	Dry	Dry	NM	Dry	118.13	117.64
URS-MW-8	70-80	152.35	10/12/2008	82.35 - 72.35	NI	NI	NI	NM	NM	NM	NM	NM	68.62	68.40	NM	NM	NM	NM	NM	NM	NM	NM	83.73	83.95
B1/MW-1	70-90	169.63	6/22/2008	99.63 - 79.63	NM	NM	NM	NM	90.77	92.81	NM	NM	NM	85.49	NM	NM	NM	NM	78.86	76.82	NM	NM	NM	84.14
B2/MW-2	70-90	159.02	6/23/2008	89.02 - 69.02	74.30	74.62	NM	74.95	75.90	75.97	75.69	75.50	NM	73.15	84.72	84.40	NM	84.07	83.12	83.05	83.33	83.52	NM	85.87
B3/MW-3	20-30	158.89	6/24/2008	138.89 - 128.89	23.89	23.93	24.68	28.93	23.45	23.40	23.43	23.70	NM	23.79	135	134.96	134.21	129.96	135.44	135.49	135.46	135.19	NM	135.10
B4/MW-4	70-90	157.06	6/24/2008	87.06-67.06	82.31	82.29	NM	79.30	76.58	76.58	76.60	76.61	NM	75.12	123.14	122.91	NM	77.76	80.48	80.48	80.46	80.45	NM	81.94
MW-17 <sup>3</sup>	20-35	152.93	8/9/2010	133.00-118.00	NI	NI	NI	NI	NI	NI	NI	29.30	NM	29.30	NI	NI	NI	NI	NI	NI	NI	123.63	NM	123.63
MW-18 <sup>3</sup>	12.5-27.5	154.49	8/9/2010	142.20-127.20	NI	NI	NI	NI	NI	NI	NI	20.71	NM	20.98	NI	NI	NI	NI	NI	NI	NI	133.78	NM	133.51
MW-19	10-30	156.31	8/5/2010	146.31-126.31	NI	NI	NI	NI	NI	NI	NI	27.21	NM	29.18	NM	NM	NM	NM	NM	NM	NM	129.10	NM	127.13
MW-20	15-30	152.63	8/6/2010	137.63 - 122.63	NI	NI	NI	NI	NI	NI	NI	21.93	NM	23.40	NM	NM	NM	NM	NM	NM	NM	130.70	NM	129.23
Data Source	Farallon <sup>1</sup>	Farallon <sup>1</sup>		Farallon <sup>1</sup>	Farallon <sup>1</sup>	Farallon <sup>1</sup>	URS <sup>2</sup>	URS <sup>2</sup>	URS <sup>2</sup>	URS <sup>2</sup>	Farallon <sup>1</sup>	Farallon <sup>1</sup>	URS <sup>2</sup>	URS <sup>2</sup>	Farallon <sup>1</sup>	Farallon <sup>1</sup>	URS <sup>2</sup>	URS <sup>2</sup>	URS <sup>2</sup>	URS <sup>2</sup>	Farallon <sup>1</sup>	Farallon <sup>1</sup>	URS <sup>2</sup>	URS <sup>2</sup>

### Notes:

<sup>1</sup>As reported (SES, 2011)

<sup>2</sup>As reported (URS, 2011)

<sup>3</sup>Off-Property location

NM = not measured

NI = Monitoring well not yet installed

feet bgs = feet below ground surface

feet NAVD 88 = feet above datum Vertical datum based on City of Bellevue - NAVD 88

Monitoring wells labeled "URS" were completed by URS Corporation.

Monitoring wells B1/MW-1, B2/MW-2, B3/MW-3, and B4/MW-4 were completed by Terra Associates.

Monitoring wells MW-17 through MW-20 were completed by Farallon.

May 3, 2010, groundwater elevations in perched zone are shown on Figure 5.

### 1990 Soil and Groundwater Data, Preliminary Environmental Site Assessment, Unocal Station Number 4511

# Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

Soil Quality D	ata <sup>1</sup>								
Boring Number	Sample Number	Depth Collected	Benzene <sup>2</sup>	Toluene <sup>2</sup>	Ethyl- Benzene <sup>2</sup>	Total Xylenes <sup>2</sup>	TPH <sup>3</sup>	Purgeable Halogenated Volatile Organics <sup>4</sup>	Sample Jar Headspace Organic Vapor Concentrations <sup>5</sup>
		(ft bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm)
MW-1	MW-1, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	7.5	NA	25.2
MW-2	MW-2, S-1	2.5	< 0.050	< 0.050	< 0.050	0.090	810	NA	28
MW-2	MW-2, S-2	7.5	< 0.050	< 0.050	< 0.050	0.240	203	NA	20
MW-3	MW-3, S-1	2.5	< 0.050	< 0.050	< 0.050	0.900	87.9	NA	22
MW-4	MW-4, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	65.3	NA	169
MW-5	MW-5, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	95.0	< 0.05	255
мтс	A Method A Cle	eaunup Level	0.03	7	6	9	2,000	See Table 5	

Boring Well/ Number	Sample Number	Benzene <sup>7</sup>	Toluene <sup>7</sup>	Ethyl- Benzene <sup>7</sup>	Total Xylenes <sup>7</sup>	TPH <sup>3</sup>	Well Headspace Organic Vapor Concentrations <sup>5</sup>
Number		(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(ppm)
MW-1	U4511-79-1	< 1	< 1	< 1	< 1	< 1,000	NA <sup>8</sup>
MW-2	U4511-79-2	< 1	< 1	< 1	< 1	< 1,000	
MW-3	U4511-79-3	3	< 1	15	14	< 1,000	
MW-4	U4511-79-4	< 1	< 1	< 1	< 1	< 1,000	
MW-5	Not sampled	-	_		-	-	
MTCA	Method A Cleaunup Level	5	1,000	700	1,000	500	-

#### Notes:

ft bgs = feet below the ground surface

mg/kg = milligrams per kilogram

MTCA = Model Toxics Cleanup Act

NA = Not Analyzed

ppm = parts per million

μg/L = micrograms per liter

**Bolded** value indicates analyte detected at the listed concentration.



<sup>&</sup>lt;sup>1</sup>Soil samples collected July 12, 13, and 17, 1990 by Sweet-Edwards/EMCON, Inc. Analyses by Sound Analytical, Tacoma, Washington.

<sup>&</sup>lt;sup>2</sup>Analysis by EPA Method 8020.

<sup>&</sup>lt;sup>3</sup>TPH = Total Petroleum Hydrocarbons, EPA Method 418.1.

<sup>&</sup>lt;sup>4</sup>Analysis by EPA Method 8010.

<sup>&</sup>lt;sup>5</sup>Volatile organic vapor concentrations measured with a photoionization detector (Photovac MP-100 microtip) calibrated to 100 ppm isobutylene.

Background reading = < 1 ppm.

<sup>&</sup>lt;sup>6</sup>Water samples collected July 31, 1990 by Sweet-Edwards/EMCON, Inc. Analyses by Sound Analytical, Tacoma, Washington.

<sup>&</sup>lt;sup>7</sup>Analysis by EPA Method 8020.

<sup>&</sup>lt;sup>8</sup>Due to high water vapor (moisture) concentrations in the wellheads, PID measurements were not obtained.

<sup>&</sup>lt; = Analyte Not Detected at or above the Method Reporting Limit

# 1991-1992 Soil Analytical Data, Underground Storage Tank Closure Assessment, Unocal Station Number 4511

# Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

Sample ID	Date	Benzene <sup>1</sup>	Toluene <sup>1</sup>	Ethyl-	Total	TPH as	TPH as	TPH as	TPH <sup>4</sup>	Total	Total	Benzo(a)	PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Acetone	Methylene Chloride	Sampling Location
Sample ID	Collected			benzene*	Xylenes*	Gasoline	Diesel	Otner		Lead	PCBs <sup>1</sup>	pyrene		•	•	•	(VOCs)	9	•	•	•	Sampling Location
OTW NA Octob	C /40 /4004	40.05	101	101	404	4.5	1				ı	(mg/kg)	1	1	I	1	T	1	1	1	1	N II was to all sussination
GTW-N1 Comp.	6/19/1991	< 0.05	< 0.1 < 0.1	< 0.1	< 0.1	< 5 < 5			-	< 3				-		-	-		-	-		N wall gas tank excavation
GTW-S1 Comp. GTW-E1 Comp.	6/19/1991 6/19/1991	< 0.05 < 0.05	0.3	< 0.1 <b>0.5</b>	0.3 4.7	101				< 3									-			S wall gas tank excavation  E wall gas tank excavation
GTW-E1 Comp.	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	<b>101</b>				< 3												W wall gas tank excavation
GTF-TA	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5				< 3												below east tank fill
GTF-TB	6/19/1991	< 0.05	0.2	< 0.1	0.2	< 5				< 3			<del>-</del>							<del>-</del> -		below east tank fill
ET-1	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5				< 3												E product line trench
ST-1	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5				< 3												S product line trench
NPI-1	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5				< 3												below N pump island
NUHOW-1	6/20/1991					< 10	< 10	17,400	35,400													N wall HO/WO tank excavation
EUHOW-1	6/20/1991	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	< 10	< 10	< 40	26													E wall HO/WO tank excavation
W/SUHOW-1	6/20/1991					< 10	< 10	< 40	90													Comp. W,S walls HO/WO exc.
UOF-1 <sup>10</sup>	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	< 10	< 40	< 25		< 1								_			below WO tank fill
				-						-			+							-		
UOF-2 <sup>10</sup>	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	< 10	< 40	90		< 1					-						below WO tank fill - duplicate
HOF-1 <sup>10</sup>	6/20/1991	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	< 10	< 10	< 40	< 25	-		-		-	-							below HO tank fill
DW-1 <sup>10</sup>	6/20/1991	< 0.05	< 0.05	0.12	2.08	1,940	< 10	< 40	1,260		< 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	W wall dry well excavation
DW-2 <sup>10</sup>	6/20/1991	< 0.05	< 0.05	< 0.05	1.45	2,050	< 10	< 40	1,690		< 1		< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	base of dry well excavation
GTW-E2A	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5			< 25	-	_	-	-	-		-				-		N end of E wall g.t. excavation
GTW-E2B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5			< 25	-	_	-	-	-		-				-		S end of E wall g.t. excavation
TP-1A	6/26/1991	<0.005	<0.005	<0.005	0.0072	< 10	< 10	< 40	< 25		_	_	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.082	0.022	test pit S of dry well excav.
TP-1B	6/26/1991	<0.005	<0.005	<0.005	<0.005	< 10	< 10	< 40	< 25		_	_	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.058	0.023	test pit S of dry well excav.
TP-2A	6/26/1991	<0.005	<0.005	<0.005	<0.005	< 10	< 10	< 40	< 25		_	_	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.061	0.019	test pit SW of dry well excav.
TP-3A	6/26/1991	< 0.05	< 0.1	< 0.1	0.1	17			< 25													near SW corner of building
TP-3B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5			32								1		_		_	near SW corner of building
TP-4A	6/26/1991	< 0.05	0.3	6.3	30.7	740	-	_	363		_					-			_	-	-	W end of former tank complex
TP-5A	6/26/1991	< 0.05	< 0.1	< 0.1	0.3	< 5	_	_	< 25		_	-		-	-	_			_	-		N of NW corner of building
TP-5B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	-	-	< 25	-	-	-	-	-		-				-		N of NW corner of building
TP-6A	6/26/1991	< 0.05	< 0.1	0.3	3.0	25	-	-	86	-	_					-			-	-		between N pump islands
TP-6B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5		-	74								1					between N pump islands
U/D-SS-1 <sup>10</sup>	6/26/1991	< 0.014	< 0.014	< 0.014	0.029	77	< 10	154	431	-	< 1		< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.136	0.055	stockpile sample
SS-1C	6/27/1991	0.20	7.8	5.2	55.4	996			616	6												stockpile sample
SS-2C	6/27/1991	< 0.05	0.4	0.3	10	174			307	12										-		stockpile sample
STOCKPILE #1	8/8/1991	< 0.05	< 0.05	< 0.05	0.06	< 1	_	_	-	7	_					-			_	-	-	stockpile sample
STOCKPILE #2	8/8/1991	0.10	0.63	2.16	18.7	406	-	_	-	5	_					-			-	-	-	stockpile sample
STOCKPILE #3	8/8/1991	< 0.05	< 0.05	< 0.05	0.20	5	-	-	-	5	_					-			-	-		stockpile sample
STOCKPILE #4	8/8/1991	5.08	110	20.2	239	3,260		-	-	6							1					stockpile sample
STOCKPILE #5	8/8/1991	< 0.05	< 0.05	0.16	0.61	130		-		7							1					stockpile sample
STOCKPILE #6	8/8/1991	0.24	4.07	4.50	33.1	436		-	-	8									-			stockpile sample
STOCKPILE #7	8/8/1991	< 0.05	2.35	3.56	35.9	1,350	-	-	-	8	_					-			-	-	-	stockpile sample
STOCKPILE #8	8/8/1991	< 0.05	< 0.05	< 0.05	0.06	23				5									-			stockpile sample
HYD-1	8/16/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25				< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05		base of hoist #1 (alignment)
HYD-2	8/16/1991	< 0.5	< 0.5	0.8	9.0	394	< 10	261	495				< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10		sidewall of hoist excavation
HYD-3A	8/19/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25				< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05		below E hoist (alignment)
HYD-3B	8/19/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25				< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05		below E hoist (alignment)
HYD-4	8/19/1991	1.44	18.8	5.21	23.8	162	< 10	26,700	61,200	-			< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	below middle hoist
HYD-4B	8/19/1991	< 0.5	< 0.5	1.0	8.6	899	< 10	326	1,450				< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10	< 5	below middle hoist
HYD-6	8/19/1991	< 0.5	4.9	4.4	34	6,670	< 10	1,030	6,460				< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10		below west hoist
HYD-6B	8/19/1991	< 0.05	< 0.05	0.28	2.76	115	< 10	238	377				< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	below west hoist
MTCA Cleanup	Levels	0.03 (A)	7 (A)	6 (A)	9 (A)	30 (A)	2,000 (A)	2,000 (A)	2,000 (A)	250 (A)	1.0 (A)	0.1 (A)	0.05 (A)	0.03 (A)	0.076 (B)	0.48 (B)	0.037 (B)	0.0023 (B)	0.0012 (B)	29 (B)	0.02 (A)	<del></del>



Sample ID	Date	Benzene <sup>1</sup>	Toluene <sup>1</sup>	Ethyl-	Total	TPH as	TPH as	TPH as	TPH⁴	Total	Total	Benzo(a)	PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Acetone	Methylene Chloride	Compling Location
Sample ID	Collected			benzene	Xylenes*	Gasoline <sup>2</sup>	Diesel	Other		Lead	PCBs'	pyrene					(VOCs)	)				- Sampling Location
												(mg/kg)										
MW-11-12.5	8/27/1991	< 0.05	< 0.05	2.03	6.31	216	-	-	-		-		-									sample from boring MW-11
NPUMPE <sup>6</sup>	2/17/1992	< 0.05	< 0.05	< 0.05	0.06	1.0					-								-			E end of N pump island
NPUMPW <sup>6</sup>	2/17/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1		-			-	-	-				-					W end of N pump island
0H20	2/17/1992	-	-	-		< 10	< 10	< 40		-	-	-	-				-	-				below oil/water separator
SS-2	2/17/1992	< 0.05	0.43	0.53	4.84	202																stockpile sample
SS-3	2/17/1992	0.19	2.63	3.91	20.6	541					-											stockpile sample
SS-4	2/17/1992	0.26	2.90	3.71	20.9	481															-	stockpile sample
SS-5	2/17/1992	1.13	11.0	7.90	26.0	900					-		-									stockpile sample
WPUMPN <sup>6</sup>	2/18/1992	< 0.05	< 0.05	< 0.05	0.23	3	-		-		-		-									N end of W pump island
WPUMPS <sup>6</sup>	2/18/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1					-						-					S end of W pump island
WPUMPE <sup>6</sup>	2/24/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1		-		-	-		-				-					base of W pump island excav.
WPUMPEW <sup>6</sup>	2/24/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1		-	-		-	-	-				-					E wall of W pump island excav.
BH0ISE <sup>6</sup>	2/28/1992			-	-	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	-		-											base of hoist excavation
SHOISW <sup>6</sup>	2/28/1992	-	-	-	_	ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>	-		-	-	-				-		-	-	-	S wall of hoist excavation
WHOISB <sup>6</sup>	3/2/1992		-	-		ND <sup>11</sup>	ND <sup>11</sup>	ND <sup>11</sup>			-											W wall of hoist excavation
SPILE1	3/2/1992	-	-	-	_	ND <sup>11</sup>	ND <sup>11</sup>	120	-		< 1	0.04	-				-		-	-	-	stockpile sample
SPILE2	3/2/1992		-	-	-	ND <sup>11</sup>	ND <sup>11</sup>	40	-		< 1	< 0.01	-				-		-			stockpile sample
SPILE3	3/2/1992			-		ND <sup>11</sup>	ND <sup>11</sup>	60			< 1	< 0.01	-				-					stockpile sample
BASE-0421-01 <sup>6</sup>	4/21/1992	-	-	-	_		< 25	< 100	-	-	-	-	-	-	_	-	-	_	-		-	base of dry well excavation
WWALL13-0421-02 <sup>6</sup>	4/21/1992		-	-			< 25	< 100	-	-		-	-				-	-	-			W wall of dry well excavation
WWALL17-0421-03 <sup>6</sup>	4/21/1992		-	-			< 25	< 100					-	-			-		-			W wall of dry well excavation
NWALL-0421-04 <sup>6</sup>	4/21/1992						< 25	< 100		-			-				-					N wall of dry well excavation
MTCA Cleanup L	evels	0.03 (A)	7 (A)	6 (A)	9 (A)	30 (A)	2,000 (A)	2,000 (A)	2,000 (A)	250 (A)	1.0 (A)	0.1 (A)	0.05 (A)	0.03 (A)	0.076 (B)	0.48 (B)	0.037 (B)	0.0023 (B)	0.0012 (B)	29 (B)	0.02 (A)	

< = Analyte not detected at or above method reporting limit

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = MTCA Method B cleanup for the protection of groundwater. See Table 8 for information on basis for cleanup levels.

DCA = dichloroethane

DCE = dichloroethene

PCE = perchloroethene (tetrachloroethene)

TCE = trichloroethene

**Bolded** value indicates analyte detected at the listed concentration.

Shaded value represents concentration that exceeded the MTCA cleanup level.



<sup>&</sup>lt;sup>1</sup>Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 5030/8020 or EPA Method 8240 (low level)

<sup>&</sup>lt;sup>2</sup>Volatile fuel hydrocarbons (TPH as gasoline) by EPA Method 5030/8015 Modified

 $<sup>^3</sup>$ Semi volatile fuel hydrocarbons (TPH as diesel, other) by EPA Method 3550/8015 Modified

<sup>&</sup>lt;sup>4</sup>Total Petroleum Hydrocarbons (TPH) by EPA Method 418.1

<sup>&</sup>lt;sup>5</sup>Total lead by EPA Method 7420

<sup>&</sup>lt;sup>6</sup>Confirmation soil sample collected following soil excavation

<sup>&</sup>lt;sup>7</sup>Total Polychlorinated Biphenyls (PCBs) by EPA Methods 3540/8080

<sup>&</sup>lt;sup>8</sup>Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Methods 3540/8310. Additional low level detections of several PAH analytes for samples SPILE 1 and SPILE 3. See lab reports for additional information.

<sup>&</sup>lt;sup>9</sup>Volatile Organic Compounds (VOCs) by EPA Method 8240. Additional low level detections of several VOC analytes for sample HYD-4. See lab reports for additional information.

 $<sup>^{10}</sup>$ Sample analyzed for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

<sup>&</sup>lt;sup>11</sup>Based on our review of the 1992 laboratory data report obtained from Ecology on-line document repository for the Site, data sheets were not available for samples shown as Non Detect (ND) in this table. ND results are from the original data table in EMCON's 1992 report.

