EXHIBIT B

FINAL CLEANUP ACTION PLAN
BOTHELL FORMER HERTZ FACILITY
BOTHELL, WASHINGTON

City of Bothell

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Issued by:

Washington State
Department of Ecology
Toxics Cleanup Program
Northwest Regional Office
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WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

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EXECUTIVE SUMMARY

This document presents the final Cleanup Action Plan (CAP) for the Bothell Former Hertz Facility Site in Bothell, Washington. This CAP was prepared by the Washington State Department of Ecology (Ecology) in collaboration with the City of Bothell. This CAP has been prepared to meet the requirements of the Model Toxics Control Cleanup Act (MTCA) administered by Ecology under Chapter 173-340 of the Washington Administrative Code (WAC). This CAP describes Ecology's proposed cleanup action for this site and sets forth the requirements that the cleanup must meet.

Background

The Site is generally located on both sides of the newly constructed SR 522 roadway, between Bothell Way NE and 98th / 180th streets, in Bothell, Washington. A 1.92-acre former parcel was located south of the former Bothell Way Northeast (SR 522) but is now bisected by the realigned SR 522. The 1.92-acre parcel no longer exists in its original configuration, although the City currently still owns the land, which now includes the new roadway, and two newly conjugated parcels, one of which is currently being marketed for sale to a developer and the other which the City will retain as part of the extended park property.

The original property formerly housed a Hertz Rentals facility with an office, warehouse, and shop building, smaller buildings, and asphalt-paved parking and storage. The City acquired the Former Hertz Facility in 2009. All buildings were demolished in May 2010, in advance of soil cleanup work, subsequent construction of the new roadway, and redevelopment of the Site as part of the City's overall Downtown Revitalization Plan.

The City entered into an Agreed Order with Ecology in 2011. Investigative activities were initiated in 2008, including a pre-purchase phase II Site Assessment, and explorations in support of the roadway design. RI activities were finalized in 2016. Interim action soil cleanups were conducted in 2010, 2012 and 2013 at the Site.

Chemicals of concern (COCs) at the Site following the two interim action cleanups are:

- Soil:
    - Halogenated volatile organic compounds (HVOCs) from the nearby Bothell Service Center Site
- Ground water:
    - Total petroleum hydrocarbons (gasoline-, diesel- and motor oil-range)
    - Arsenic
    - HVOCs from the nearby Bothell Service Center Site

Cleanup Action Overview

The selected remedy for the Site is a combination of excavation of contaminated soils (already completed as interim actions), monitored natural attenuation for ground water, institutional controls (environmental covenants restricting access to soil and ground water), and ground water monitoring for compliance, as described below:

1) Contaminated Soil – adopt interim actions as the final cleanup

2) Remnant petroleum contaminated ground water – leave in place and implement:
    a. Institutional controls – implement an environmental covenant. Option to lift or modify pending compliance monitoring results
    b. Monitored natural attenuation– provide for compliance monitoring under a Compliance Monitoring Plan

3) Ground water arsenic – include institutional controls in new environmental covenant for the arsenic impacted area and provide compliance monitoring for ground water with option to remove arsenic from the covenant if monitoring shows naturally elevated concentrations unrelated to historical or current contamination at the site.

FINAL CLEANUP ACTION PLAN
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1 INTRODUCTION

1.1 PURPOSE

This document is the final Cleanup Action Plan (FCAP) for the Bothell Former Hertz Facility Site (Site) located in Bothell, Washington. The general location of the Site is shown in Figures 1, 2 and 3. A CAP is required as part of the site cleanup process under Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulations. The purpose of the CAP is to identify the proposed cleanup action for the Site and to provide an explanatory document for public review. More specifically, this plan:

- Describes the Site
- Summarizes current site conditions;
- Summarizes the cleanup action alternatives considered in the remedy selection process;
- Describes the selected cleanup action for the Site and the rational for selecting this alternative;
- Identifies site-specific cleanup levels and points of compliance for each hazardous substance and medium of concern for the proposed cleanup action;
- Identifies applicable state and federal laws for the proposed cleanup action;
- Identifies residual contamination remaining on the Site after cleanup and restrictions on future uses and activities at the Site to ensure continued protection of human health and the environment;
- Discusses compliance monitoring requirements; and
- Presents the schedule for implementing the CAP.