<sup>-- =</sup> analyte not tested

### **Chemical Analytical Data for Soil Samples**

Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

					VOCs (r	ng/kg)¹	Gasoline-range	Diesel-range	Oil-range	Exca	vation
Sample ID	Sample Collected By	Sample Date	Depth (feet bgs)	Elevation (feet NAVD 88)	PCE	TCE	Petroleum Hydrocarbons (mg/kg) <sup>2</sup>	Petroleum Hydrocarbons (mg/kg) <sup>3</sup>	Petroleum Hydrocarbons (mg/kg) <sup>3</sup>	Lift	Grid Cell
oil samples collected		•	(1000 080)				, ···· <i>o/</i> ·· <i>o/</i>	\a/ 1'6 <i>l</i>	l (9/ 1.09/		
URSSB-OP1		3/11/2000	6	148			< 5.6	< 28	< 56	3	H4
		3/11/2000	18	136	< 0.056	< 0.056	< 5.6	< 28	< 56	5	H4
URSSB-0P2	_	3/11/2000	12	142	< 0.054	< 0.054	< 5.4	< 27	< 56	4	H6
URSSB-OP3		3/11/2000 3/11/2000	6 18	148 136			< 5.9 < 5.6	< 29 < 28	< 59 < 56	3 5	G3 G3
URSSB-0P4	URS	3/11/2000	8	151			< 5.4	< 27	< 54	2	A3
URSSB-OP5	1	3/11/2000	12	146	< 0.054	< 0.054	< 5.4	< 27	< 54	3	B3
URSSB-OP6		3/11/2000	20	140	< 0.054	< 0.054	< 5.4	< 27	< 54	5	A6
URSSB-OP7		3/11/2000	16	142			< 5.4	< 28	88	4	A2
URSSB-OP8		3/11/2000	8	149			< 5.6	< 28	< 56	3	D3
		3/11/2000	18	139			< 5.5	< 28	< 55	5	D4
oil samples collected	in 2008 (Terra, 20	6/23/2008)	5	155			<22	<56	<110	2	A5
B2/MW-2	Terra	6/23/2008	15	145			<22	<55	<110	4	A5
<i>52</i> / 2	Associates	6/23/2008	25	135			<22	<54	<110	6	A5
LIDO MANA	LIDO	8/25/2008	15	143	< 0.02		<10			4	A2
URS-MW-1	URS	8/25/2008	27.5	130.5	0.41		<10			6	A2
URS-MW-2	URS	8/27/2008	15	144	< 0.02		<10			4	A7
3 <b>3</b> 2	51.0	8/27/2008	27.5	131.5	< 0.02		<10			6	A7
URS-MW-3	URS	8/26/2008	17.5	136.5	< 0.02		<10			5	G5
	+	8/26/2008	27.5	126.5	< 0.02		<10			7	G5
URS-MW-4	URS	8/26/2008	12.5 30	141.5 124	0.17 0.12	-	<10			4 8	H9 H9
	+	8/26/2008 11/18/2008	24	124 129	<b>0.12</b> < 0.02		<10 <10			N/A	N/A
URS-MW-5 <sup>4</sup>	URS	11/18/2008	31.5	121.5	< 0.02	-	<10			N/A	N/A
Á		11/18/2008	21.5	131.5	< 0.02		<10	<del></del>		N/A	N/A
URS-MW-6 <sup>4</sup>	URS	11/18/2008	31.5	121.5	< 0.02		<10			N/A	N/A
LIDO MAN 74	UDC	11/18/2008	26.5	126.5	< 0.02		<10	-		N/A	N/A
URS-MW-7 <sup>4</sup>	URS	11/18/2008	31.5	121.5	< 0.02		<10			N/A	N/A
		8/25/2008	10	148	< 0.02		<10			3	B5
URS-SB-1	URS	8/25/2008	30	128	0.22		<10	-		7	B5
		8/25/2008	45	113	0.05	-	<10			10	B5
		8/25/2008	75	83	< 0.02		<10			16	B5
URS-SB-2	URS	8/25/2008	10	147	< 0.02 <b>0.07</b>		<10			7	D5 D5
		8/25/2008 8/26/2008	27.5 17.5	129.5 137.5	0.07		<10 <10			5	F2/F3
URS-SB-3	URS	8/26/2008	22.5	132.5	0.03		<10	<del></del>		6	F2/F3
		8/27/2008	17.5	150.5	< 0.02		<10	<del></del>		2	N/A
URS-SB-4	URS	8/27/2008	30	138	< 0.02		<10			5	N/A
		11/19/2008	21.5	134.5	< 0.02					6	N/A
URS-SB-8	URS	11/19/2008	29	127	< 0.02					7	N/A
		11/19/2008	41.5	114.5	< 0.02 U		-	-		10	N/A
oil samples collected	in 2010 (Farallon,						T		T		1
		8/9/2010	10.5	143.5	<0.025	<0.03				4	N/A
		8/9/2010 8/9/2010	14 19	140 135	<0.025 <0.025	<0.03 <0.03				5 6	N/A
MW-17 <sup>4</sup>	Farallon	8/9/2010	24	130	<0.025	<0.03		<del></del>		7	N/A N/A
IVIVV-11	Taranon	8/9/2010	29	125	<0.025	<0.03		<del>-</del>		8	N/A
		8/9/2010	34.5	119.5	0.023	<0.03		<del></del>		9	N/A
		8/9/2010	39	115	<0.025	<0.03				10	N/A
		8/9/2010	10	145	<0.025	<0.03	-	-		4	N/A
MW-18 <sup>4</sup>	Farallon	8/9/2010	14	141	<0.025	<0.03				4	N/A
IAIAA-TQ	raidiiUN	8/9/2010	19	136	<0.025	<0.03				5	N/A
		8/9/2010	24	131	<0.025	<0.03				6	N/A
		8/5/2010	4.5	152.5	<0.025	<0.03				2	D3
MW-19	Farallon	8/5/2010	9	148	<0.025	<0.03				3	D3
		8/5/2010	24	133	<0.025	<0.03	<2	<50	<250	6 7	D3
	+	8/5/2010 8/6/2010	29 4.5	128 148.5	<0.025 <0.025	<0.03 <0.03				3	D3 G2
		8/6/2010	10	148.5	<0.025	<0.03				4	G2 G2
		8/6/2010	14.5	138.5	<0.025	<0.03	-			5	G2
MW-20	Farallon	8/6/2010	19.5	133.5	<0.025	<0.03				6	G2
		8/6/2010	25	128	0.026	<0.03	<2	-		7	G2
		8/6/2010	29.5	123.5	<0.025	<0.03				8	G2
		8/5/2010	1	158	<0.025	<0.03	6			1	A3
		8/5/2010	11	148	<0.025	<0.03				3	A3
SRO-1	Farallon	8/5/2010	16	143	<0.025	<0.03				4	A3
		8/5/2010	20	139	0.28	<0.03	<2	<50	<250	5	A3
		8/5/2010 8/5/2010	22	137	0.43	<0.03	<2	<50	<250	5 6	A3
	+	8/5/2010 8/5/2010	26 1	133 158	<0.025	<0.03 <0.03	3	67	760	1	A3 A4
		8/5/2010	5.5	153.5	<0.025	<0.03				2	A4 A4
		8/5/2010	9	150	<0.025	<0.03	-			3	A4
		., .,								4	A4
SR0-2	Farallon	8/5/2010	14	145	< 0.025	< 0.03	-			-	
SRO-2	Farallon	8/5/2010 8/5/2010	14 19	145 140	<0.025 <0.025	<0.03		-		5	A4
SR0-2	Farallon										A4 A4



					VOCs (n	ng/kg) <sup>±</sup>	Gasoline-range	Diesel-range	Oil-range	Exca	vation
	Camarila		B 44	Floredion			Petroleum	Petroleum	Petroleum		Grid
Sample ID	Sample Collected By	Sample Date	Depth (feet bgs)	Elevation (feet NAVD 88)	PCE	TCE	Hydrocarbons (mg/kg) <sup>2</sup>	Hydrocarbons (mg/kg) <sup>3</sup>	Hydrocarbons (mg/kg) <sup>3</sup>	Lift	Cell
Sample ID	Collected By	8/5/2010	(reet bgs)	157	<0.025	<0.03	(mg/ kg) 610	(mg/ kg) 140	(mg/ kg) 270	1	C4
	-	8/5/2010	3	155	<0.025	<0.03	<2	<50	<250	2	C4
		8/5/2010	7	151	<0.025	<0.03				2	C4
		8/5/2010	13	145	<0.025	<0.03				4	C4
SRO-3	Farallon	8/5/2010	18	140	<0.025	<0.03				5	C4
ONO O	raranon	8/5/2010	21	137	0.057	<0.03	<2	<50	<250	5	C4
		8/5/2010	22.5	135.5	0.06	<0.03				5	C4
		8/5/2010	27	131	0.00	<0.03				6	C4
		8/5/2010	30	128	0.16	<0.03				7	C4
		8/6/2010	6	148	<0.025	<0.03				3	G3
		8/6/2010	12	142	<0.025	<0.03				4	G3
		8/6/2010	17	137	<0.025	<0.03				5	G3
SRO-4	Farallon	8/6/2010	22	132	<0.025	<0.03	<2	<50	<250	6	G3
	-	8/6/2010	27	127	<0.025	<0.03				7	G3
		8/6/2010	30	124	0.038	<0.03				8	G3
		8/6/2010	3	152	<0.025	<0.03				2	F4
	l l	8/6/2010	6	149	<0.025	<0.03				3	F4
	l l	8/6/2010	11	144	<0.025	<0.03	7	<50	<250	4	F4
SRO-5	Farallon	8/6/2010	16	139	<0.025	<0.03				5	F4
		8/6/2010	21	134	<0.025	<0.03				6	F4
		8/6/2010	30	125	<0.025	<0.03				8	F4
		8/6/2010	5.2	148.8	<0.025	<0.03	<2	<50	<250	3	G4
	<b> </b>	8/6/2010	12	142	<0.025	<0.03	<2	<50	<250	4	G4
	<b> </b>	8/6/2010	15	139	<0.025	<0.03	<2	<50	610	5	G4
SRO-6	Farallon	8/6/2010	17	137	<0.025	<0.03	<2	70	870	5	G4
		8/6/2010	20.5	133.5	<0.025	<0.03	<2	<50	<250	6	G4
		8/6/2010	25	129	<0.025	<0.03			-	7	G4
	<del> </del>	8/6/2010	30	124	<0.025	<0.03				8	G4
		8/6/2010	9	147	<0.025	<0.03	1,100	<50	<250	3	E3
	<del> </del>	8/6/2010	12.5	143.5	<0.025	<0.03	<2	<50	<250	4	E3
		8/6/2010	19	137	<0.025	<0.03				5	E3
SR0-7	Farallon	8/6/2010	22.5	133.5	<0.025	<0.03	<2			6	E3
		8/6/2010	26	130	0.046	<0.03				7	E3
		8/6/2010	30	126	0.08	<0.03				7	E3
		8/6/2010	4	152	<0.025	<0.03				2	C2
		8/6/2010	8	148	<0.025	<0.03				3	C2
		8/6/2010	13.5	142.5	<0.625	<0.03	4			4	C2
		8/6/2010	14.5	141.5	<0.625	<0.03	<2.0	<50	<250	4	C2
SRO-8	Farallon	8/6/2010	18	138	<0.025	<0.03	<2.0	-	-200	5	C2
55		8/6/2010	22	134	<0.025	<0.03	3	<50	<250	6	C2
		8/6/2010	23.5	132.5	0.15	<0.03				6	C2
		8/6/2010	26	130	0.16	<0.03				7	C2
		8/6/2010	29	127	0.19	<0.03				7	C2
		8/9/2010	3	155	<0.025	<0.03	<2			2	B3/C3
	-	8/9/2010	8	150	<0.025	<0.03	<2			3	B3/C3
	-	8/9/2010	13	145	<0.625	<0.03				4	B3/C3
SRO-9	Farallon	8/9/2010	17.5	140.5	<0.025	<0.03	<2			4	B3/C3
		8/9/2010	21.5	136.5	<0.025	<0.03	<2			5	B3/C3
	Ī	8/9/2010	26	132	0.037	<0.03	<2			6	B3/C3
	l l	8/9/2010	29.5	128.5	0.057	<0.03	<2			7	B3/C3
		8/9/2010	1	153	<0.025	<0.03				2	G5/G6
		8/9/2010	7	147	<0.025	<0.03				3	G5/G6
		8/9/2010	10	144	<0.025	<0.03	<2			4	G5/G6
SRO-10	Farallon	8/9/2010	16	138	<0.025	<0.03				5	G5/G6
		8/9/2010	21	133	<0.025	<0.03	<2			6	G5/G6
	<b> </b>	8/9/2010	23.5	130.5	<0.025	<0.03				6	G5/G6
	<u> </u>	8/9/2010	29	125	<0.025	<0.03	<2			8	G5/G6
		8/9/2010	1	153	<0.025	<0.03				2	G6
	<u> </u>	8/9/2010	5	149	<0.025	<0.03				3	G6
	<b> </b>	8/9/2010	10	144	<0.025	<0.03	<2			4	G6
SRO-11	Farallon	8/9/2010	15	139	<0.025	<0.03				5	G6
		8/9/2010	20	134	<0.025	<0.03	<2			6	G6
		8/9/2010	25	129	<0.025	<0.03				7	G6
		8/9/2010	28	126	<0.025	<0.03	<2			7	G6
		8/9/2010	5	150	<0.025	<0.03				3	F6
	<b> </b>	8/9/2010	8	147	<0.025	<0.03	<2			3	F6
	<b> </b>	8/9/2010	13	142	<0.025	<0.03				4	F6
SRO-12	Farallon	8/9/2010	17	138	<0.025	<0.03				5	F6
		8/9/2010	21	134	<0.025	<0.03	<2			6	F6
		8/9/2010	23.5	131.5	<0.025	<0.03				6	F6
		8/9/2010	29.5	125.5	<0.025	<0.03	<2			7	F6
		8/9/2010	0.5	157.5	<0.025	<0.03	<2	280	3,100	1	C6
	<b> </b>	8/9/2010	5.5	152.5	<0.025	<0.03	<2	<50	<250	2	C6
		8/9/2010	11	147	<0.025	<0.03	<2	<50	<250	3	C6
SRO-13	Farallon	8/9/2010	15.5	142.5	<0.025	<0.03	<2	<50	400	4	C6
-		8/9/2010	20.5	137.5	<0.025	<0.03	<2	<s0< td=""><td>&lt;250</td><td>5</td><td>C6</td></s0<>	<250	5	C6
	<del> </del>	8/9/2010	24.5	133.5	<0.025	<0.03	-			6	C6
	<del> </del>	8/9/2010	29.5	128.5	<0.025	<0.03				7	C6
		8/10/2010	1.5	158.5	<0.025	<0.03		<del></del>		1	A5
	}	8/10/2010	6.5	158.5	<0.025	<0.03		<del></del>		2	A5
	}	8/10/2010	12	148	<0.025	<0.03		<del></del>		3	A5
	Farallon		17	143	<0.025	<0.03				4	A5
SRO-1/I	ı aralluli	8/10/2010 8/10/2010	22	143	<0.025	<0.03		<u></u>		5	A5 A5
SRO-14	l l			138	~∪.∪∠5	<b>\U.U3</b>		-		၁	CA
SR0-14			+	12/10	0.025	<0.05				c	۸ ⊏
SR0-14		8/10/2010 8/10/2010 8/10/2010	25.2 29.8	134.8 130.2	<b>0.035</b> < 0.025	<0.03 <0.03				6	A5 A5



					VOCs (r	ng/kg) <sup>1</sup>	Gasoline-range	Diesel-range	Oil rango	Exca	vation
	Sample		Depth	Elevation			Petroleum Hydrocarbons	Petroleum Hydrocarbons	Oil-range Petroleum Hydrocarbons		Grid
Sample ID	Collected By	Sample Date	(feet bgs)	(feet NAVD 88)	PCE	TCE	(mg/kg) <sup>2</sup>	(mg/kg) <sup>3</sup>	(mg/kg) <sup>3</sup>	Lift	Cell
		8/10/2010	1	159	<0.025	<0.03				1	A6
		8/10/2010	5	155	<0.025	<0.03	-			2	A6
000 45	Famallan	8/10/2010	10	150	<0.025	<0.03	-	-		3	A6
SRO-15	Farallon	8/10/2010 8/10/2010	15 20	145 140	<0.025 <0.025	<0.03 <0.03				4 5	A6 A6
		8/10/2010	25	135	<0.025	<0.03				6	A6
		8/10/2010	29.5	130.5	<0.025	<0.03		<del>-</del>		6	A6
		8/10/2010	2	157	<0.025	<0.03	_	-		1	B5
		8/10/2010	7	152	<0.015	<0.03		-		2	B5
		8/10/2010	12	147	<0.025	<0.03				3	B5
SR0-16	Farallon	8/10/2010	17	142	<0.025	<0.03	-			4	B5
		8/10/2010	22	137	<0.025	<0.03		-		5	B5
		8/10/2010	25.5 29.5	133.5 129.5	<0.025 <b>0.039</b>	<0.03 <0.03	-			6 7	B5 B5
	+	8/10/2010 8/10/2010	1.8	155.2	<0.039	<0.03	2,800	130	 <250	1	D5
		8/10/2010	5.5	151.5	<0.025	<0.03	<2	<50	<250	2	D5
		8/10/2010	10.5	146.5	<0.025	<0.03	<2	<50	<250	3	D5
SR0-17	Farallon	8/10/2010	16	141	<0.025	<0.03	<2	<50	<250	4	D5
		8/10/2010	21	136	<0.025	<0.03	<2	<50	<250	5	D5
		8/10/2010	25	132	<0.025	<0.03	<2	<50	<250	6	D5
		8/10/2010	30	127	<0.025	<0.03				7	D5
SR0-18	Farallon	8/10/2010	2	155	<0.025	<0.03		-		2	E5
50 10	1 0.0001	8/10/2010	5.5	151.5	<0.025	<0.03				2	E5
SRO-19	Farallon	8/10/2010	2	155	<0.025	<0.03				2	D5
-		8/10/2010	5.5	151.5	<0.025	<0.03				2	D5
SR0-20	Farallon	8/10/2010	2	155	<0.025	<0.03		-		2	D5
SDO 24	Eoroll	8/10/2010	6	151 150 5	<0.025	<0.03				2	D5
SRO-21 Soil samples collected i	Farallon	8/10/2010	6.5	150.5	<0.025	<0.03				2	D5
HC-1-1	ZVII (HAFE GFOV	8/13/2011	20	139	<0.05	<0.02				5	A4
HC-1-2	†	8/13/2011	22.5	136.5	0.092	<0.02				5	A4
HC-1-3	1	8/13/2011	25	134	0.36	<0.02				6	A4
HC-1-4	1	8/13/2011	27.5	131.5	0.46	<0.02				6	A4
HC-1-5	1	8/13/2011	30	129	0.43	<0.02				7	A4
HC-1-6	1	8/13/2011	32.5	126.5	0.74	<0.02	-	-		7	A4
HC-1-7	Hart Crowser	8/13/2011	35	124	0.38	<0.02	-	-		8	A4
HC-1-8		8/13/2011	37.5	121.5	0.92	<0.02				8	A4
HC-1-9	_	8/13/2011	40	119	1.10	<0.02	<5	<50		9	A4
HC-1-10	1	8/13/2011	42.5	116.5	0.41	<0.02	-	-		9	A4
HC-1-11	4	8/13/2011	45	114	2.30	<0.02	-	-		10	A4
HC-1-12	4	8/13/2011	47.5	111.5	1.80	<0.02	-			10	A4
HC-1-13 HC-2-1		8/13/2011	50 20	109 137	<b>0.07</b> < 0.05	<0.02 <0.02				11 5	A4 C4/D4
HC-2-2	<del> </del>	8/13/2011 8/13/2011	22.5	134.5	0.05	<0.02				6	C4/D4
HC-2-3	┪	8/13/2011	25	132	0.29	<0.02				6	C4/D4
HC-2-4	1	8/13/2011	27.5	129.5	0.33	<0.02				7	C4/D4
HC-2-5	1	8/13/2011	30	127	0.31	<0.02				7	C4/D4
HC-2-6	1	8/13/2011	32.5	124.5	0.22	<0.02		-		8	C4/D4
HC-2-7	Hart Crowser	8/13/2011	35	122	0.23	<0.02	-			8	C4/D4
HC-2-8		8/13/2011	37.5	119.5	0.46	<0.02				9	C4/D4
HC-2-9	1	8/13/2011	40	117	0.60	<0.02	<5	<50		9	C4/D4
HC-2-10	_	8/13/2011	42.5	114.5	1.20	<0.02				10	C4/D4
HC-2-11	4	8/13/2011	45	112	0.58	<0.02				10	C4/D4
HC-2-12	-	8/13/2011	47.5	109.5	2.00	0.044				11	C4/D4
HC-2-13		8/13/2011	50 20	107 136	<b>0.11</b> <0.05	<0.02 <0.02				11 5	C4/D4 D2
HC-3-1 HC-3-2	┥	8/13/2011 8/13/2011	22.5	136	<0.05 <b>0.13</b>	<0.02				6	D2 D2
HC-3-3	┥	8/13/2011	25	133.5	0.13	<0.02				6	D2
HC-3-4	┪	8/13/2011	27.5	128.5	0.061	<0.02				7	D2
HC-3-5	1	8/13/2011	30	126	0.18	<0.02	-			7	D2
HC-3-6	7	8/13/2011	32.5	123.5	0.13	<0.02		-		8	D2
HC-3-7	Hart Crowser	8/13/2011	35	121	0.10	<0.02		-		8	D2
HC-3-8	]	8/13/2011	37.5	118.5	0.37	<0.02				9	D2
HC-3-9	<b>」</b>	8/13/2011	40	116	0.27	<0.02	<5	<50		9	D2
HC-3-10	<b>.</b>	8/13/2011	42.5	113.5	0.17	<0.02	-			10	D2
HC-3-11	<b>-</b>	8/13/2011	45	111	0.05	<0.02				10	D2
HC-3-12	-	8/13/2011	47.5	108.5	<0.05	<0.02				11	D2
HC-3-13	1	8/13/2011	50	106	0.91	0.087				11	D2
		10/10/2011	50 55	108 103	0.0218 0.276	<0.0213 0.00624 J				11 12	A3 A3
		10/10/2011	60	98	0.276 0.000720 J	<0.0204				13	A3
URS-SB-9	URS	10/10/2011	65	93	<0.0126	<0.0204		<del></del>		14	A3
	51.0	10/10/2011	70	88	<0.0120	<0.0189				15	A3
		10/10/2011	75	83	<0.0151	<0.0226	-			16	A3
		10/10/2011	80	78	<0.0142	<0.0213				N/A	A3
		10/11/2011	50	106	<0.0117	<0.0175				11	D2
		10/11/2011	55	101	<0.0111	<0.0167		-		12	D2
			60	96	0.00160 J	<0.00145	-	-		13	D2
LIDC CD 40	LIDO	10/11/2011									1
URS-SB-10	URS	10/11/2011	65	91	<0.0142	<0.0213	-	-	-	14	D2
URS-SB-10	URS		65 70	86	<0.0142 <0.0148	<0.0213 <0.0221				15	D2 D2
URS-SB-10  MTCA Method A Clean		10/11/2011	65						1	15 16	4



					VOCs (r	ng/kg) <sup>1</sup>	Gasoline-range	Diesel-range	Oil-range	Exca	vation
	Sample		Depth	Elevation			Petroleum Hydrocarbons	Petroleum Hydrocarbons	Petroleum Hydrocarbons	1 :64	Grid
Sample ID	Collected By	Sample Date	(feet bgs)	(feet NAVD 88)	PCE	TCE	(mg/kg) <sup>2</sup>	(mg/kg) <sup>3</sup>	(mg/kg) <sup>3</sup>	Lift	Cell
		10/12/2011 10/12/2011	35 40	118 113	0.00148 J 0.000383 J	<0.0190 <0.0164	-			9 10	H2 H2
		10/12/2011	45	108	<0.0112	<0.0164				11	H2
		10/12/2011	50	103	<0.0112	<0.0186				12	H2
URS-MW-8		10/12/2011	55	98	<0.0124	<0.0186				13	H2
(SB-11)	URS	10/12/2011	60	93	<0.0105	<0.0158				14	H2
		10/12/2011	65	88	<0.0104	<0.0156	-			15	H2
		10/12/2011	70	83	<0.0105	<0.0158				16	H2
		10/12/2011	75	78	<0.0138	<0.0207				N/A	H2
		10/12/2011	80	73	<0.0113	<0.0170				N/A	H2
		10/12/2011	35 40	119 114	<0.0129	<0.0193 <0.0192				9 10	G4 G4
		10/12/2011 10/12/2011	45	109	0.00436 J 0.00479 J	0.000403 J		<del></del> 		11	G4 G4
		10/12/2011	55	99	0.004793	0.000463 J				13	G4
URS-SB-12	URS	10/12/2011	60	94	0.00901 J	0.00120 J				14	G4
		10/12/2011	65	89	<0.0151	<0.0227				15	G4
		10/12/2011	70	84	<0.0159	<0.0239	-			16	G4
		10/12/2011	75	79	<0.0156	<0.0235				N/A	G4
		10/13/2011	35	119	0.0142	<0.0175				9	Н9
		10/13/2011	40	114	0.0140 J	<0.0210				10	H9
LIDO OD 40	1100	10/13/2011	45	109	0.00347 J	<0.0213				11	H9
URS-SB-13	URS	10/13/2011	60	94	0.0647	0.000382 J				14	H9
		10/13/2011 10/13/2011	65 70	89 84	<b>0.0861</b> < 0.0145	<0.0204 <0.0218			<del></del> 	15 16	H9 H9
		10/13/2011	75	79	<0.0145	<0.0218				N/A	H9
		10/11/2011	35	121	<0.00954	<0.0223				8	E4
		10/11/2011	40	116	0.0541	0.000659 J	_			9	E4
		10/11/2011	45	111	0.0712	0.00114 J				10	E4
		10/11/2011	50	106	0.166	0.00164 J				11	E4
URS-SB-14	URS	10/11/2011	55	101	0.105	0.00119 J				12	E4
		10/11/2011	60	96	0.000312 J	<0.0142	-			13	E4
		10/11/2011	65	91	<0.00915	<0.0137				14	E4
		10/11/2011	70	86	<0.0137	<0.0206	-			15	E4
		10/11/2011	75	81	<0.0104	<0.0156	-			16	E4
		10/11/2011	35	125	0.0331	<0.0189	-			8	A6
		10/11/2011	40 45	120	0.00263 J	<0.0138				9	A6
		10/11/2011 10/10/2011	45 50	115 110	<0.0128 <0.0128	<0.0191 <0.0192				10 11	A6 A6
URS-SB-15	URS	10/10/2011	55	105	<0.0128	<0.0192				12	A6
0110 02 10	511.5	10/10/2011	60	100	<0.0101	<0.0123				13	A6
		10/10/2011	65	95	<0.0140	<0.0210				14	A6
		10/10/2011	70	90	<0.0127	<0.0190				15	A6
		10/10/2011	75	85	<0.0119	<0.0179	-			16	A6
		11/14/2011	30	123	0.00880 J	<0.0191	_			N/A	N/A
		11/14/2011	35	118	0.00105 J	<0.0177	-	-		N/A	N/A
		11/14/2011	40	113	0.00310 J	<0.0196	_			N/A	N/A
4		11/14/2011	45	108	0.00276 J	<0.0170				N/A	N/A
URS-SB-16 <sup>4</sup>	URS	11/14/2011	47.5	105.5	0.000318 J	<0.0207	_			N/A	N/A
		11/14/2011	60 65	93	0.727	0.00308 J				N/A	N/A
		11/14/2011 11/14/2011	65 70	88 83	<b>0.772</b> <0.0130	0.000799 J <0.0195				N/A N/A	N/A N/A
		11/14/2011	75	78	<0.0130	<0.0193				N/A	N/A
		11/15/2011	40	117	<0.00937	<0.0103	-			9	N/A
		11/15/2011	45	112	<0.00915	<0.0141	_			10	N/A
URS-SB-17	URS	11/15/2011	65	92	<0.0122	<0.0183				14	N/A
		11/15/2011	70	87	<0.0124	<0.0186	-			15	N/A
		11/15/2011	75	82	<0.0156	<0.0234				16	N/A
		11/17/2011	30	128	0.00590 J	<0.0218	-			7	C7
		11/17/2011	35	123	0.00560 J	<0.0174	-			8	C7
		11/17/2011	40	118	<0.0116	<0.0174				9	C7
		11/17/2011	45	113	<0.0159	<0.0238	-			10	C7
		11/17/2011	50	108	<0.0157	<0.0235	_			11	C7
URS-SB-21	URS	11/17/2011	60 65	98 93	<0.0104	<0.0156				13 14	C7
		11/17/2011 11/17/2011	70	93 88	<0.0192 <0.0203	<0.0288 <0.0304	<del></del>			14 15	C7
		11/17/2011	71.5	86.5	<0.0203	<0.0304				15	C7
	i				<0.0170	<0.0233				16	C7
		11/17/2011	73	X5	SULUTION						· ·
		11/17/2011 11/17/2011	73 74.5	85 83.5	<0.0136	<0.0234			-	16	C7
		11/17/2011 11/17/2011 11/17/2011	73 74.5 80								C7 C7

- <sup>1</sup>VOCs = Volatile organic compounds were analyzed using EPA SW-846 Method 8260B.
- $^{2}\,\mathrm{Gasoline}\text{-range}$  petroleum hydrocarbons were analyzed using Ecology Method NWTPH-Gx.
- $^{\rm 3}$  Diesel- and oil-range petroleum hydrocarbons were analyzed using Ecology Method NWTPH-Dx.
- $^{\rm 4}$  Soil samples were collected from off-Property 5 to 20 feet to the west or south.
- Compound was not analyzed.
- < Compound was not detected at a concentration equal to or greater than the listed laboratory practical quantitation limit.

PCE = Tetrachloroethene

TCE = Trichloroethene

VOCs = Volatile organic compounds

feet bgs = feet below ground surface

J = estimated concentration less than the listed laboratory Practical Quantitation Limit (PQL); For purpose of this report J-flagged concentrations are considered not detected.

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level (unrestricted land use)

N/A = Not Applicable

**Bold** font indicates that the compound was detected at a concentration greater than the listed PQL.

Shading indicates that the concentration exceeds the MTCA cleanup level.



### **Chemical Analytical Data for Groundwater Samples** Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

							VOCs (µg/L)	1						
Sample ID	Sample Date	Depth (feet bgs)	PCE	TCE	cis-1,2- DCE	1,1,1-TCA	1,2-DCA	Benzene	Toluene	Ethyl- benzene	Xylenes, total	Gasoline-range Petroleum Hydrocarbons (µg/L) <sup>2</sup>	Diesel-range Petroleum Hydrocarbons (μg/L) <sup>3</sup>	Oil-range Petroleum Hydrocarbons (µg/L) <sup>3</sup>
	in 2000 (URS, 2000	<u> </u>						_			_			
URSSB-OP1	03/11/2000	NA	2.1	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<100	<25	<50
URSSB-0P3	03/11/2000	NA	1.7	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<100	<25	<50
	l in 2008 and 2010 (					SES, 2011)						1	1	
URS-SB-3	08/27/2008	NA	21	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<100	-	-
	09/10/2008	NA	340	3.5	<1.0			<1.0	<1.0	<1.0	<1.0	<100	-	
LIDC MW 1	11/21/2008	NA	210	3.4	<1.0		-	<1.0	<1.0	<1.0	<1.0		-	
URS-MW-1	03/17/2010 06/17/2010	NA NA	460 320	9.6	11 1.2	-		<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<50 <50	-	
	08/24/2010	NA NA	430	10	6.1	-		~1.0	<u></u>	~1.0			-	
	03/17/2010	NA NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<50		-
URS-MW-2	06/17/2010	NA NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<50	_	_
0.10 2	08/25/2010	NA	<1.0	<1.0	<1.0								_	
	09/10/2008	NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<100	_	_
	11/21/2008	NA	3.9	<1.0	<1.0		_	<1.0	<1.0	<1.0	<1.0	-	_	_
URS-MW-3	03/17/2010	NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<50	_	-
	06/17/2010	NA	<1.0	<0.2	<1.0			<1.0	<1.0	<1.0	<1.0	<50	-	
	08/23/2010	NA	<1.0	<0.2	<1.0	-						-	_	-
MW-17 <sup>4</sup>	08/24/2010	NA	14	1.8	2.2	-	-							
MW-18 <sup>4</sup>	08/24/2010	NA	830	15	10								_	_
MW-19	08/25/2010	NA	33	1.1	<1.0		_		_	_				
MW-20	08/25/2010	NA	4.6	<1.0	<1.0								_	_
B1/MW1	03/17/2010	NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<50	_	-
,	07/07/2008	NA	<0.2	<0.2	-		-	<0.2	<0.2	<1.0	<0.6	<100	<250	<500
D O (MANA) O	11/21/2008	NA	2.0	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0			
B-2/MW-2	03/17/2010	NA	<1.0	<1.0	<1.0	-		<1.0	<1.0	<1.0	<1.0	<50	_	-
	06/17/2010	NA	<1.0	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<50	-	-
	07/07/2008	NA	80	0.42			-	<0.4	<0.4	<2.0	<1.2	<100	<250	<500
	09/10/2008	NA	88	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<100	_	-
B-3/MW-3	11/21/2008	NA	20	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0		-	-
	03/17/2010	NA	68	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<50	-	-
	06/17/2010	NA	44	<1.0	<1.0		-	<1.0	<1.0	<1.0	<1.0	<50	-	-
	08/23/2010	NA	50	<1.0	<1.0									
	07/07/2008	NA NA	<0.2	<0.2			-	<0.2	<0.2	<1.0	<0.6	<100	<250	<500
B-4/MW-4	11/21/2008 03/17/2010	NA NA	<b>1.9</b> <1.0	<1.0 <1.0	<1.0 <1.0		-	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	 <50		
	06/17/2010	NA NA	<1.0	<1.0	<1.0			<1.0	<1.0	<1.0	<1.0	<50 <50	-	
Samples collecter	in 2011 (URS, 2011		\1.0	11.0	\1.U			11.0	11.0	11.0	\1.0	\30		
URS-MW-1	11/22/2011	29	114	4.36	1.47	<1.0	<1.0		_					
URS-MW-2	11/21/2011	28.6	<1.0	<1.0	<1.0	<1.0	<1.0	-	_				_	
URS-MW-3	11/22/2011	28	<1.0	<1.0	<1.0	<1.0	<1.0	_	_			_	_	_
URS-MW-6 <sup>4</sup>	10/19/2011	NA	<1.0	<1.0	1.33	<1.0	2.0						_	_
URS-MW-7 <sup>4</sup>	10/19/2011	NA	12.4	<1.0	3.42	0.87 J	<1.0		_	_			_	
01.0 141 <b>4</b> 4-1	10/19/2011	73	<1.0	<1.0	<1.0	<1.0	<1.0	_	_			_	_	_
Ī	10/19/2011	77	<1.0	<1.0	<1.0	<1.0	<1.0	_	_			_	_	_
URS-MW-8	11/22/2011	70	<1.0	<1.0	<1.0	<1.0	<1.0	-	_			_	_	_
	11/22/2011	73	<1.0	<1.0	<1.0	<1.0	<1.0	-	-				-	-
	11/22/2011	75.5	<1.0	<1.0	<1.0	<1.0	<1.0	-	-			-	-	-
MW-19	11/21/2011	29.2	31.0	1.08	0.140 J	<1.0	<1.0					-	_	-
MW-20	11/22/2011	25	1.03	0.140 J	<1.0	<1.0	<1.0		-				-	
B1/MW-1	11/29/2011	90	<1.0	<1.0	<1.0	<1.0	<1.0	-	-			-	-	
21/ IVI VV-1	11/29/2011	95	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	_	-
B2/MW-2	11/29/2011	75	<1.0	<1.0	<1.0	<1.0	<1.0		-			_	_	_
, ,	11/29/2011	80	<1.0	<1.0	<1.0	<1.0	<1.0					-	-	-
B3/MW-3	11/22/2011	27	23.7	<1.0	<1.0	<1.0	<1.0		-				-	
B4/MW-4	11/29/2011	75	<1.0	<1.0	<1.0	<1.0	<1.0	-	-			-	-	
, ,	11/29/2011	80	<1.0	<1.0	<1.0	<1.0	<1.0	-	-			-	-	-
URS-SB-9	10/10/2011	77 75	0.270 J	<1.0	<1.0	<1.0	<1.0		-		-		-	
URS-SB-15 URS-SB-21	10/10/2011 11/17/2011	75 74	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0						-	
	thod A or B Cleanup L			5 (A)					1,000 (A)			_		
IVITOA IVIE	anou a or b oreatiup L		5 (A)	5 (A)	16 (B)	200 (A)	5 (A)	5 (A)	1,000 (A)	700 (A)	1,000 (A)	800 / 1,000 <sup>5</sup> (A)	500 (A)	500 (A)

### Notes:

PCE = tetrachloroethene

feet bgs = feet below ground surface

J = estimated concentration  $\mu g/L$  = micrograms per liter

NA = not available

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level (unrestricted land use)

(B) = Standard Method B cleanup levels from CLARC. Table 5 includes the basis for cleanup levels. Bold font indicates that the compounds was detected at a concentration greater than the listed practical quantitation limit (PQL).

Shading indicates that the compound was detected at a concentration that exceeds the MTCA cleanup level.

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 $<sup>^{1}</sup>$ VOCs = Volatile organic compounds were analyzed using EPA SW-846 Method 8260B.

 $<sup>^2</sup>$ Gasoline-range petroleum hydrocarbons were analyzed using Ecology Method NWTPH-Gx.

 $<sup>^3</sup>$ Diesel- and oil-range petroleum hydrocarbons were analyzed using Ecology Method NWTPH-Dx. <sup>4</sup>Groundwater samples were collected from wells located 5 to 20 feet west or south of the Property.

 $<sup>^5</sup>$ The groundwater cleanup level is 1,000  $\mu$ g/L if benzene is not detected. If benzene is detected, the cleanup level is 800  $\mu$ g/L.

<sup>-</sup> Compound not analyzed.

<sup>&</sup>lt; Compound not detected at a concentration equal to or greater than the listed laboratory practical quantitation limit (PQL).

<sup>1,1,1-</sup>TCA = 1,1,1-trichloroethane

<sup>1,2-</sup>DCA = 1,2-dichloroethane

cis-1,2-DCE = cis-1,2-dichloroethene

### Soil and Groundwater Cleanup Levels

# Sterling Realty Organization Property at 10605 and 10619 NE $8^{\rm th}$ Street Bellevue, Washington

Contaminants of Concern	Media	Cleanup Level	Source
Gasoline-range Petroleum Hydrocarbons		100 (mg/kg)	MTCA Method A, Unrestricted
Diesel-range Petroleum Hydrocarbons		2,000 (mg/kg)	
Oil-range Petroleum Hydrocarbons		2,000 (mg/kg)	
PCE	Soil	0.05 (mg/kg)	
TCE	5011	0.03 (mg/kg)	
Benzene		0.03 (mg/kg)	
Toluene		7 (mg/kg)	
Ethylbenzene	-	6 (mg/kg)	
Xylenes		9 (mg/kg)	
Lead		250 (mg/kg)	
MTBE	1	0.1 (mg/kg)	
1,2-dichloroethane		0.0023 (mg/kg)	
cis-1,2-dichloroethene	1	0.076 (mg/kg)	MTCA Method B <sup>1</sup>
trans-1,2-dichloroethene	Soil	0.48 (mg/kg)	
1,1-dichloroethene	1	0.037 (mg/kg)	
Vinyl chloride	1	0.00013 (mg/kg)	
Gasoline-range Petroleum Hydrocarbons		1,000 (µg/L)	
Diesel-range Petroleum Hydrocarbons		500 (μg/L)	
Oil-range Petroleum Hydrocarbons		500 (μg/L)	
MTBE	1	20 (μg/L)	
PCE	1	5 (μg/L)	
TCE	Groundwater	5 (μg/L)	MTCA Method A
Vinyl chloride	1	0.2 (μg/L)	
1,2-dichloroethane	1	5 (μg/L)	
1,1,1-trichloroethane	1	200 (μg/L)	
Benzene	1	5 (μg/L)	
Toluene	1	1,000 (µg/L)	
Ethylbenzene	1	700 (μg/L)	
Xylenes	1	1,000 (µg/L)	
Chlorobenzene		160 (µg/L)	
cis-1,2-dichloroethene	Groundwater	16 (µg/L)	MTCA Method B, Standard Formula <sup>2</sup>
trans-1.2-dichloroethene	1	160 (µg/L)	

### Notes:

<sup>1</sup>Based on Protection of Groundwater

<sup>2</sup>Based on Potable Groundwater (non-carcinogenic)

MTBE = methyl tert-butyl ether

PCE = Tetrachloroethene

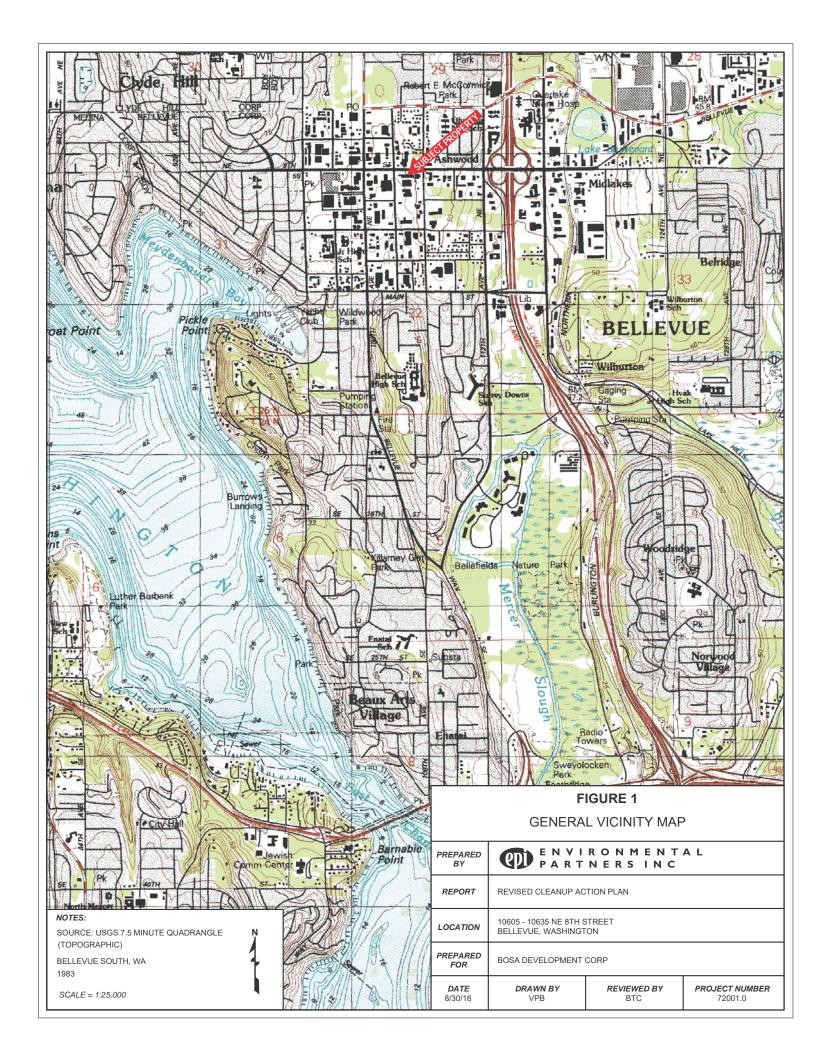
TCE = Trichloroethene

mg/kg = milligrams per kilogram

 $\mu$ g/L = micrograms per liter



Figu	ıres
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### Legend



### Proposed Redevelopment



### Parcel Boundary

Data Source: Aerial image from Microsoft, 2011. Parcel boundaries from King County, 2013.