Ecology has made a preliminary determination that a cleanup conducted in conformance with this CAP will comply with the requirements for selection of a remedy under WAC 173-340-360.

1.2 PREVIOUS STUDIES

Previous studies at the Site include the following:

DLH Environmental Consulting, 1993a, *Underground Storage Tank Removal and Decommissioning, WDOE Report Number N12100 for AA Rentals*, dated May 14, 1993.

DLH Environmental Consulting, 1993b, *Underground Storage Tank Removal and Decommissioning, WDOE Report Number 005294 for AA Rentals*, dated September 10, 1993.

DLH Environmental Consulting, 2007, *Letter to Roger Odegard, RE: 18030 Bothell Way NE,* dated September 13, 2007.

HWA GeoSciences, 2007, *Arsenic In Ground Water, Bothell Downtown Redevelopment Projects Area, Bothell, Washington,* March 7, 2011.

HWA, 2008a, *Phase I Site Assessment, Hertz Rentals Property, Bothell, WA*. Prepared for City of Bothell, October 8, 2008.

HWA, 2008b, *Phase II Site Assessment, Hertz Rentals Property, Bothell, WA*. Prepared for City of Bothell, October 10, 2008.

HWA GeoSciences, 2010a, *Limited Remedial Investigation Work Plan, Bothell Hertz Property Solvent Plume*. Prepared for City of Bothell, August 2, 2010.

HWA GeoSciences, 2010b, *Interim Action Work Plan, Former Hertz Rentals Property, Bothell, Washington*. Prepared for City of Bothell, May 7, 2010.

HWA GeoSciences, 2011, *Documentation of Soil Cleanup at Bothell Former Hertz Facility, Bothell, Washington*, August 18, 2011.

HWA GeoSciences, 2012a, *Remedial Investigation Feasibility Study Final Work Plan, Bothell Former Hertz Facility, Bothell, Washington,* September 10, 2012

HWA GeoSciences, 2012b, *Test pit sampling Results for Construction - Soil Characterization & Limited Remedial Action*, September 19, 2012.

HWA GeoSciences, 2012c, *Amendment I to Remedial Investigation Feasibility Study Final Work Plan, Bothell Former Hertz Facility, Bothell, Washington,* December 10, 2012.

HWA GeoSciences, 2013, *Implementation of Approved Hertz RI/FS Work Plan, Remedial Investigation Report, Phase 1B, Bothell Former Hertz Facility, Bothell, Washington,* technical memorandum dated May 31, 2013.

HWA GeoSciences, 2014a, *Interim Action Soil Cleanup, Bothell Former Hertz Facility, Bothell, Washington*, dated April 7, 2014.

HWA, 2014b, *Area Wide Ground Water Monitoring Network, Bothell Agreed Order Sites, Bothell, WA* dated August 22, 2014.

HWA, 2014c, *Area Wide Ground Water Monitoring Second Round Results, September 2014, Bothell Agreed Order Sites, Bothell, WA* dated October 17, 2014.

HWA, 2015a, *Area Wide Ground Water Monitoring Third Round Results, December 2014, Bothell Agreed Order Sites, Bothell, WA* dated January 16, 2015.

HWA, 2015b, *Area Wide Ground Water Monitoring Fourth Round Results, March 2015, Bothell Agreed Order Sites, Bothell, WA* dated April 16, 2015.

Kane Environmental Inc., 2017. *Remedial Investigation & Feasibility Study & Cleanup Action Plan DRAFT Bothell Service Center 18107 Bothell Way NE Bothell, Washington,* dated March 31, 2017.

1.3 REGULATORY FRAMEWORK

The draft CAP was conducted under Agreed Order DE 8375, dated May 12, 2011, between the City of Bothell (City) and the Washington State Department of Ecology (Ecology) to address soil and ground water contamination related to historical releases of hazardous substances at the Site. Requirements under the Agreed Order include performance of a remedial investigation/feasibility study (RI/FS) and development of a draft CAP.

There are no other local, state or federal regulatory actions at the site.

2 SITE DESCRIPTION

2.1 SITE HISTORY

Details of historic property use and the several site assessments performed to date at the Site can be found in the RI. The following is a summary of those assessments, some of which were carried out before the property became a formal MTCA site. Figure 4 shows the Site prior to Cleanup.