#### Notes

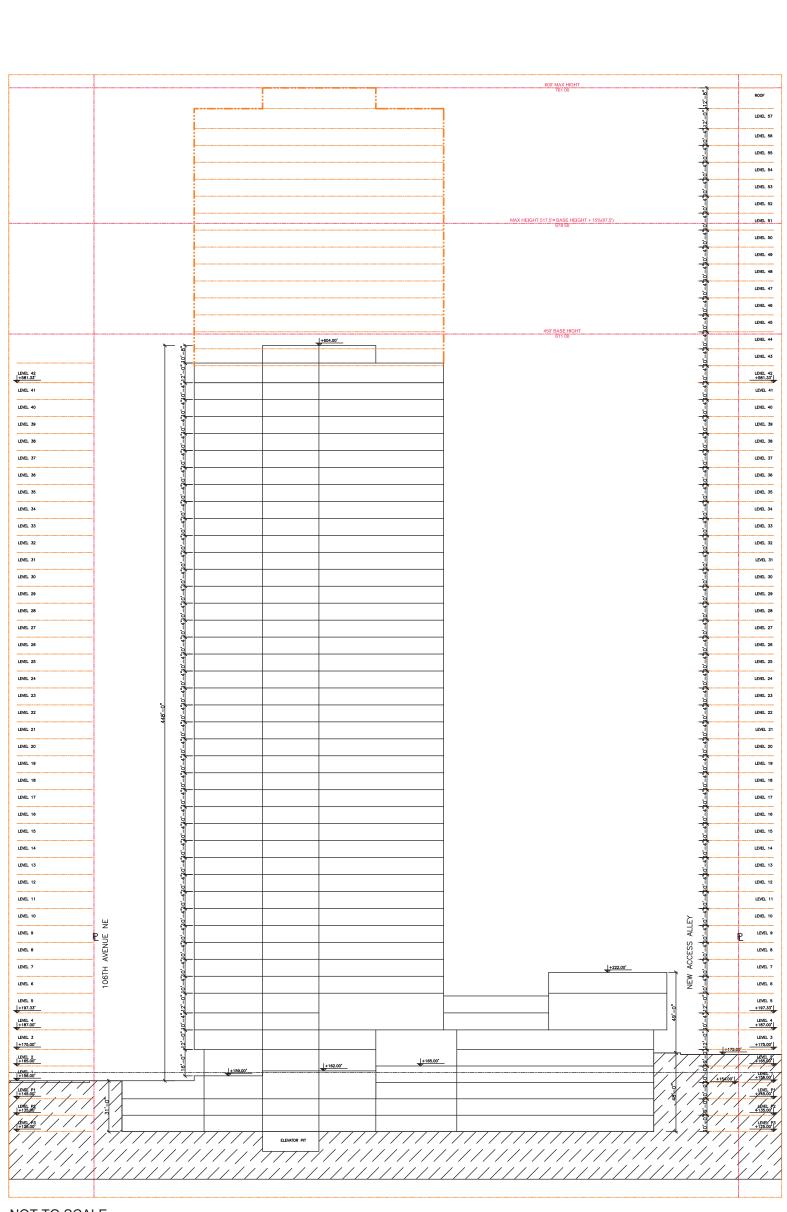
- The locations of all features shown are approximate.
- 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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



# FIGURE 2

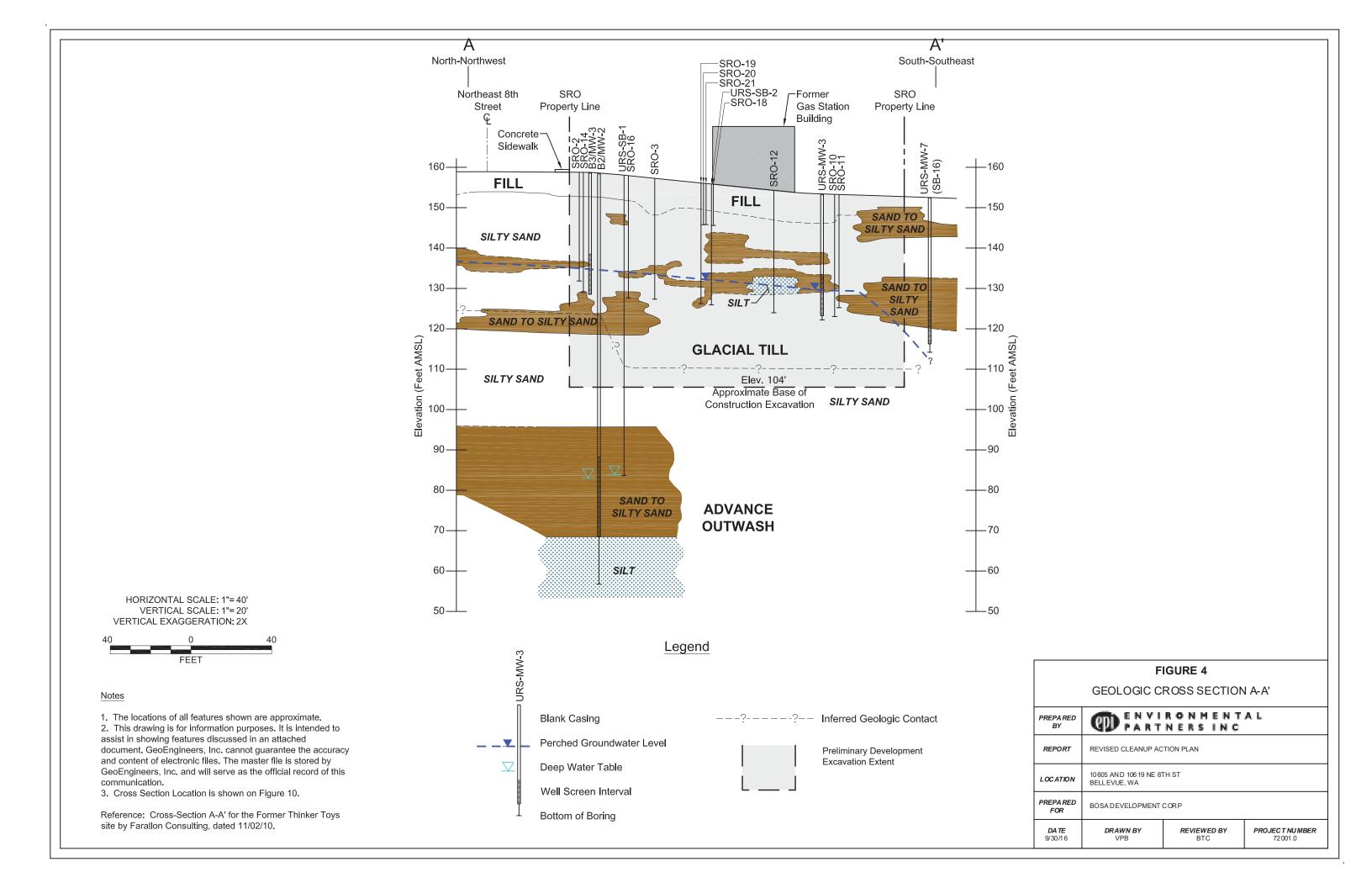
SITE REPRESENTATION

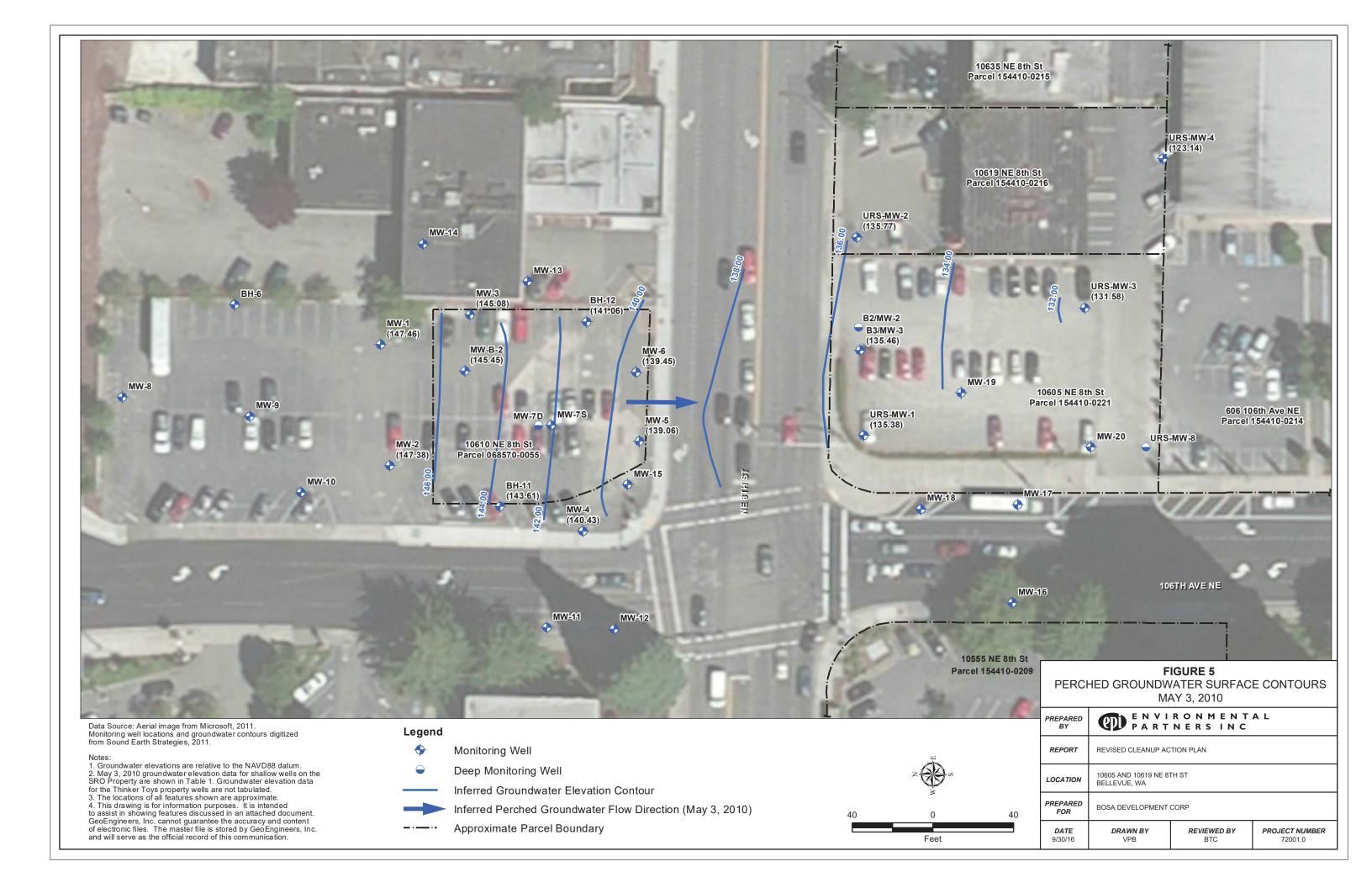
SHE REFRESENTATION			
PREPARED BY	PARTNERS INC		
REPORT	REVISED CLEANUP ACTION PLAN		
LOCATION	10 605 - 10 635 NE 8TH STREET BELLEVUE, WASHINGTON		
PREPARED FOR	BOSA DEVELOPMENT CORP		
<b>DA TE</b> 9/30/16	<b>DR AWN BY</b> VPB	REVIEWED BY BTC	<b>PROJECT NUMBER</b> 72 001 .0

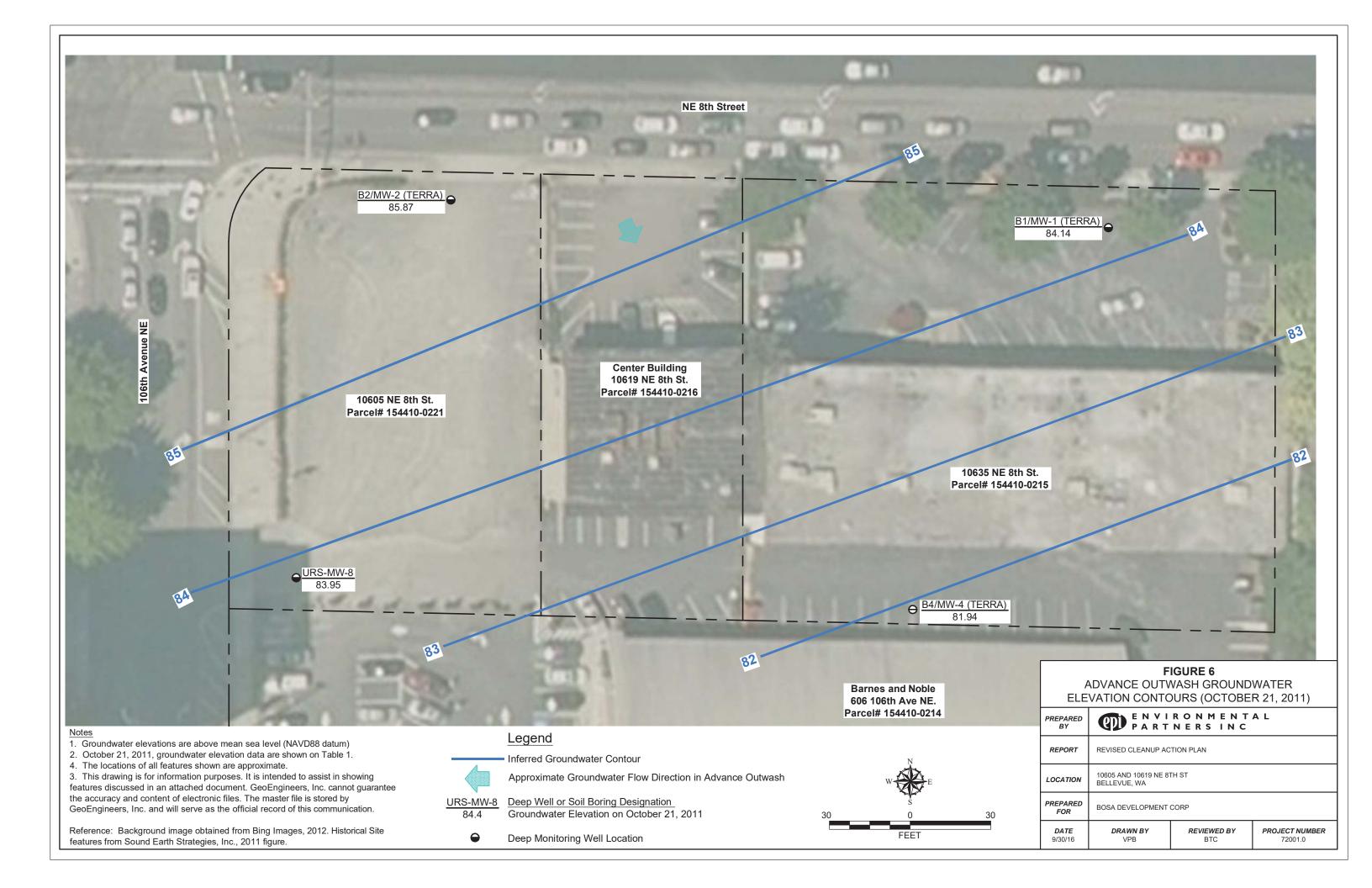


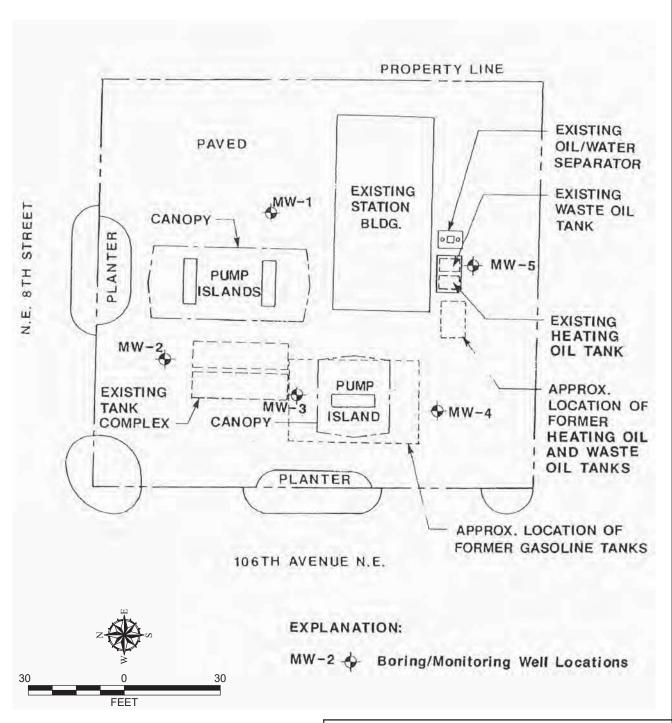
NOT TO SCALE

FIGURE 3				
CONCEPTUAL DESIGN OF PROPOSED REDEVELOPMENT				
PREPARED ENVIRONMENTAL PARTNERS INC				
REPORT	REVISED CLEANUP ACTION PLAN			
LOCATION	10605 AND 10619 NE 8TH ST BELLEVUE, WA			
PREPARED FOR	BOSA DEVELOPMENT CORP			
<b>DATE</b> 9/30/16	<b>DRAWN BY</b> VPB	REVIEWED BY BTC	PROJECT NUMBER 72001.0	





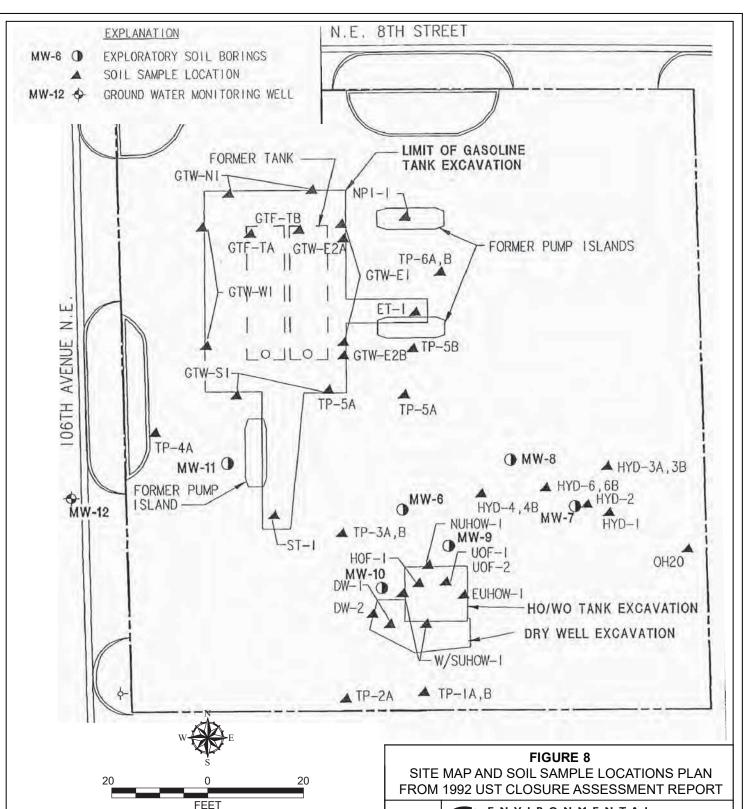




- 1. The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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

Reference: Figure 2 Site and Exploration Plan by EMCON dated June 1990.

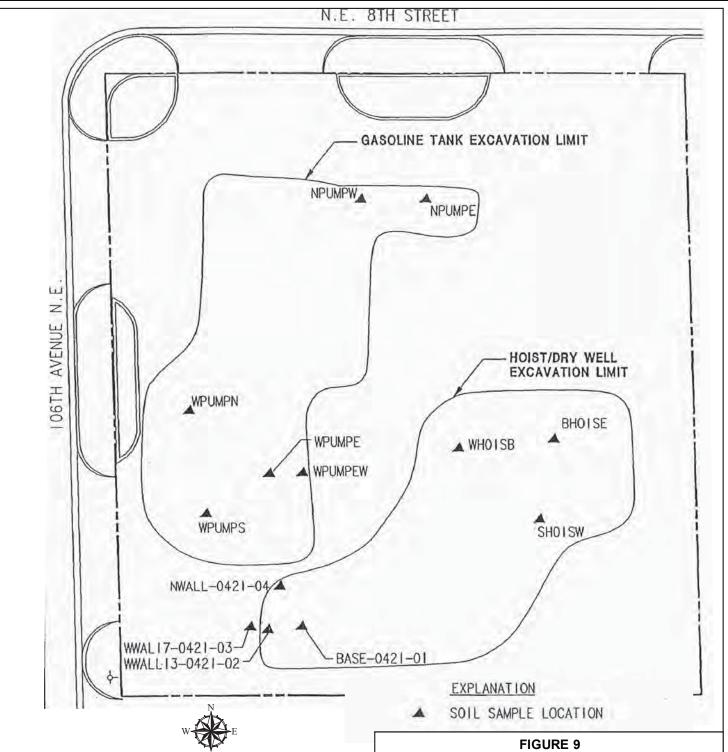
### FIGURE 7 SITE AND EXPLORATION PLAN FROM 1990 PESA REPORT ENVIRONMENTAL PREPA RED PARTNERS INC REPORT REVISED CLEANUP ACTION PLAN 10 605 - 10 635 N E 8 TH STREET BELL EVUE, WASHINGTON LOCATION PREPA RED BOSA DEVELOPMENT CORP FOR DR AWN BY REVIEWED BY PROJECT NUMBER DA TE 9/30/16



- 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.

Reference: Figure 2 Site Map and Soil Sample Locations by EMCON dated May 1992.

ENVIRONMENTAL PREPA RED BY PARTNERS INC REPORT REVISED CLEANUP ACTION PLAN 10 605 - 10 635 NE 8 TH STREET BELL EVUE, WASHINGTON LOCATION PREPA RED BOSA DEVELOPMENT CORP FOR DR AWN BY REVIEWED BY PROJECT NUMBER DA TE 9/30/16



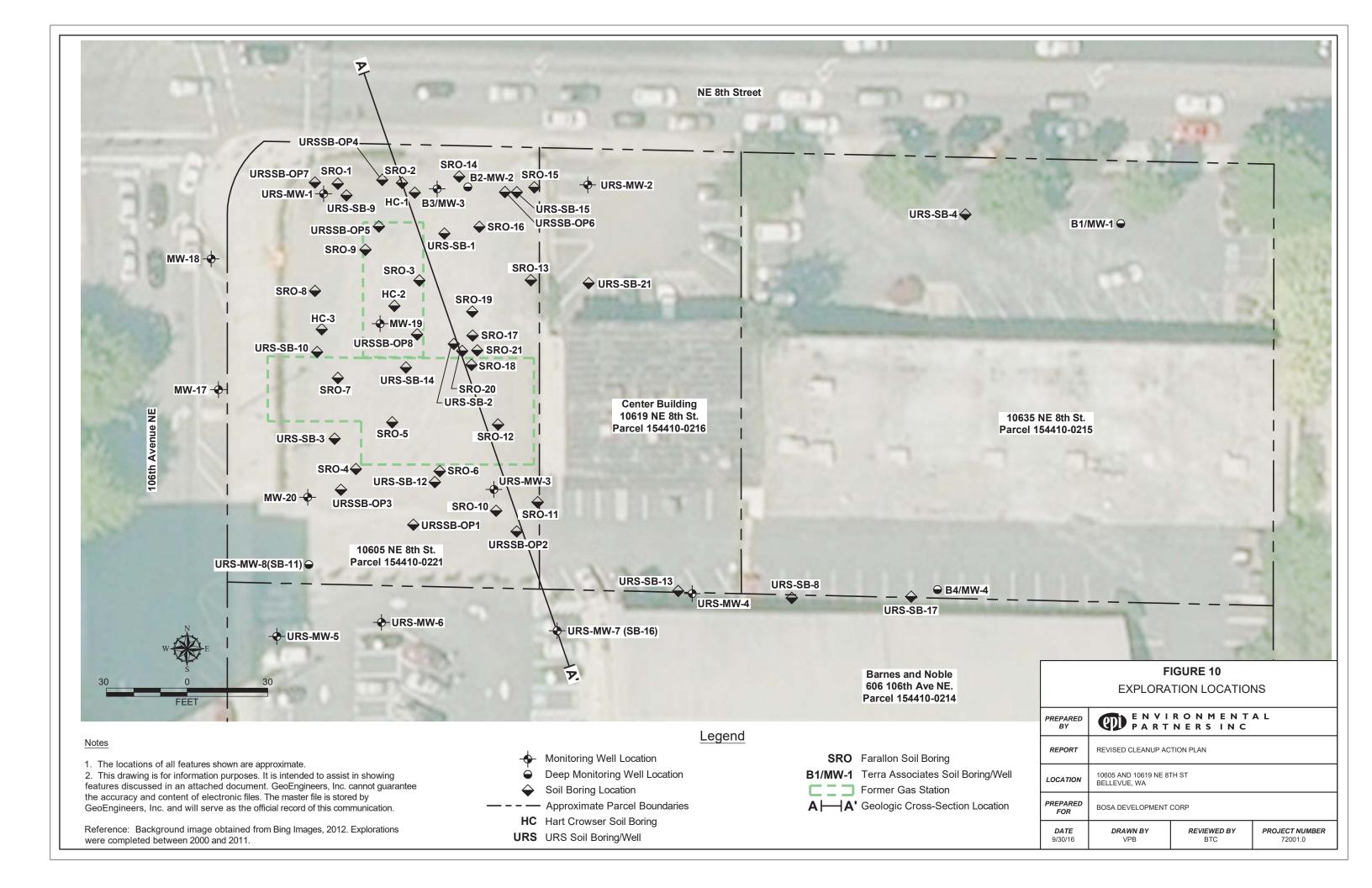
- 1. The locations of all features shown are approximate.
- 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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

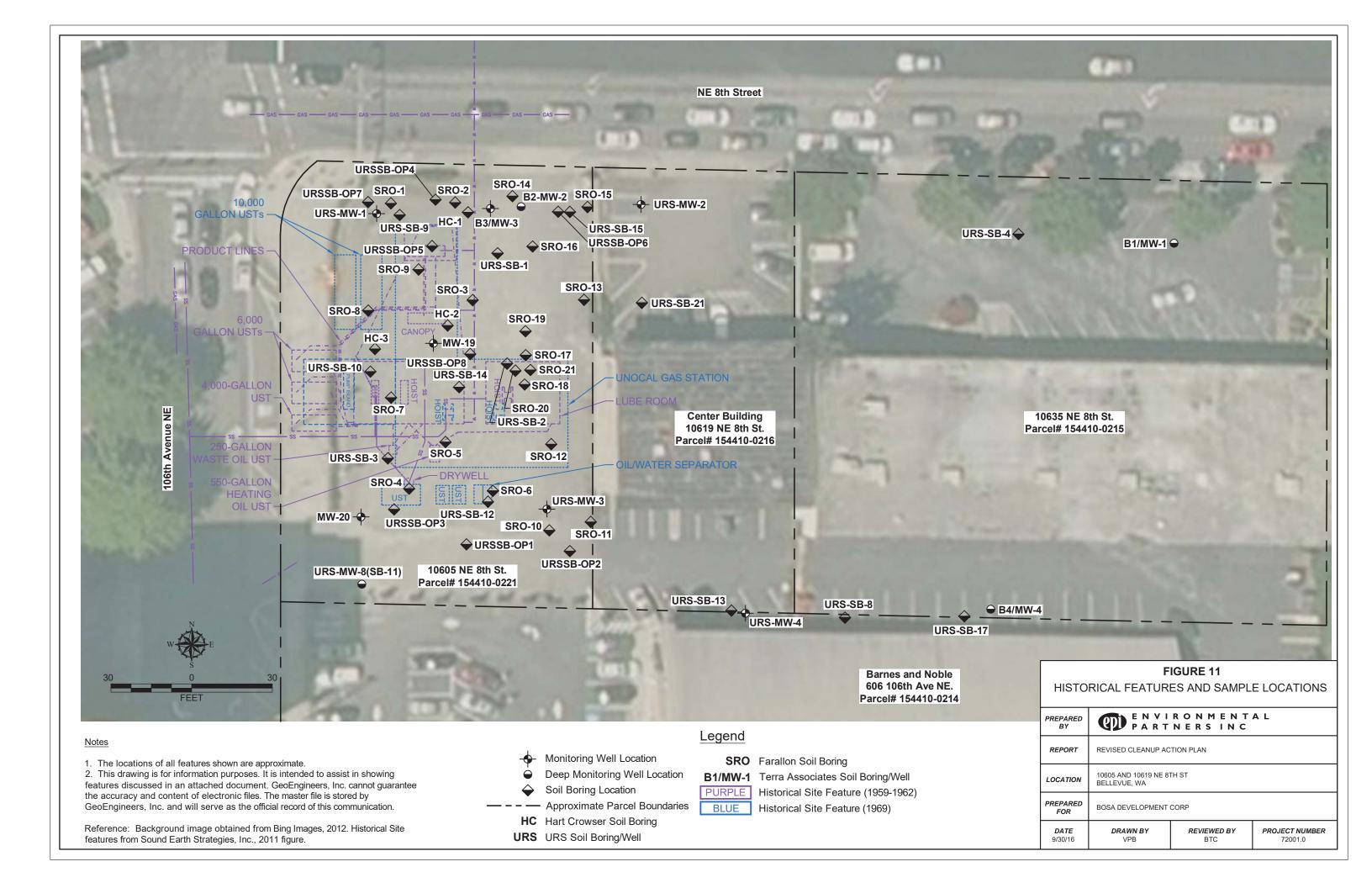
20

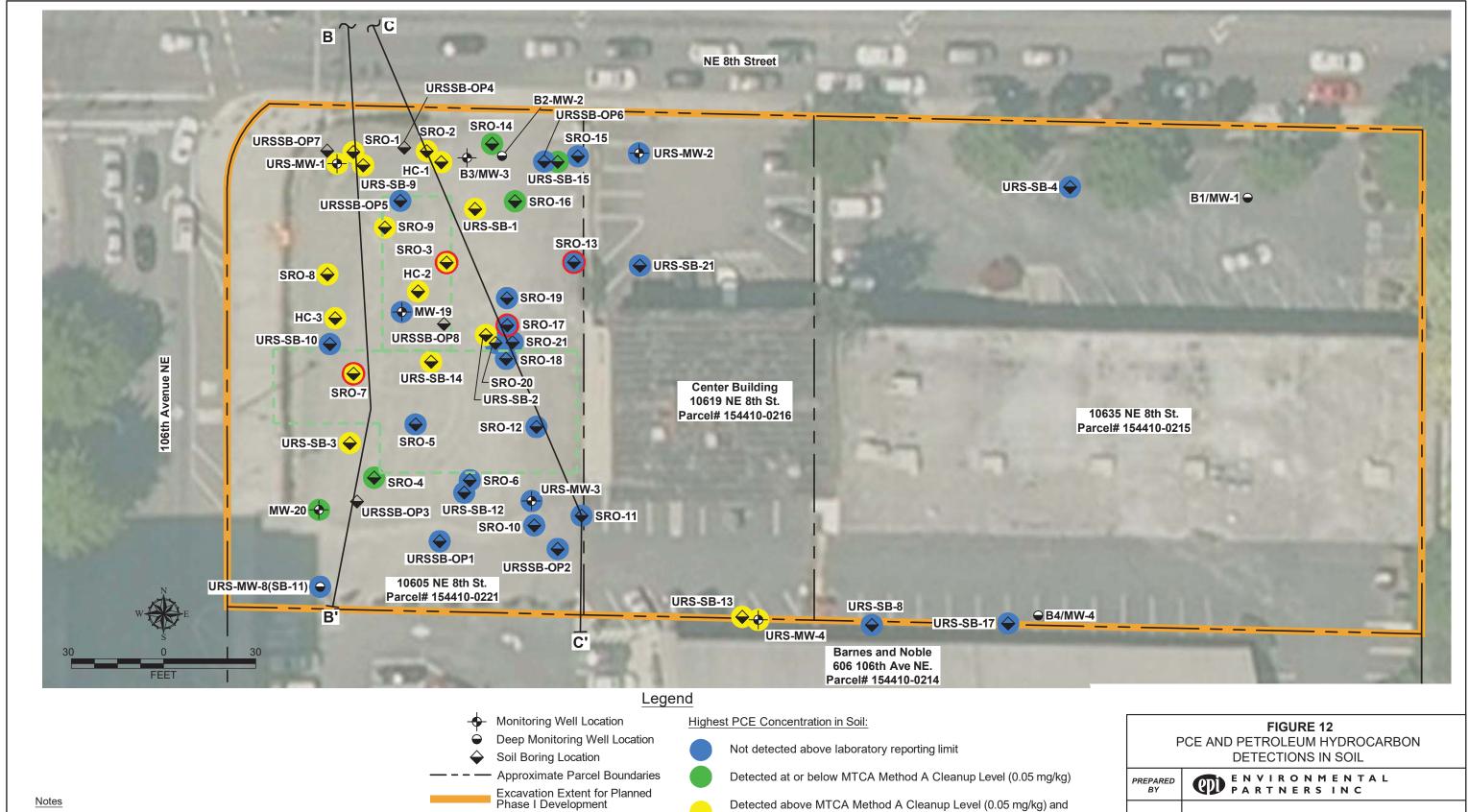
Reference: Figure 3 Soil Excavation Sample Locations by EMCON dated May 1992.

SOIL EXCAVATION SAMPLE LOCATIONS FROM 1992 UST CLOSURE ASSESSMENT REPORT

PREPARED BY	PARTNERS INC		
REPORT	REVISED CLEANUP ACTION PLAN		
LOCATION	10 605 - 10 635 NE 8TH STREET BELLEVUE, WASHINGTON		
PREPARED FOR	BOSA DEVELOPMENT CORP		
<b>DA TE</b> 9/30/16	<b>DR AWN BY</b> VPB	<b>REVIEWED BY</b> BTC	<b>PROJECT NUMBER</b> 72 001.0







- 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.

Reference: Background image obtained from Bing Images, 2012.

Detected above MTCA Method A Cleanup Level (0.05 mg/kg) and

at or below 2.3 mg/kg

Gasoline or diesel-/oil-range petroleum detected above MTCA Method A Cleanup level in shallow soil (≤ 9' bgs)

No Color = Chemical analysis not performed

**HC** Hart Crowser Soil Boring

URS URS Soil Boring/Well

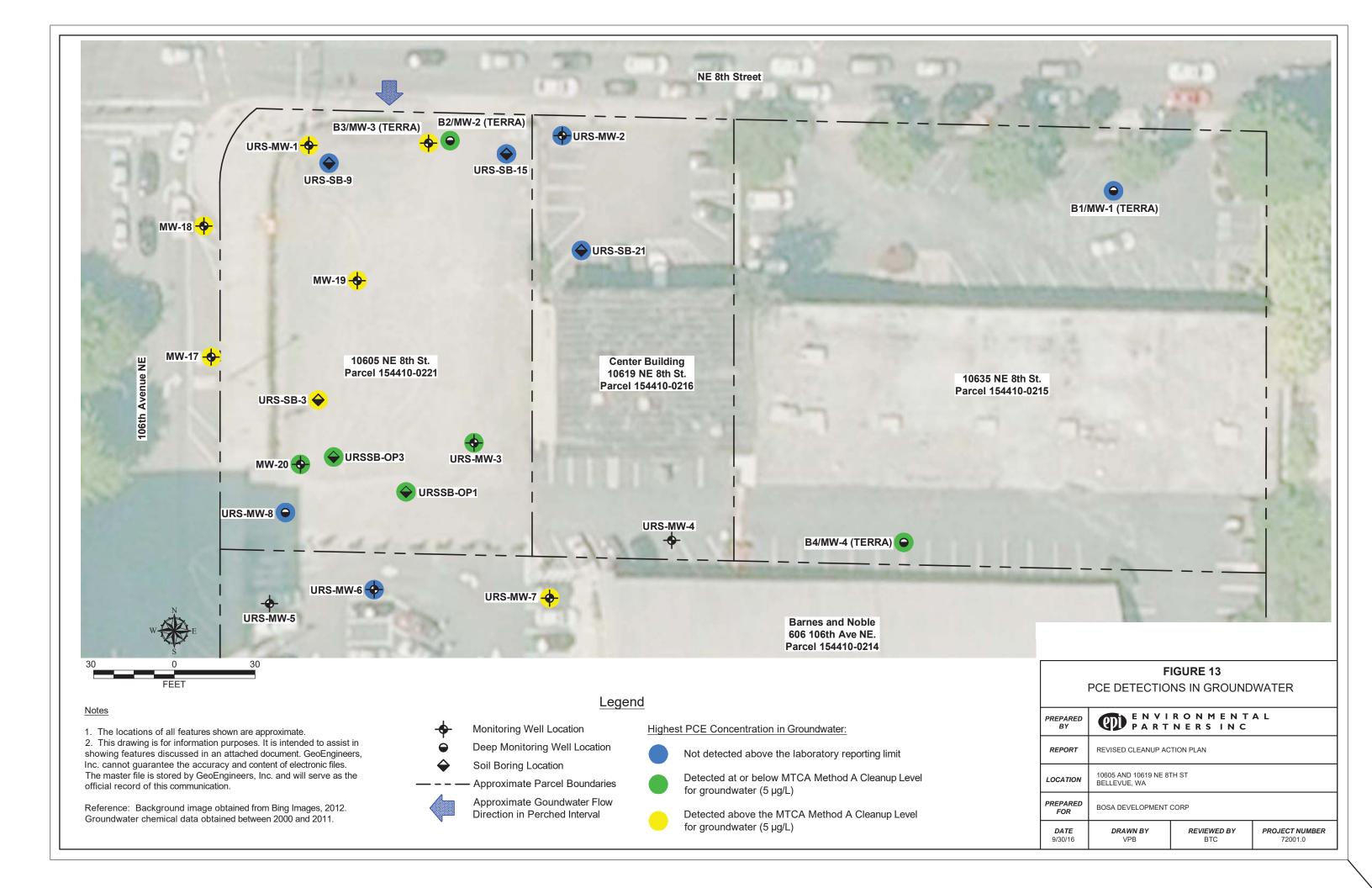
**B1/MW-1** Terra Associates Boring/Well

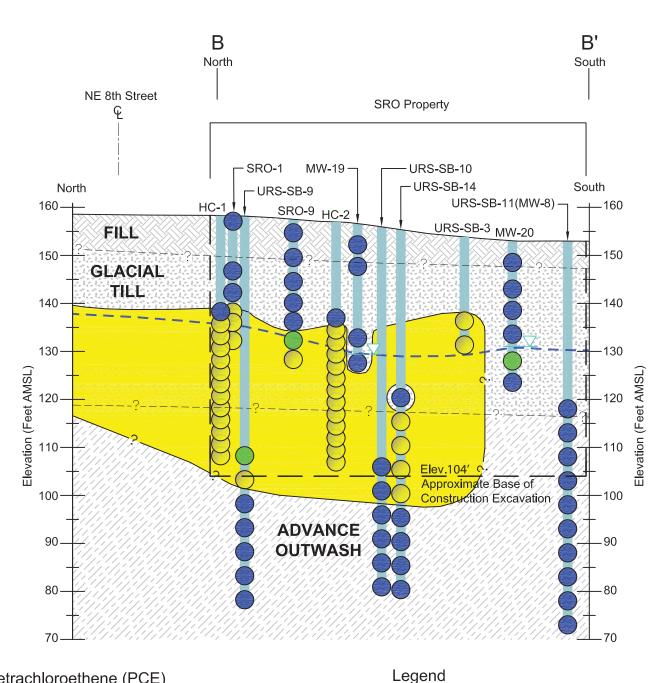
**SRO** Farallon Soil Boring

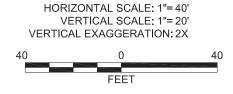
Former Gas Station

C Cross-Section

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	REVISED CLEANUP ACTION PLAN		
LOCATION	10605 AND 10619 NE 8TH ST BELLEVUE, WA		
PREPARED FOR	BOSA DEVELOPMENT CORP		
<b>DATE</b> 9/30/16	<b>DRAWN BY</b> VPB	REVIEWED BY BTC	PROJECT NUMBER 72001.0

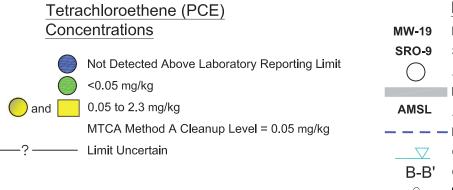






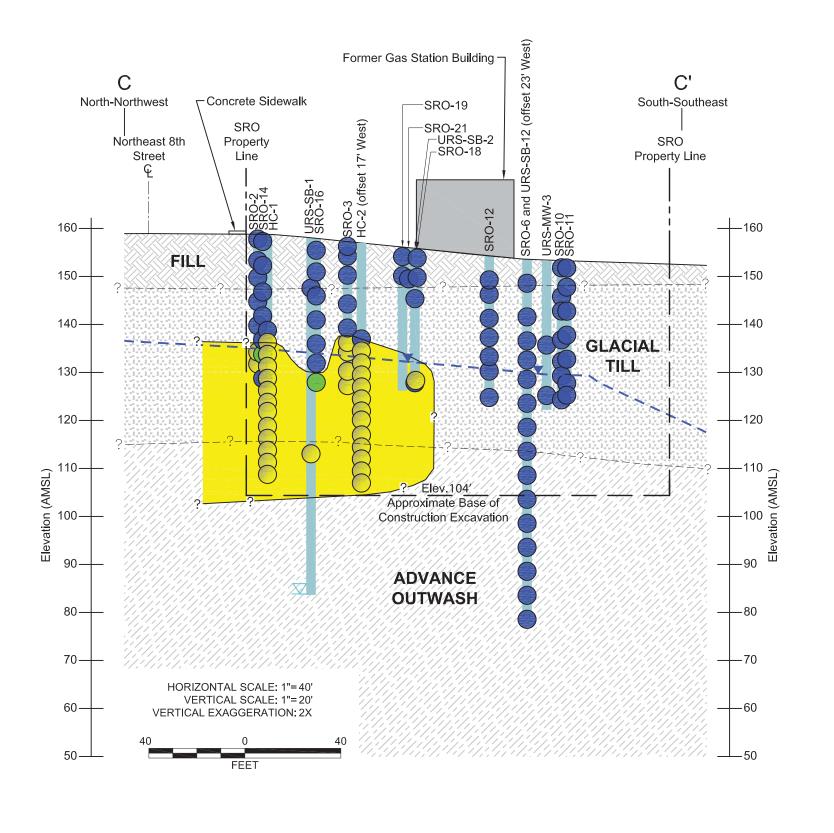
The locations of all features shown are approximate.
 This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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

Reference: Background image provided by URS, dated 2011. Modified by GeoEngineers.



# 

FIGURE 14				
PCE SOIL CONTAMINATION CROSS SECTION B-B'				
EPARED ENVIRONMENTAL BY PARTNERS INC				
REPORT	REVISED CLEANUP ACTION PLAN			
CATION	10 605 AND 106 19 NE 8TH ST BELLEVUE, WA			
PEPA RED FOR	I BOSADEVELOPMENI CORP			
<b>DA TE</b> 9/30/16	<b>DRAWN BY</b> VPB	REVIEWED BY BTC	<b>PROJECT NU MBER</b> 72 001.0	



### Legend

MW-8 Monitoring Well Location

SRO-9 Soil Boring Location

Approximate Soil Sample Depth

✓ — — Perched Groundwater Level (August 23, 2010)✓ Deep Groundwater Level (August 23, 2010)

C-C' Cross-Section Location Shown on Figure 12

AMSL Above Mean Sea Level (NAVD88 datum)

---?-- Inferred Geologic Contact

Planned Development Excavation Extent

L \_\_\_ J

# Tetrachloroethene (PCE) Concentrations

Not Detected Above the Laboratory Reporting Limit

<0.05 mg/kg</li>and ≥0.05 to 2.3 mg/kg

MTCA Method A Cleanup Level = 0.05 mg/kg

——?—— Limit Uncertain

### Notes

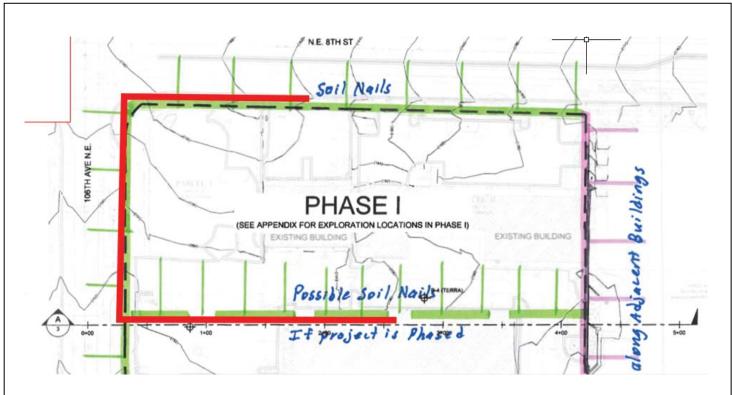
- 1. The locations of all features shown are approximate.
- 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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

Reference: Cross-Section B-B' for the Former Thinker Toys site by Farallon Consulting, dated 11/02/10. Soil chemical data obtained between 2008 and 2011.

### FIGURE 15

PCE SOIL CONTAMINATION CROSS SECTION C-C'

PREPARED BY	PARTNERS INC		
REPORT	REVISED CLEANUP ACTION PLAN		
LOCATION	10 605 AND 106 19 NE 8TH ST BELL EVUE, WA		
PREPA RED FOR	BOSA DEVELOPMENT CORP		
<b>DA TE</b> 9/30/16	<b>DRAWN BY</b> VPB	REVIEWED BY BTC	PROJECT NU MBER 72 001 .0



### Legend

**⊕** 

Borehole Number and Approximate Location

\_\_-

**Project Boundary** 



Conceptual Shoring Plan (Provided by Golder)

Soil Nail Shoring Plan Soldier Pile Shoring

Excavation Sidewall with Possible Adjacent Areas of PCE Contamination (added by GeoEngineers). Perimeter Contaminated Groundwater Capture System to be Located Here. Extent will be Subject to Revision Based on Confirmation Sampling Test Results.