According to historical information and interviews, the Site has been developed since 1918; businesses operating at the Site included automobile repair and dealerships, fueling, and equipment rental. In 1993 three leaking underground storage tanks (LUSTs) containing kerosene, diesel, and leaded gasoline, were removed from the property followed by UST site assessments.

To the north of the Site, the Bothell Service Center site is listed on Ecology's Confirmed or Suspected Contaminated Sites List (CSCSL). This former dry cleaning facility had releases of HVOCs to ground water with off-Site migration of contamination in the direction of the Bothell Former Hertz Facility.

Soils in the northern and eastern portions of the Site in the vicinity of the three former LUSTs contained petroleum hydrocarbons exceeding Ecology MTCA Method A cleanup levels, and associated volatile organic compounds (VOCs) below cleanup levels. Ground water in several areas of the Site, including near the LUSTs, also contained petroleum hydrocarbons and VOCs exceeding MTCA Method A cleanup levels. Petroleum hydrocarbons detected in soil and ground water at the Site appeared to be from multiple releases, as several petroleum types were identified (i.e. gasoline, diesel, oil). Some of the VOCs detected in ground water at the Site are typically associated with petroleum products, while some chlorinated VOCs detected in ground water originated at the Bothell Service Center north and hydraulically upgradient of the Site. Other investigations in the vicinity have also confirmed impacts originating at the Bothell Service Center.

Interim action TPH-soil cleanups were completed in three phases; the first one in 2010, before the roadway realignment; the second in March 2012 during utility work prior to the SR 522 roadway realignment, and the third in February/March 2013 during the roadway realignment. This phasing was necessary in order to effectively manage access to contaminated soils beneath the old (operational in 2010) and the new roadways and utilities (operational in 2013), with minimal impacts to traffic and construction activities. The extents of the interim actions are depicted in Figure 6.

2.2 HUMAN HEALTH AND ENVIRONMENTAL CONCERNS

2.2.1 Conceptual Site Model

The conceptual model for the Site identifies the primary contaminant sources, release mechanisms, transport mechanisms, secondary contaminant sources, potential pathways, and exposure routes. Existing chemical data, site characterization data, and identification of potential human and ecological receptors were used to develop the model are shown on Figure 5.

2.2.2 Primary Sources of Contamination and Primary Release Mechanisms

The primary contaminant sources are historic leaking underground storage tanks and repair facilities at the Site and from the upgradient Bothell Service Center Site. The primary contaminants on Site include petroleum hydrocarbons and associated volatile hydrocarbons, and arsenic. The Site also contains HVOCs although remediation of those HVOCs will be evaluated under the RI/FS for the Bothell Service Center Site.

The primary potential release mechanisms for petroleum hydrocarbons include leaks from fuel or lubricant storage systems (e.g., USTs, containers, piping, dispensers, etc.); or accidental spills and leaks. The primary potential release mechanism for arsenic is dissolution from native soils.

2.2.3 Secondary Sources and Release Mechanisms

When a released contaminant is retained in an environmental medium, such as soil, the medium functions as a secondary source for further chemical release. Secondary release mechanisms for contaminants potentially present at the Site include the following:

- Leaching from soil to ground water
- Volatilization from soil and ground water to air

The degree of contaminant leaching is controlled by chemical properties of the contaminants, ground water chemical properties, physical properties of the soil, characteristics of the ground water flow system, and precipitation recharge. Volatilization is controlled by the concentration and chemical properties of the contaminants, physical properties of the soil, and soil gas characteristics.

2.2.4 Pathways and Potential Receptors

Potential exposure routes for human and ecological receptors include the following:

Dermal/Direct Contact – Exposure to chemicals in soil may occur through direct contact with soil. Direct contact is a potential exposure route for current and future on-Site workers or visitors. Burrowing or ground-dwelling mammals and invertebrates may be exposed directly to the soil contaminants.

Inhalation – Particulates from soil can be transported by air and inhaled by potential on-Site and off-Site receptors. Emissions of volatile chemicals from soil and ground water may also be transported as vapors by air. Terrestrial biota could also be exposed to chemicals volatilizing to outdoor air, but if this exposure actually occurs the duration of exposure would be expected to be relatively short. Burrowing animals may be exposed to volatile air contaminants in underground stagnant air while spending time within the burrow.

Ingestion – Ingestion of chemicals in Site soil is a primary exposure route for human and ecological receptors. Uptake by plants is also a potential exposure route.