### 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.

Reference: Figure 2 Exploration Location Plan by Golder Associates dated 3-27-13.



#### NOTES

- 1. SURVEY PROVIDED BY BUSH, ROED, AND HITCHINGS, INC. MARCH, 2013
- CONTOUR DATA IS BASED ON TIN SURFACE DATA CREATED FROM SURVEYED SOURCE DATA. SINCE THIS DATA WAS PROVIDED BY OTHERS, GOLDER ASSOCIATES INC. MAKES NO WARRANTY AS TO THE ACCURACY OF THIS SURFACE DATA. ANY AND ALL DECISIONS BASED ON THIS DATA ARE DONE SO AT THE SOLE RISK OF THE USER.

# FIGURE 16 CONCEPTUAL SHORING PLAN WITH PHASE I GROUNDWATER CAPTURE SYSTEM

PREPARED BY	PART	RONMENT NERS INC	A L
REPORT	REVISED CLEANUP ACTION PLAN		
LOCATION	10 605 - 10 635 NE 8TH STREET BELLEVUE, WASHINGTON		
PREPARED FOR	BOSA DEVELOPMENT CORP		
<b>DA TE</b> 9/30/16	<b>DR AWN BY</b> VPB	REVIEWED BY BTC	<b>PROJECT NUMBER</b> 72 001 .0

Attachment A
Opinion on Proposed Cleanup Action
dated September 8, 2014 by
Washington Department of Ecology



# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000 711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

September 8, 2014

Mr. David S. Schooler Sterling Realty Organization Company 600 106th Avenue NE, Suite 200 Bellevue, WA 98004

Re: Opinion on Proposed Cleanup of a Property Associated with a Site:

Property Address: 10605 and 10619 NE 8th Street, Bellevue, WA 98004

Facility/Site No.: 5569973
VCP Project No.: NW2817
Cleanup Site ID No.: 7649

Dear Mr. Schooler:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of a Property associated with the **Bellevue Corner Property UNOCAL 4511** facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

### **Issues Presented and Opinion**

- 1. Upon completion of the proposed cleanup, will further remedial action likely be necessary at the Property to clean up contamination associated with the Site?
  - NO. Ecology has determined that no further remedial action will likely be necessary at the Property to clean up contamination associated with the Site.
- 2. Upon completion of the proposed cleanup, will further remedial action likely still be necessary elsewhere at the Site?

YES. Ecology has determined that further remedial action will likely still be necessary elsewhere at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

eccent 1250018



### Description of the Property and the Site

This opinion applies only to the Property and the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.

### 1. Description of the Property.

The Property includes the following tax parcels in King County, which were affected by the Site and will be addressed by your cleanup:

- 1544100221
- 1544100216

**Enclosure A** includes a legal description and survey map of the Property. **Enclosure B** includes a diagram of the Site that illustrates the location of the Property within the Site.

### 2. Description of the Site.

The Site is defined by the nature and extent of contamination associated with the following releases:

- Tetrachloroethylene (PCE) and related degradation products; methylene chloride, chloroform, chloromethane; gasoline-, diesel-, and oil-range petroleum hydrocarbons (TPHg, TPHd, TPHo), benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE) into the Soil.
- PCE and related degradation products and naphthalene into the Ground Water.

Those releases have affected more than one parcel of real property, including the parcels identified above.

**Enclosure B** includes a detailed description and diagram of the Site, as currently known to Ecology.

### 3. Identification of Other Sites that may affect the Property.

Please note the Thinker Toys Former facility (Facility Site ID # 2462690, VCP Site No. NW2338) also affects the Property. This opinion applies to contamination associated with the Thinker Toys Former facility that has migrated onto the Property.

### **Basis for the Opinion**

This opinion is based on the information contained in the following documents:

- 1. Sweet-Edwards/EMCON, Inc, *Preliminary Environmental Site Assessment (PESA)*, *Unocal Service Station 4511*, *Bellevue, WA*, September 5, 1990.
- 2. EMCON Northwest, Inc., Underground Storage Tank Closure Assessment, UNOCAL Corporation Service Station 4511, 106th Avenue and NE 8th Street, Bellevue, WA, May 21, 1992.
- 3. Terra Associates, Inc., Limited Phase II Environmental Site Assessment, SRO Site, SEC NE 8th Street and 106th Avenue NE, Bellevue, WA, (Ecology's file copy is missing laboratory data report enclosed), July 17, 2008.
- 4. URS, Report, Limited Phase II Site Investigation, SRO Bellevue Corner Property, NE 8th and 106th Avenue, Bellevue (Ecology's file copy is missing Appendices C and D) WA, October 10, 2008.
- 5. SoundEarth Strategies, Inc., Remedial Investigation and Focused Feasibility Study Report, Former Thinker Toys Property, 10610 Northeast 8th Street, Bellevue, WA (only portions of Appendix B and Appendix D reviewed), April 8, 2011.
- 6. GeoEngineers, Remedial Investigation and Feasibility Study (RI/FS), Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, WA, December 30, 2013.
- 7. GeoEngineers, Revised DRAFT Remedial Investigation and Feasibility Study, Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, WA, June 10, 2014.
- 8. GeoEngineers, DRAFT Cleanup Action Plan (CAP), Sterling Realty Organization, Bellevue Corner Property, 10605 and 10619 NE 8th Street, Bellevue, WA, April 10, 2014.

Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or sending an email to nwro\_public\_request@ecy.wa.gov.

This opinion is void if any of the information contained in those documents is materially false or misleading.

### Analysis of the Cleanup

### 1. Cleanup of the Property located within the Site.

Ecology has concluded that, upon completion of your proposed cleanup, **no further** remedial action will likely be necessary at the Property to clean up contamination associated with the Site. That conclusion is based on the following analysis:

### a. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards for the Site and select a cleanup for the Property. The Site is described above and in **Enclosure B**.

**Soil:** Soil samples indicate that petroleum-contaminated soil (PCS) with concentrations greater than Site cleanup levels remains at several locations at the Property. TPHo was detected in near surface soils and TPHg was detected in soils from 1.8 to 9 feet below the ground surface (bgs) at concentrations greater than Site cleanup levels. The nature and extent of the TPH releases have not been defined within the Property. However, the extent of PCS appears to be limited to within the boundaries of the proposed re-development excavation, thus it appears that all PCS on the Property will be removed during construction activities.

PCE and daughter products have been detected in soil samples collected over a large portion of the Property at depths ranging from 12.5 to 65 feet bgs. All PCE-related contamination within the Property boundaries will likely be removed during the re-development activities. However, there may be locations where soil containing these COCs at concentrations greater than cleanup levels will remain below the proposed total depth of excavation.

**Ground Water**: Ground water samples obtained from a number of monitoring wells on the Thinker Toys Former facility and on the Property show a broad PCE plume in the perched zone that extends onto, and likely beyond the Property to the south and west. PCE concentrations close to  $10,000~\mu g/L$  in two wells on the Thinker Toys Former facility suggest the potential for product to be present at that property and indicate the upgradient source of PCE at the Property is the Thinker Toys Former facility. Water quality data from the deep zone indicate that PCE is not present at concentrations greater than Site cleanup levels at the Property or on the Thinker Toys Former property.

Ground water in the perched zone from down gradient wells indicates that impacted ground water is not present at the down gradient Property boundary.

However, west of the Property beneath 106th Avenue NE, the PCE plume appears to extend further southward.

### b. Establishment of cleanup standards for the Site.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

The selected soil and ground water cleanup levels were selected to be protective of unrestricted site uses and drinking water. In addition, a simplified Terrestrial Ecological Evaluation (TEE) was conducted for the Site, and an appropriate exclusion was identified (WAC 173-340-7491(c)(i)). There are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site. Therefore, the proposed cleanup levels are appropriate for the Site.

**Soil:** The proposed cleanup levels for the Property are Method A cleanup levels, except where Method A levels are not available. In this case, Method B cleanup levels protective of potential leaching to potable ground water are proposed. The proposed cleanup levels are presented in Table 4 of the June 2014 Draft RI/FS, and are included in Enclosure B, Table 1 for reference.

The point of compliance for soil is throughout the Property to all depths.

**Ground Water:** The proposed cleanup levels for the Property are Method A cleanup levels, except where Method A levels are not available. In this case, Method B cleanup levels are proposed. The proposed cleanup levels are presented in Table 4 of the June 2014 Draft RI/FS, and are included as Enclosure B. Table 1 for reference.

The point of compliance for ground water at the Property is throughout all water bearing zones within the Property boundary.

### c. Selection of cleanup for the Property.

Ecology has determined the cleanup you proposed for the Property meets the substantive requirements of MTCA. Your proposed cleanup meets minimum cleanup requirements and will not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Site.

The proposed cleanup outline in the Draft CAP includes:

- Soil excavation with off-Site disposal over the entire Property to an approximate depth of 70 feet bgs, with limit of excavation soil confirmation samples to be collected below and on the sidewalls of the excavation.
- Installation of a ground water capture system incorporated into the subsurface perimeter building wall drains with captured ground water discharged under permit to sanitary sewer.
- Installation of a vapor barrier at the base and sides of the underground structure to limit vapor intrusion into the structure.
- Implementation of an Environmental Covenant to operate and maintain the vapor barrier and ground water capture system. The Environmental Covenant may also be necessary to implement ongoing monitoring of ground water in the event that impacted soil or ground water is identified below the bottom slab of the building.

Once the following actions have been completed, Ecology will consider a No Further Action (NFA) determination for the Property:

- The draft CAP needs to be revised to be consistent with the changes made to the June 2014 RI/FS based on Ecology's previous comments and resubmitted to Ecology for review.
- Ecology strongly suggests that the following plans be submitted to Ecology *prior* to re-development of the Property:
  - o Compliance Monitoring Plan for soil compliance sampling and post-remediation ground water monitoring and sampling.
  - Operation and Maintenance Plan for the passive wall drain system, and vapor barrier (including walls and floor of the building).
  - Environmental Materials Handling Plan (EMHP) proposed in the CAP.

Submission of these plans prior to re-development will allow Ecology to comment on these plans and reduce the risk that these plans would be inadequate to support an eventual NFA finding for the Property.

A sufficient number of final limit of excavation sidewall and base of excavation samples below cleanup levels will need to be collected and analyzed for the appropriate parameters to demonstrate that all impacted soil is removed. Final limit of excavation soil samples should be analyzed for TPHg, TPHd, TPHo, and VOCs.

The RI/FS indicates that there may be locations where soil samples containing concentrations of COCs at concentrations greater than cleanup levels will remain below the proposed total depth of excavation. In this case, if removal is not possible, the remaining impacted soil areas should be thoroughly characterized. Residual impacted soils beneath the final limits of excavation will need to be treated or removed or shown to no longer be present at concentrations greater than Site cleanup levels at a later date. Alternately, an Environmental Covenant for the remaining impacted soil could be requested with a Property-specific NFA.

- After the excavation is complete, residual contaminated soil vapor may exist within the Property boundaries due to residual VOCs in soil and ground water surrounding the Property. The new building floor and walls are to be designed to act as a barrier to vapor intrusion. Ecology will need to review those detailed design documents when they are available. Confirmation soil vapor and air sampling will be needed during and following the remediation in accordance with MTCA requirements for demonstrating that cleanup levels have been met at the points of compliance.
- Provisions have to be made during Property re-development to ensure that ground water monitoring of the deep zone beneath and the perched zone adjacent to the Property can continue to be conducted after Property re-development, particularly within the Property boundaries. This should include installation of monitoring wells beneath and adjacent to the new building. A minimum of four consecutive quarters of post-remediation ground water monitoring for TPHg, TPHd, TPHo, and VOCs with concentrations at or less than proposed cleanup levels is required to support an eventual NFA finding for the Property.
- Because the wall drains and vapor barrier are an engineering control to
  prevent ground water and soil vapor migration, an NFA for the Property
  would require ongoing ground water monitoring as part of an
  Environmental Covenant and will have to be authorized by the Property
  owner and all easement holders within the Property.

#### 2. Cleanup of the Site as a whole.

Ecology has concluded that **further remedial action** will still be necessary elsewhere at the Site upon completion of your proposed cleanup. In other words, while your proposed cleanup may constitute the final action for the Property, it will constitute only an **"interim action"** for the Site as a whole.

#### **Limitations of the Opinion**

#### 1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Change the boundaries of the Site.
- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

## 2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

## 3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Property upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

#### 4. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70.105D.030(1)(i).

#### **Contact Information**

Thank you for choosing to clean up your Property under the Voluntary Cleanup Program (VCP). As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: <a href="www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm">www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm</a>. If you have any questions about this opinion, please contact me by phone at (425) 649-7257 or by e-mail at masa461@ecy.wa.gov.

Sincerely,

Maureen Sanchez

Toxics Cleanup Program

Enclosures (2): A – Legal Description and Survey Map of the Property

B – Description and Diagrams of the Site (Including the Property)

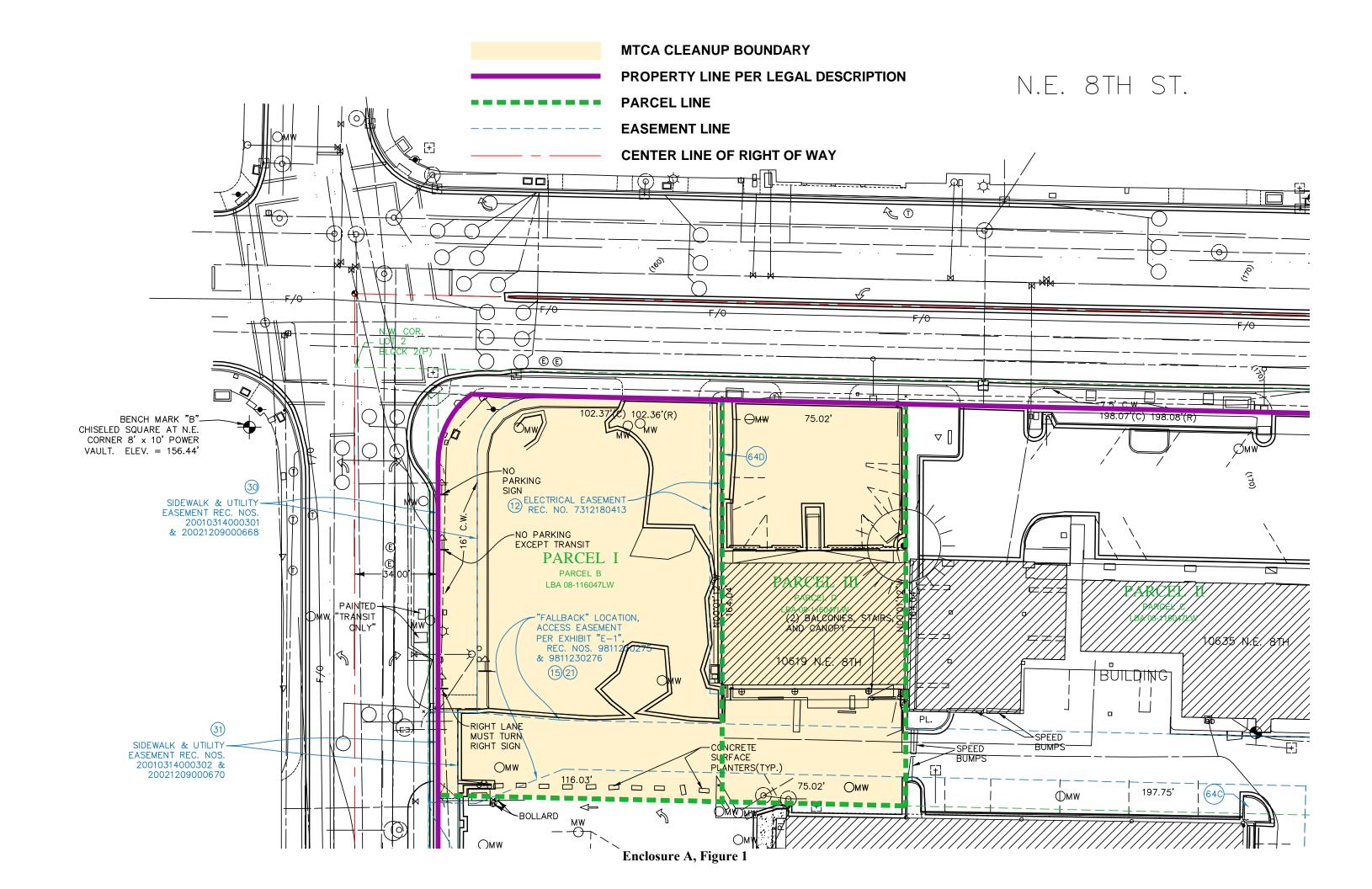
cc: James G. Roth, GeoEngineers

Sonia Fernandez, VCP Coordinator, Ecology

Heather Vick, VCP Site Manager, Thinker Toys Former (NW2338), Ecology

# **Enclosure A**

**Legal Description and Survey Map of the Property** 



#### REVISED PARCEL B DESCRIPTION:

THE EAST 120.00 FEET OF THE WEST 150.00 FEET OF THE NORTH 174.00 FEET OF LOT 2 IN BLOCK 2 OF CHERITON FRUIT GARDENS PLAT NO. 1, ACCORDING TO PLAT THEREOF, RECORDED IN VOLUME 7 OF PLATS, PAGE 47, AS RECORDED IN THE RECORDS OF KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 10.00 FEET THEREOF FOR STREET PURPOSES;

AND EXCEPT THOSE PORTIONS CONVEYED TO THE CITY OF BELLEVUE, A MUNICIPAL CORPORATION BY DEED UNDER RECORDING NO. 20021209000668 AND RECORDING NO. 2002120900670, RECORDS OF IN KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF BELLEVUE, KING COUNTY, WASHINGTON.

From:

Boundary Line Adjustment 08-116047LW, Recorded January 27, 2009, Records of King County, Washington

# EXHIBIT A TO SPECIAL WARRANTY DEED

That portion of Lot 2, Block 2, Cheriton Fruit Gardens Plat No. 1, according to the plat recorded in Volume 7 of Plats, Page 47, as recorded in the Records of King County, Washington, described as follows:

The east 120 feet of the west 150 feet of the northerly 140 feet of said Lot 2; Except the north 10 feet thereof; and,

Except that portion thereof, described as follows:

Commencing at the intersection of the centerlines of NE 8<sup>th</sup> Street and of 106<sup>th</sup> Avenue NE; thence South 00°00'59" East 30.01 feet along said centerline of 106<sup>th</sup> Avenue NE to the northwest corner of said Lot 2; thence continuing South 00°00'59" East 10.00 feet along the west line of said Lot 2; thence South 88°41'48" East 30.01 feet to the intersection of the south margin of NE 8<sup>th</sup> Street and the east margin of 106<sup>th</sup> Avenue NE and the POINT OF BEGINNING; thence South 00°00'59" East along said east margin, a distance of 130.03 feet to the south line of the north 140.00 feet of said Lot 2; thence South 88°41'48" East along said south line a distance of 4.00 feet; thence North 00°00'59" West 102.23 feet to the beginning of a curve to the right having a radius of 34.50 feet; thence northeasterly along said curve to the right through a central angle of 52°49'11", an arc distance of 31.80 feet to a point on the south margin of NE 8<sup>th</sup> Street; thence North 88°41'48" West along said south margin 17.66 feet to the POINT OF BEGINNING;

Grantor reserves from this grant, on behalf of itself and its successors and assigns, a temporary construction and staging easement, over all of the above described property. This easement shall be exercised in accordance with the provisions set forth in Attachment A to this Exhibit A, which is incorporated herein by this reference; and

Grantor further reserves from this grant, a sidewalk and utility easement over that portion thereof, described as follows:

COMMENCING at the intersection of the centerlines of NE 8<sup>th</sup> Street and of 106<sup>th</sup> Avenue NE; thence South 00°00'59" East 30.01 feet along said centerline of 106<sup>th</sup> Avenue NE to the northwest corner of said Lot 2; thence continuing South 00°00'59" East 10.00 feet along the west line of said Lot 2; thence South 88°41'48" East 30.01 feet to the intersection of the south margin of NE 8<sup>th</sup> Street and the east margin of 106<sup>th</sup> Avenue NE;

thence South 00°00'59" East along said east margin, a distance of 130.03 feet to the south line of the north 140.00 feet of said Lot 2; thence South 88°41'48" East along said south line a distance of 4.00 feet to the POINT OF BEGINNING;

thence North 00°00'59" West 102.23 feet to the beginning of a curve to the right having a radius of 34.50 feet; thence northeasterly along said curve to the right through a central angle of 52°49'11", an arc distance of 31.80 feet to a point on the south margin of NE 8<sup>th</sup> Street; thence South 88°41'48" East along said south margin 27.93 feet to the beginning of a curve concave to the southeast, having a radius of 25.00 feet and from which the radius point bears South 01°18'12" West; thence southwesterly along said curve to the left through a central angle of 91°19'11", an arc distance of 39.85 feet; thence South 00°00'59" East 104.45 feet to said south line of the north 140.00 feet of said Lot 2; thence North 88°41'48" West along said south line a distance of 16.00 feet to the POINT OF BEGINNING;

Containing an area of 2107 square feet.

This sidewalk and utility easement shall be exercised in accordance with the provisions set forth in Attachment B to this Exhibit A, which is incorporated herein by this reference.

Situate in the City of Bellevue, King County, Washington.