Potentially complete exposure pathways after completion of the Interim Actions are:

Soil – no Site cleanup level exceedances remaining

Ground water – TPH and Arsenic:

- Current/future construction/utility worker:
  - Direct ingestion of contaminated ground water
- Ecological receptors
  - Dermal contact with ground water in a burrow

Remaining ground water impacts are TPH and arsenic in ground water, which is generally greater than 6 feet below grade in the areas impacted, therefore park visitors or others are unlikely to be exposed to any ground water, as there are no drinking water wells and it is not planned or legal to install any in the impacted area. The only potential human receptors would be future construction workers involved in excavation below ground water level or dewatering work.

Vapor – none except for possible impacts from HVOCs from the Bothell Service Center Site.

Arsenic, diesel, and oil-range petroleum hydrocarbons in ground water do not pose a vapor risk, therefore there are no vapor-related risks or exposure pathways.

2.3 CLEANUP STANDARDS

2.3.1 Contaminants of concern

2.3.1.1 Soil COCs

Based on the studies before the interim cleanups, chemicals of potential concern (COPCs) in Site soil were:

- Total petroleum hydrocarbons (gasoline-, diesel- and motor oil-range)
- BTEX (benzene, toluene, ethylbenzene, and xylenes)
- HVOCs from an upgradient source at the Bothell Service Center Site.

Following the interim action soil cleanups, no samples representing soils remaining on Site had concentrations exceeding Site cleanup levels for TPH and BTEX. Thus there are no soil chemicals of concern (COCs) remaining on Site other than HVOCs from the Bothell Service Center Site.

2.3.1.2 Ground Water COCs

COPCs for ground water in the RI area before the interim cleanups were:

- HVOCs
- Total petroleum hydrocarbons (gasoline-, diesel- and motor oil-range)
- BTEX
- Arsenic

Ground water monitoring data following the soil cleanups and the Site boundaries defined in this RI/FS report indicates the following COCs remain on Site:

- Total petroleum hydrocarbons (diesel- and motor oil-range)
- Arsenic
- HVOCs

2.3.2 Cleanup Levels

Cleanup levels for COCs that need to be addressed by the cleanup in affected media at the site (soil and ground water) are presented in Section 4.3.

3 CLEANUP ACTION ALTERNATIVES AND ANALYSIS

3.1 CLEANUP ACTION ALTERNATIVES

The initial technologies screened for petroleum contaminated ground water at the Site include:

- In-situ bioremediation
- Monitored natural attenuation
- Engineering and institutional controls

The initial technologies screened for arsenic contaminated ground water at the Site include:

- Excavation and removal
- In-situ chemical fixation
- Institutional controls

Cleanup alternatives considered for the remaining petroleum contaminated soil and ground water at the Site were:

- In-situ bioremediation with monitored natural attenuation and engineering / institutional controls
- Institutional controls + monitored natural attenuation

Cleanup alternatives considered for arsenic contaminated ground water at the Site were:

- In-situ chemical fixation with institutional controls
- Institutional controls with compliance monitoring

A contingency plan for ground water will be part of the cleanup remedy in case the ground water has not reached compliance at the end of the compliance monitoring period.

All of the above listed alternatives include the excavation and removal already completed as an interim action.

3.2 INITIAL SCREENING OF ALTERNATIVES

The selected Site-wide combined alternative for both petroleum and arsenic impacts was:

- Monitored natural attenuation (TPH) and institutional controls with compliance monitoring

The other alternatives (In-situ chemical fixation (arsenic), monitored natural attenuation (TPH), and institutional controls with compliance monitoring, and In-situ bioremediation (TPH), in-situ chemical fixation (arsenic), monitored natural attenuation (TPH), and engineering / institutional controls with compliance monitoring) were eliminated during the screening process due to efficacy, and cost-to-benefit ratios evaluated via a disproportionate cost analysis.

3.3 DETAILED EVALUATION OF ALTERNATIVES

The preferred alternative was recommended in accordance with remedy selection requirements under MTCA, and meets all threshold and other requirements specified in WAC 173-340-360.

The selected alternative was evaluated for compliance with the following, as detailed in the RI/FS:

- The minimum requirements in WAC 173-340-360(2)(a)&(b)
    - Protection of human health and the environment
    - Compliance with cleanup standards
    - Compliance with applicable or relevant and appropriate requirements (ARARs)
    - Provide for compliance monitoring
    - Use of permanent solutions to the maximum extent practicable (see also WAC 173-340-360(3))
    - Provide for a reasonable restoration timeframe (see also WAC 173-340-360(4))
    - Consideration of public concerns
- WAC 173-340-360(2)(c) Requirements for ground water cleanup actions
- WAC 173-340-360(2)(e) Requirements for institutional controls (see also WAC 173-340-440)

4 DESCRIPTION OF SELECTED REMEDY

4.1 SITE DESCRIPTION

The 1.92-acre former parcel was located south of the former Bothell Way Northeast (SR 522) but now bisected by the realigned SR 522. The 1.92-acre parcel no longer exists in its original configuration (as depicted in the Agreed Order), although the City currently still owns the land, which includes public right-of-way for the newly constructed and re-aligned SR 522 as well as two newly conjugated parcels one of which is currently being marketed for sale to a developer (Lot D, a portion of which is located on the northern half of this Site, see Figures 2 and 3) and the other which the city will retain as part of the extended park property. The property was formerly developed with a combined office warehouse and shop building that occupied approximately one quarter of the property, as well as three smaller buildings along the east side of the property, with asphalt-paved parking and storage constituting most of the remainder of the property. All buildings were demolished in May 2010, in advance of the soil cleanup work, subsequent construction of the new roadway, and redevelopment of the Site as part of the City's overall Downtown Revitalization Plan.

Whereas the Site was originally defined as including a 1.92-acre property (which no longer exists due to re-platting of parcels and construction of the new roadway) the findings of the RI establish the Site boundaries as shown on Figure 3.

4.2 DESCRIPTION OF THE CLEANUP ACTION

Based on the results of the remedial investigation and feasibility study conducted under MTCA and the application of the selection of remedy criteria, the preferred cleanup alternatives for contaminated soil and ground water at the Site (developed in accordance with WAC 173-340-350 through 173-340-390) includes:

1) Contaminated Soil – adopt interim actions as the final cleanup

2) Remnant petroleum contaminated ground water – leave in place and implement:
   a. **Compliance monitoring** – The City will implement the Compliance Ground Water Monitoring Plan in accordance with the schedule to be laid out in the final Agreed Order executed for the site.

   b. **Monitored Natural Attenuation (MNA)** - Monitored Natural Attenuation (MNA) means the reliance on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remedial objectives within a time frame that is reasonable compared to that offered by more active cleanup methods. Natural attenuation refers to a variety of physical, chemical, and/or biological processes that under favorable conditions, act without human

intervention to reduce the mass, toxicity, mobility, volume, or concentration of hazardous substances in the environment. These in situ processes include: natural biodegradation; dispersion; dilution by recharge; sorption; volatilization; chemical or biological stabilization, transformation or destruction of hazardous substances (WAC 173-340-200).

(i) The main MNA performance parameters will be ground water TPH and arsenic concentrations.

(ii) MNA parameters will also be tested for, including dissolved oxygen, redox potential, pH, conductivity , temperature, nitrate, manganese (soluble), ferrous iron (soluble), sulfate, methane, and alkalinity.

c. **Compliance with cleanup standards**

(i) Compliance with cleanup levels in ground water is defined as eight (8) consecutive quarters at or below MTCA cleanup levels adopted in this cleanup plan.

(ii) If compliance with site cleanup levels for arsenic and TPH at the Site is reached within or at the end of five years, the City will not be required to conduct additional sampling, data analysis, or modeling for arsenic and TPH at the Site.

At that time, the City may request lifting the environmental covenants for arsenic and TPH in ground water at the Site.

(iii) If compliance with site cleanup levels for arsenic and TPH at the Site is not reached within or at the end of five years the City shall take the following actions:

- If arsenic only exceeds cleanup levels, the City shall carry out the requirements of a Statistical and MNA-Based Analysis for arsenic in accordance with Section (d) below.

  The City will not be required to conduct additional sampling, data analysis, or modeling for TPH in the ground water at the Site.

  At that time, the City may request modification of the environmental covenant to remove TPH as a chemical of concern in ground water at the Site.

- If TPH only exceeds cleanup levels, the City shall carry out the requirements of a Statistical and MNA-Based Analysis for TPH in accordance with Section (d) below.