#### REVISED PARCEL D DESCRIPTION:

THE EAST 75.00 FEET OF THE WEST 225.00 FEET OF THE NORTH 174.00 FEET OF LOT 2 IN BLOCK 2 OF CHERITON FRUIT GARDENS PLAT NO. 1, ACCORDING TO PLAT THEREOF, RECORDED IN VOLUME 7 OF PLATS, PAGE 47, AS RECORDED IN THE RECORDS OF KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 10.00 FEET THEREOF CONVEYED TO THE CITY OF BELLEVUE FOR STREET PURPOSES, BY DEED RECORDED UNDER RECORDING NO. 5038658, IN KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF BELLEVUE, KING COUNTY, WASHINGTON.

#### From:

Boundary Line Adjustment 08-116047LW, Recorded January 27, 2009, Records of King County, Washington After Recording Mail to:

Sterling Realty Organization Co. PO Box 91723 Bellevue, WA 98009



Document Title: Statutory Warranty Deed

Grantor:

EPC Holdings 693 LLC, a Washington limited liability company

Grantee:

Sterling Realty Organization Co.,

, a Washington corporation

Legal Description: Ptn Lot 2, Block 2, Cheriton Fruit Gardens Plat No. 1, Vol 7 P 47

Assessor's Property Tax Account Number: 154410-0216-09

STATUTORY WARRANTY DEED

THE GRANTOR, EPC Holdings 693 LLC, a Washington limited liability company, for good and valuable consideration as part of an I.R.C. Section 1031 Tax Deferred Exchange, convey and warrant to Sterling Realty Organization Co. a Washington corporation, the following described real estate, situated in the County of King, State of Washington:

THE EAST 75 FEET OF THE WEST 225 FEET OF THE NORTH 179 FEET OF LOT 2 IN BLOCK 2 OF CHERITON FRUIT GARDENS PLAT NO. 1, AS PER PLAT RECORDED IN VOLUME 7 OF PLATS, PAGE 47, RECORDS OF KING COUNTY;

EXCEPT THE NORTH 10 FEET THEREOF CONVEYED TO THE CITY OF BELLEVUE FOR STREET, BY DEED RECORDED UNDER RECORDING NO. 5038658, IN KING COUNTY, WASHINGTON.

Subject to all matters of record.

DATED THIS 6<sup>TH</sup> DAY OF OCTOBER, 2006

EPC Holdings 693 LLC, a Washington

limited liability company

by: EPC Exchange Corporation, a Washington

corporation

its: Sole member

Karen S. King, Vice-President

STATE OF WASHINGTON

)ss.

COUNTY OF KING

PAGE001 OF 001

On this 6th day of October, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Karen S. King, to be known to be the Vice-President of EPC Exchange Corporation, sole member of EPC Holdings 693 LLC, a Washington limited liability company, the limited liability company that executed the foregoing instrument, and acknowledged the said instrument to be free and voluntary act and deed of said limited liability company, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument.

Witness my hand and official seal hereto affixed the day and year first above written.

JESSICA C. KELLY NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES MARCH 9, 2009 

Notary Public, State of Washington Residing at: Belle

Commission expires:

Printed name: Jessica

# **Enclosure B**

# Description and Diagrams of the Site (including the Property)

## **Site Description**

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined as PCE and related degradation products; methylene chloride, chloroform, chloromethane; TPHg, TPHd, TPHo, BTEX, and MTBE in soil, and PCE and related degradation products and naphthalene to ground water. The Site is located on King County tax parcels 1544100221 and 1544100216 at 10605 and 10619 NE 8th Street in Bellevue, WA (Property). The Property has been impacted by releases of PCE at the Thinker Toys Former facility located across NE 8th Street to the north (Figure 1).

**Area and Property Description:** The Property is located east of 106th Avenue East and south of NE 8th Street, see **Figure 1.** The Property is in the Bellevue central business district, surrounded by numerous commercial and multi-story condominium developments.

Site History and Current Use: Parcel 1544100221 (10605 NE 8th Street) is 0.43 acres in size and was reportedly undeveloped until 1958 when a retail gasoline station was constructed on the Property by the Union Oil Company of California (Unocal). The gas station consisted of separate shop and station buildings, three gasoline underground storage tanks (USTs), a waste oil UST and an oil UST. In 1969, the gas station was re-developed by Unocal as a Union 76 station. The Union 76 station included two 10,000-gallon gasoline USTs, a heating oil UST, a waste oil UST, three hydraulic hoists, an oil-water separator, and a dry well (Figure 2). The disposition of the three original (1958) USTs is not known. Parcel 1544100221 continued to be used as a service station until 1991 when the station building was demolished and the facilities removed. Approximately 2,000 cubic yards of petroleum-impacted soil were removed from the Property during the closure of the service station. An NFA finding for the Site was issued by Ecology in July 1992 however that NFA is no longer valid due to new information. Parcel 1544100221 is vacant, paved and currently in use as a parking lot.

Parcel 1544100216 is 0.28 acres in size and was used from approximately 1930 to 1958 as part of the Cheriton Fruit Gardens that had fruit trees, berry plants and fields in agricultural use. The 11,250-square foot masonry commercial building on Parcel 1544100216 was constructed in the early 1960s for use as office and retail space. The commercial building on Parcel 1544100216 is currently used for retail businesses.

**Sources of Contamination:** The sources of petroleum hydrocarbon contamination at the Site are the USTs and associated product piping and dispensers, and potentially the former service garage waste oil UST and dry well. Based on data collected at the Property and surrounding area, the source of PCE detected in soil and ground water at the Property is the upgradient Thinker Toys Former facility located north of the Property across NE 8th Street.

**Physiographic Setting:** The Site is situated on top of and near the middle of the Interlake Drift Upland, a topographic highland bordered by Lake Washington on the west and the Lake Sammamish/Sammamish River valley to the east. The upland surface is molded into a series of

north-south trending ridges and valleys, and near the Site slopes gently down to the southwest. Elevations at the Site range from about 150 to 160 feet above mean sea level.

Surface/Storm Water System: Surface water runoff from the Property and surrounding area is captured in the City of Bellevue's storm water drainage system. The runoff is likely directed to the southwest towards Meydenbauer Creek, the surface water body closest to the Site. This creek, and its tributaries, historically drained much of downtown Bellevue, but now that drainage is mostly underground in culverts. The creek daylights about ½-mile southwest of the Property, where it continues to the south and west before discharging into Lake Washington.

**Ecological Setting:** The downtown area near the Property has little ecological habitat, except for limited landscaping around commercial buildings. The land surface in the Site area is covered by paving and buildings.

Geology: The Property vicinity is mapped as being underlain by glacial till. The Property is generally underlain by approximately 5 to 15 feet of fill underlain by silt, sand, and gravel interpreted as glacial till to approximately 35 to 40 feet bgs. This unit contains some sandy zones, particularly at depths of 20 to 30 feet bgs, where perched water is encountered. Below this unit is a deposit consisting of silt, sand, and gravel that has been interpreted as glacial (Advance) outwash that extends to a maximum depth of approximately 88 feet bgs. A blue-gray dense, sandy silt layer was encountered beneath the Advance outwash at depths ranging from 76 to 88 feet bgs in some borings (Figures 3 and 4).

**Ground Water:** The uppermost ground water at the Site reportedly occurs as a perched zone within sand lenses in the till. This water-bearing zone occurs between 20 and 35 feet bgs, whereas static water levels are generally 22 to 30 feet bgs. Lateral flow in the perched zone is to the south or southwest **(Figure 5).** 

A lower aquifer, the deep zone, has also been identified within the Advance outwash below 74 feet (static water levels range from 74 to 93 feet bgs). Based on water level elevation data from deep zone monitoring wells, flow direction in the deep zone is to the southeast (**Figure 6**).

#### Release and Extent of Contamination in Soil and Ground Water:

Soil: Soil samples indicate that soil containing petroleum hydrocarbon concentrations greater than MTCA Method A cleanup levels remains at several locations at the Property. TPHo was detected in near surface soils and TPHg was detected in soils from 1.8 to 9 feet bgs (at SRO-7) at concentrations greater than Site cleanup levels. The nature and extent of the TPH releases have not been defined. PCE has been detected in soil samples collected at the Property at depths ranging from 12.5 to 65 feet bgs (Figures 7, 8, and 9).

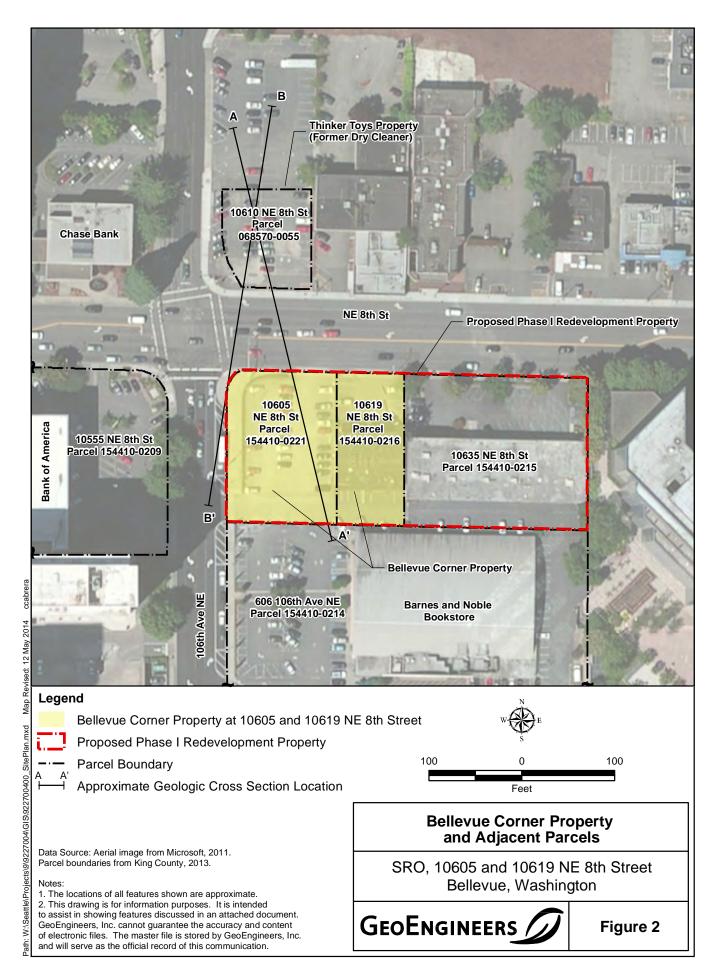
Ground Water: Ground water samples obtained from a number of monitoring wells on the Thinker Toys Site and on the Property show a broad PCE plume in the perched zone that extends onto, and likely beyond the Property. PCE concentrations close to 10,000 µg/L in two wells on

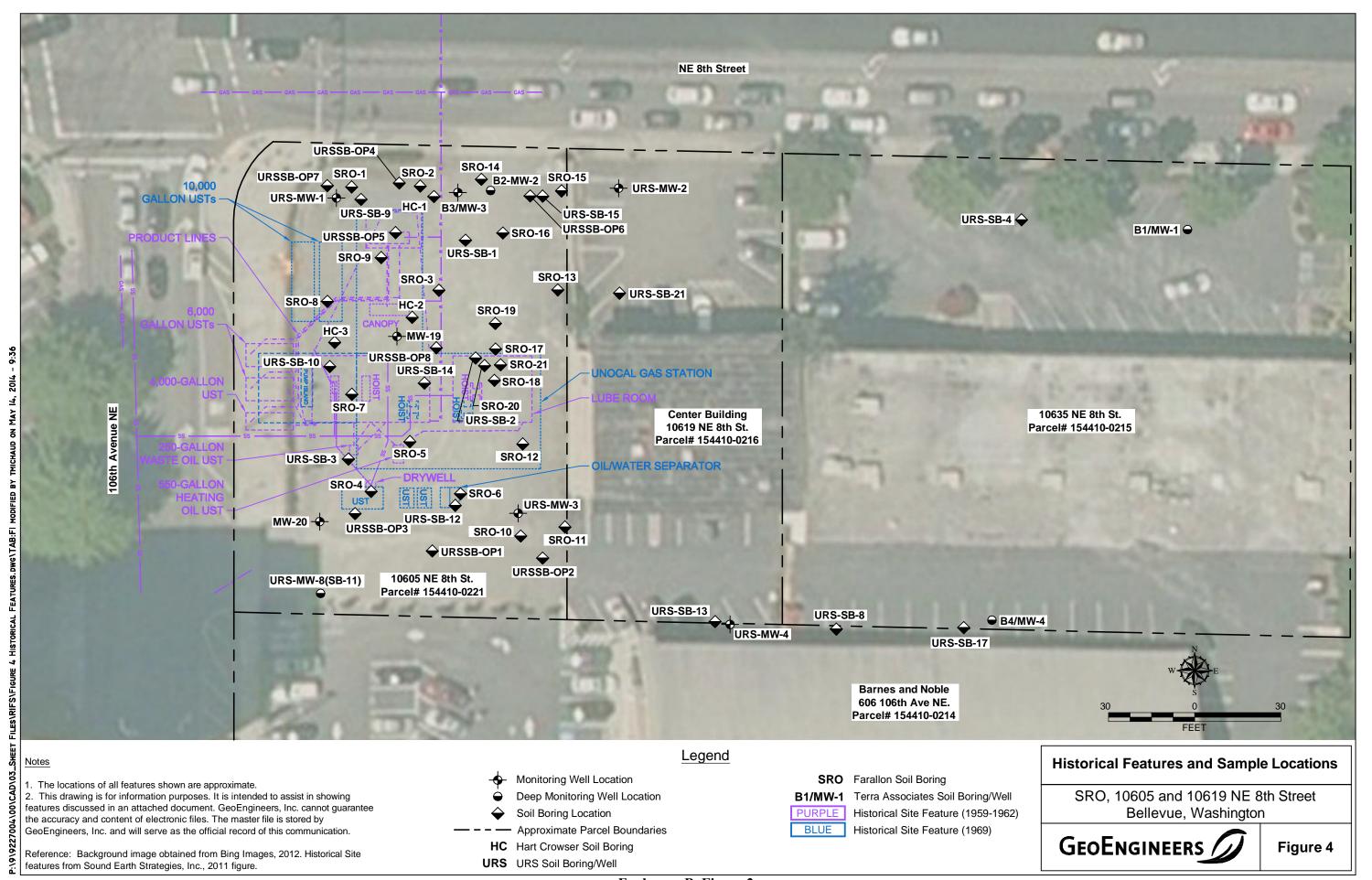
the Thinker Toys property suggest the potential for product to be present and indicate the apparent upgradient source of PCE at the Property. Water quality data from the deep zone indicate that PCE is not present at concentrations greater than MTCA Method A cleanup levels at the Property or at the Thinker Toys property.

Ground water in the perched zone has not been sampled immediately downgradient of the TPH detections in soil to determine if TPH impacts are present in ground water. However, data collected from more distant down gradient wells indicate that impacted ground water is not present in those wells.

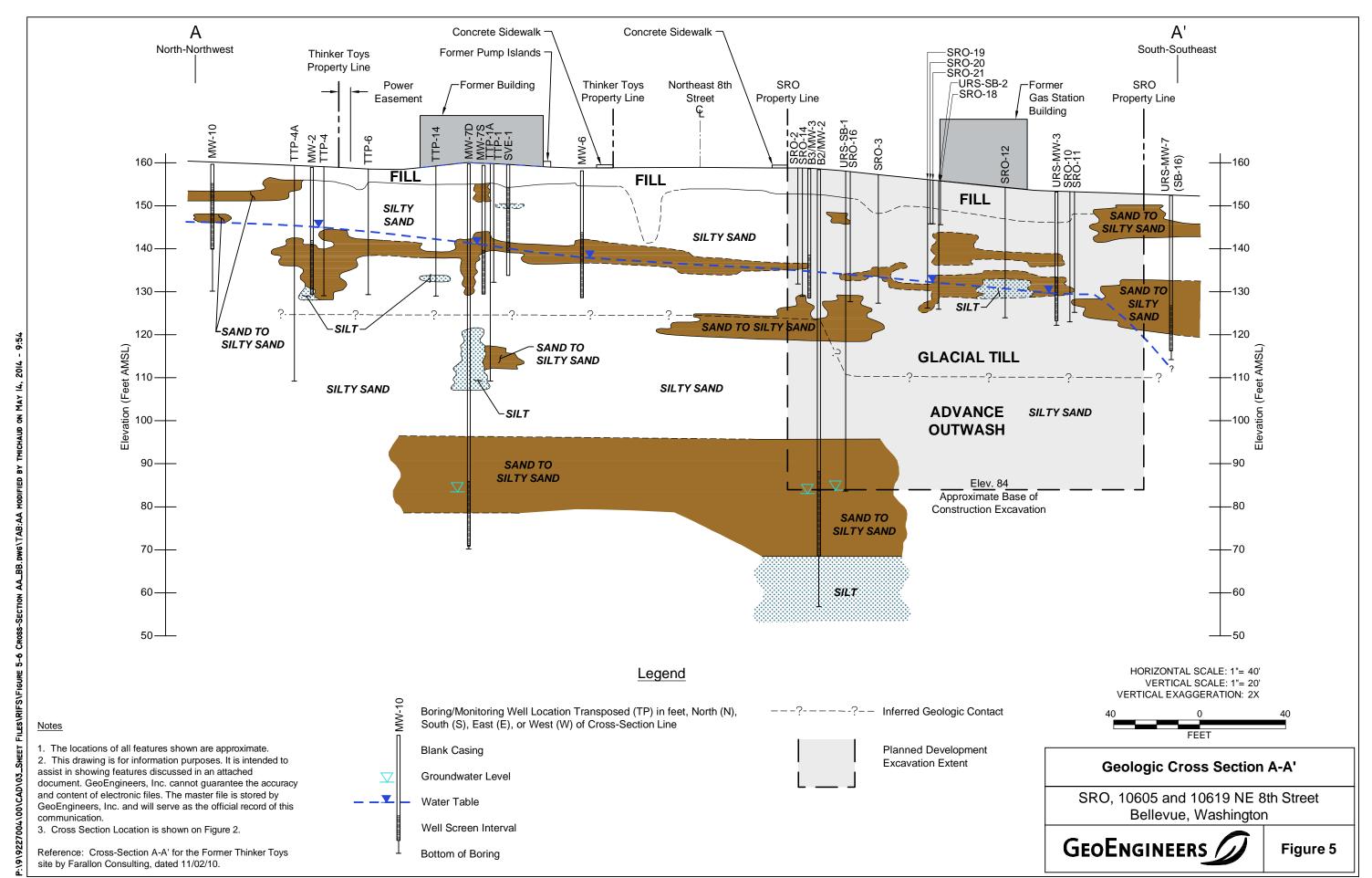
The sampling locations at the Site with select sample results are shown on **Figure 10**, which is included in the Site Diagrams.

# **Site Diagrams**

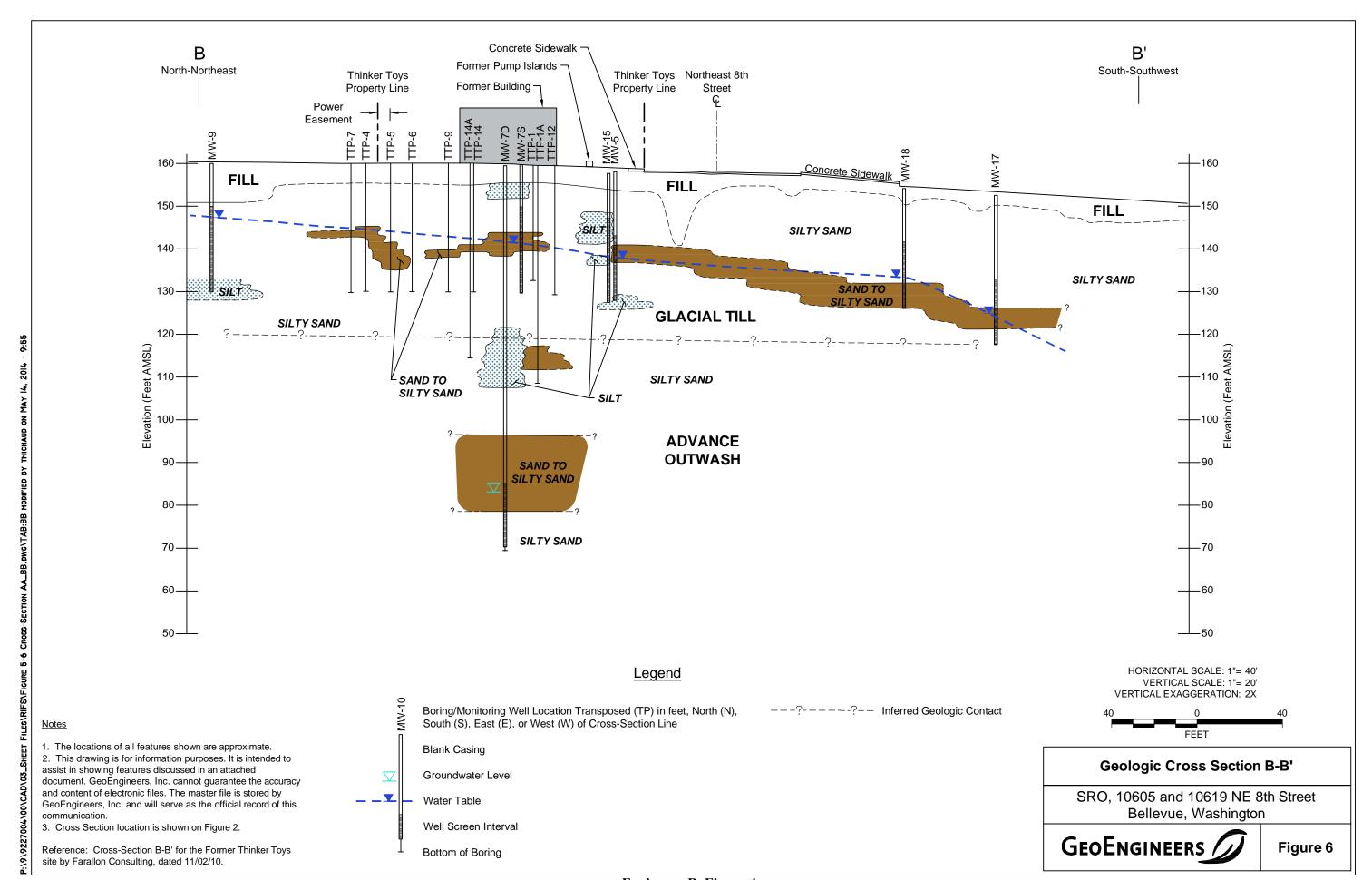




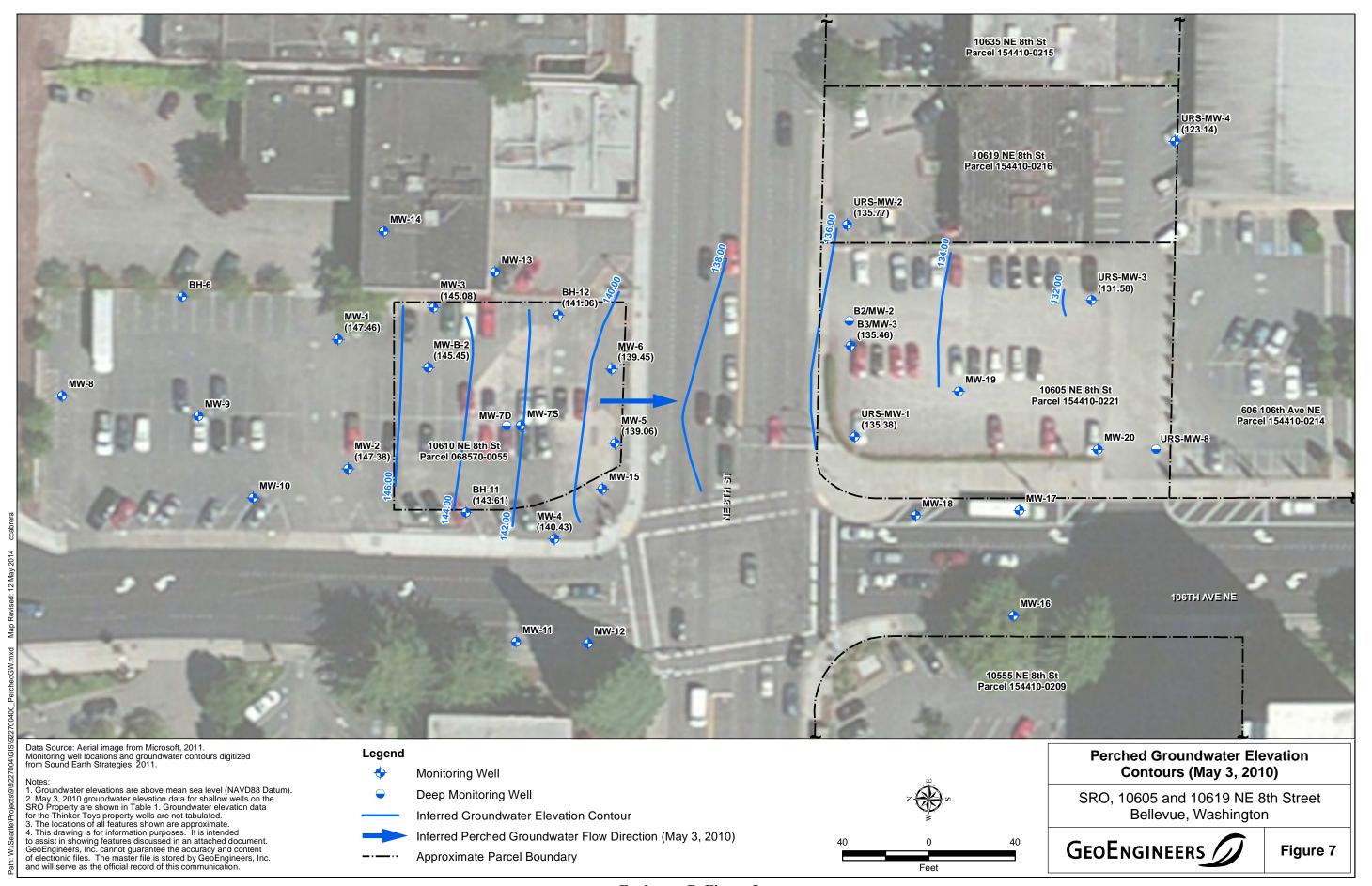
**Enclosure B, Figure 2** 



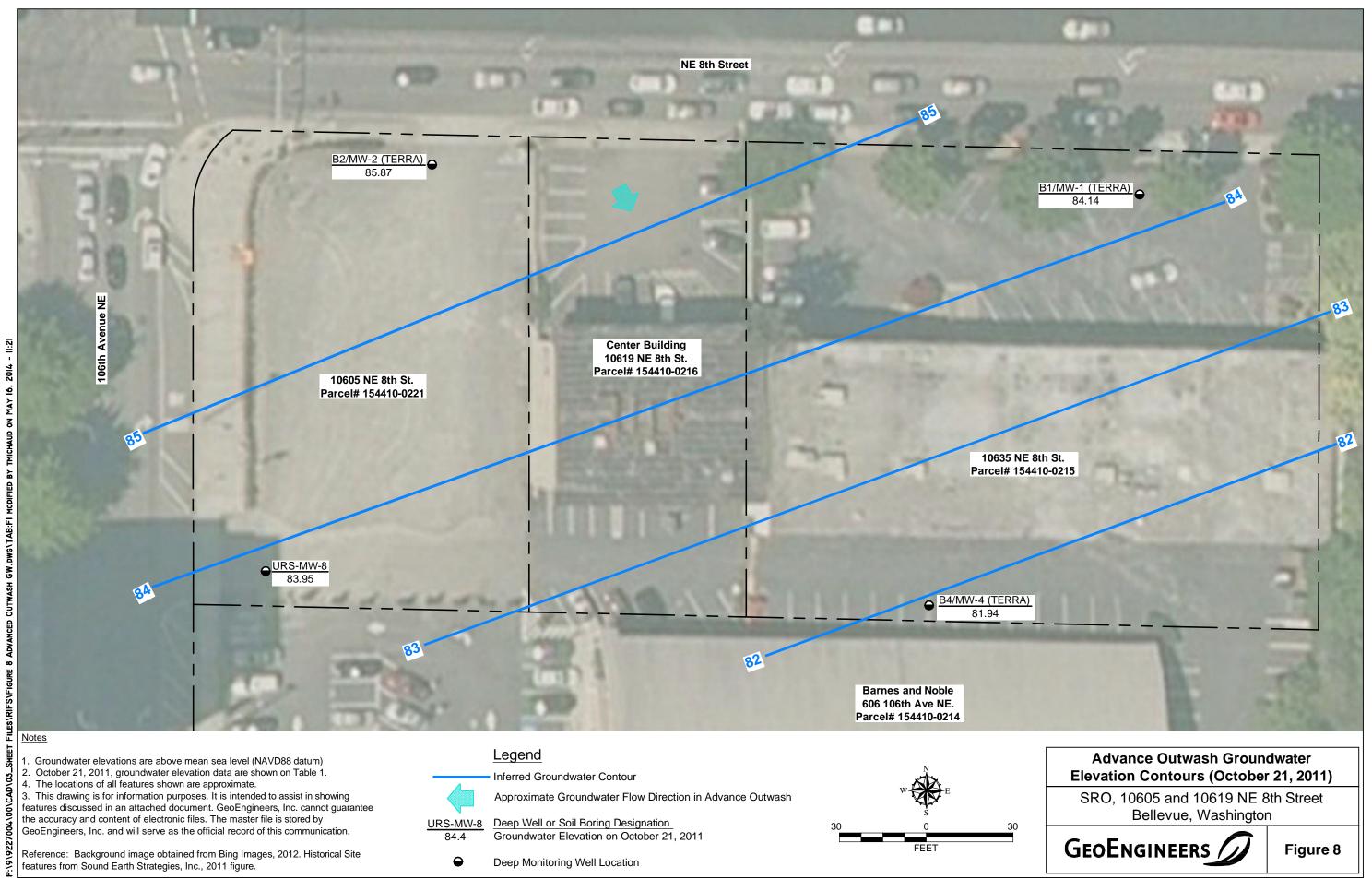
**Enclosure B, Figure 3** 



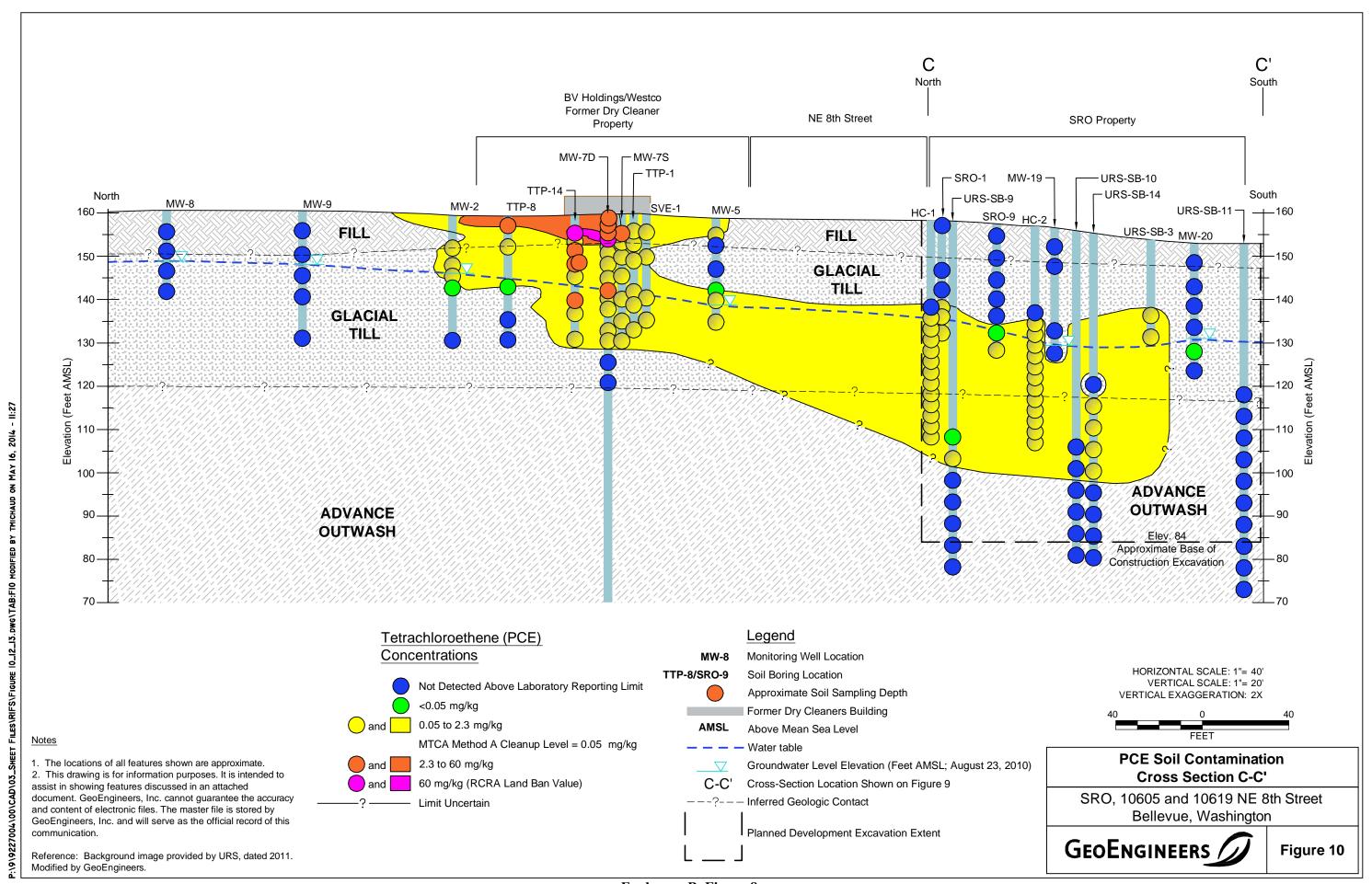
**Enclosure B, Figure 4** 

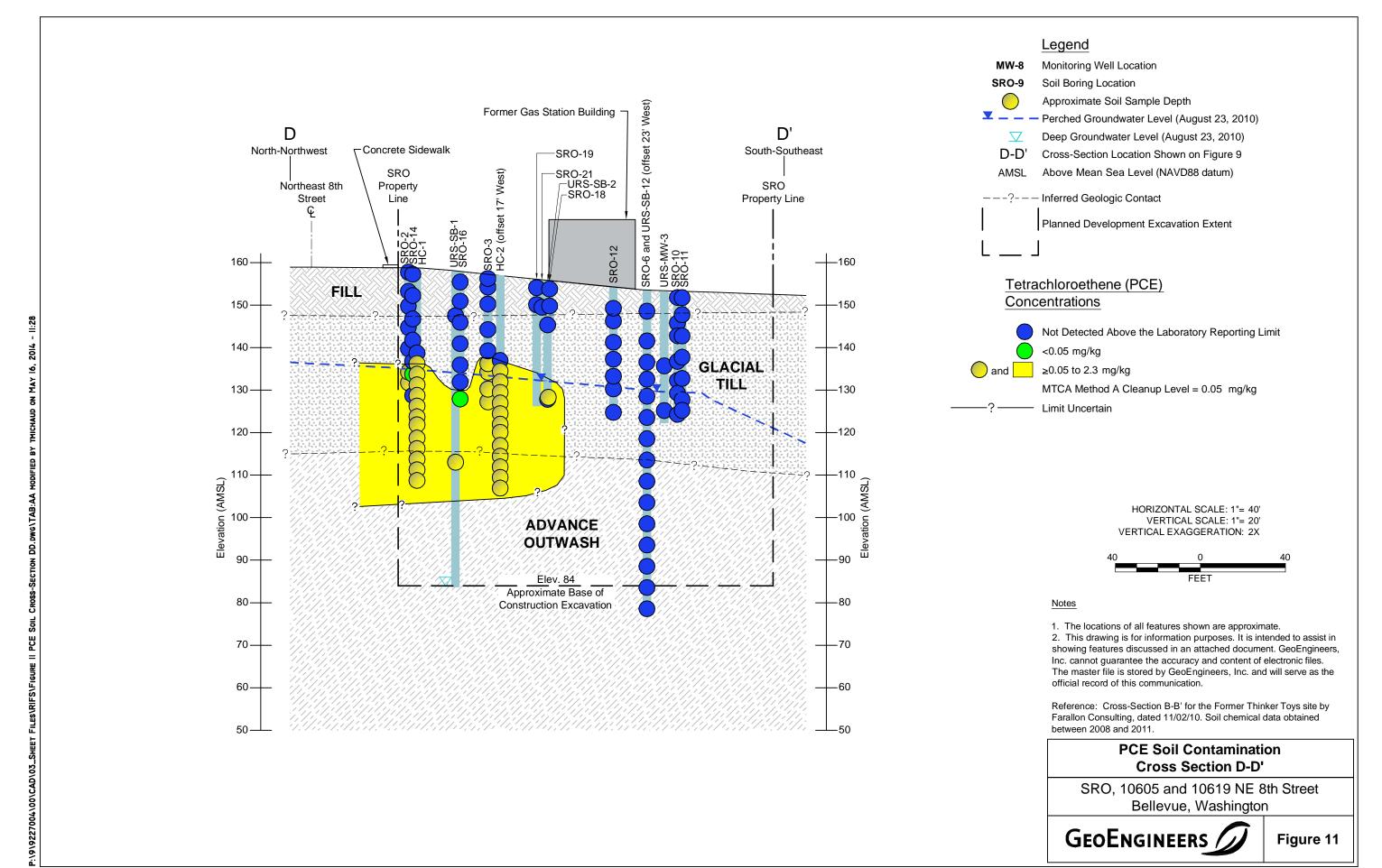


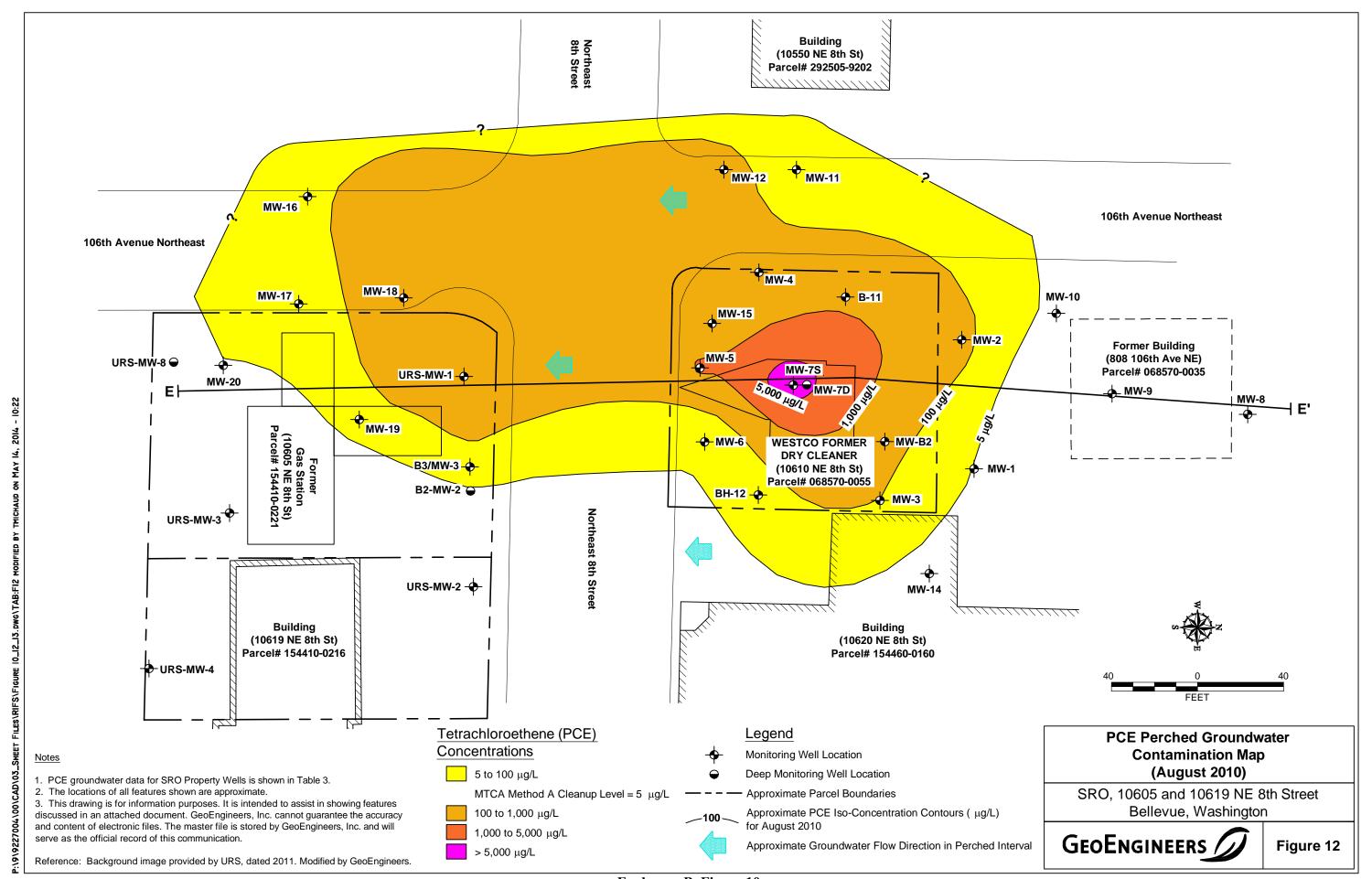
**Enclosure B, Figure 5** 



**Enclosure B, Figure 7** 







#### Table 4

#### Soil and Groundwater Cleanup Levels

# Sterling Realty Organization Property at 10605 and 10619 NE 8<sup>th</sup> Street Bellevue, Washington

Contaminants of Concern	Media	Cleanup Level	Source
Gasoline-range Petroleum Hydrocarbons	Soil	100 (mg/kg)	MTCA Method A, Unrestricted
Diesel-range Petroleum Hydrocarbons		2,000 (mg/kg)	
Oil-range Petroleum Hydrocarbons		2,000 (mg/kg)	
PCE		0.05 (mg/kg)	
TCE		0.03 (mg/kg)	
Benzene		0.03 (mg/kg)	
Toluene		7 (mg/kg)	
Ethylbenzene		6 (mg/kg)	
Lead		250 (mg/kg)	
MTBE		0.1 (mg/kg)	
Xylenes		9 (mg/kg)	
cis-1,2-dichloroethene	Soil	0.076 (mg/kg)	MTCA Method B <sup>1</sup>
trans-1,2-dichloroethene		0.48 (mg/kg)	
1,1-dichloroethene		0.037 (mg/kg)	
1,2-dichloroethane		0.0023 (mg/kg)	
Vinyl chloride		0.0012 (mg/kg)	
Chloroform		0.4 (mg/kg)	
Chloromethane		N/A	
Gasoline-range Petroleum Hydrocarbons	Groundwater	1,000 (µg/L)	MTCA Method A
Diesel-range Petroleum Hydrocarbons		500 (μg/L)	
Oil-range Petroleum Hydrocarbons		500 (μg/L)	
Naphthalenes		160 (µg/L)	
MTBE		20 (μg/L)	
PCE		5 (µg/L)	
TCE		5 (μg/L)	
Benzene		5 (μg/L)	
Toluene		1,000 (µg/L)	
Ethylbenzene		700 (μg/L)	
Xylenes		1,000 (µg/L)	
1,1,1-trichloroethane		200 (μg/L)	
1,2-dichloroethane		5 (μg/L)	
cis-1,2-dichloroethene	Groundwater	16 (µg/L)	MTCA Method B, Standard Formula <sup>2</sup>

#### Notes:

<sup>1</sup>Based on Protection of Groundwater

<sup>2</sup>Based on Potable Groundwater (non-carcinogenic)

PCE = Tetrachloroethene

TCE = Trichloroethene

mg/kg = milligrams per kilogram

MTBE = methyl tert-butyl ether

N/A = none available

 $\mu$ g/L = micrograms per liter