  The City will not be required to conduct additional sampling, data analysis, or modeling for arsenic at the Site.

  At that time, the City may request modification of the environmental covenant to remove arsenic as a chemical of concern at the site.

- If both TPH and arsenic exceed cleanup levels, the City shall confer with Ecology, and Ecology will decide whether the City shall carry out the requirements of a Statistical and MNA-Based Analysis in accordance with Section (d) below, or carry out the requirements of a Contingency Plan in accordance with Section (e) below.

d. **Statistical and MNA-Based Analysis.**

(i) Purpose**.** The purpose of a Statistical and MNA-Based Analysis is to ascertain whether MNA is occurring at a rate, and in a restoration timeframe, that is acceptable to Ecology.

(ii) Plan and schedule**.** The City will prepare a Statistical and MNA-Based Analyses plan and schedule for Ecology's approval. The City's plan may include one or more of the following analyses options:

- Determining the plume status with non-parametric statistical tests, graphical and regression analysis
- Estimating the bulk attenuation rate constant
- Estimating the biodegradation rate constant
- Estimating the restoration time
- Evaluating the geochemical indicators of biodegradation or other natural attenuation processes

The City may also propose additional options for Ecology's consideration.

Ecology's ultimate choice of appropriate analytic methods is not restricted to those listed above.

(iii) Implementation by City for Ecology's Approval. Upon Ecology's approval of the City's Statistical and MNA-Based Analysis plan and schedule, the City will carry out the plan and present its results to Ecology for Ecology's consideration and approval.

- If Ecology concludes, based on the City's Statistical and MNA-Based Analysis, and/or other information, that MNA is not progressing at the Site at a rate achievable in a restoration time frame that is acceptable to Ecology, the City will carry out the requirements of a Contingency Plan in accordance with Section (e) below.

- If Ecology concludes, based on the City's Statistical and MNA-Based Analysis, and/or other information, that MNA is progressing at the Site at a rate achievable in a restoration time frame that is acceptable to Ecology, Ecology may extend the MNA monitoring periods as appropriate. For exceedances of ground water arsenic only or ground water TPH only, Ecology currently expects such extended monitoring to occur as follows:

    - **Ground water arsenic exceedances only**. If only arsenic remains above cleanup levels when TPH reaches compliance, the City will perform two additional years of monitoring for arsenic.

      If compliance with site cleanup levels for arsenic at the Site is reached within or at the end of that two year period, the City will not be required to conduct additional sampling and Statistical and MNA-Based Analysis for arsenic at the Site. The City may request lifting the environmental covenant at the Site.

      If, at the end of two years, arsenic levels at the Site remain above cleanup levels, the City may attempt to demonstrate to Ecology that elevated levels of arsenic in the ground water represent locally high natural background levels of arsenic or are related to some other naturally-occurring variable (e.g., precipitation).

      If Ecology finds that arsenic levels at the Site represent locally high natural background levels or are related to some other naturally-occurring variable, the City will not be required to conduct additional sampling and Statistical and MNA-Based Analysis for arsenic at the Site. At that time, the City may request modification of the environmental covenant to remove arsenic in ground water as a chemical of concern at the Site.

      If Ecology finds that arsenic levels at the Site do not represent locally high natural background levels and are not related to some other naturally-occurring variable, the City will carry out the requirements of a Contingency Plan in accordance with Section (e) below.

- **Ground water TPH exceedances only.** If only TPH remains above cleanup levels at the Site, the City will perform additional monitoring for TPH for a duration that is expected to achieve the restoration time frame calculated in the Statistical and MNA-Based Analyses.

  If, within that restoration time frame, eight successive quarters of measurements at the Site are below cleanup levels, the City will not be required to conduct additional sampling and Statistical and MNA-Based Analysis for TPH in the ground water at the site. At that time, the City may request modification of the environmental covenants for to remove TPH in ground water as a chemical of concern at the Site.

  If, at the end of that restoration time frame, eight successive quarters of measurements at the Site are not below cleanup levels, the City will carry out the requirements of a Contingency Plan in accordance with Section (e) below.

  Table 1 summarizes the actions to be taken based on the results of the compliance monitoring.

e. **Contingency Planning**

(i) **Purpose.** A Contingency Plan for ground water is part of the cleanup remedy if MNA is not occurring at a rate, and in a restoration timeframe, that is acceptable to Ecology.

(ii) **Plan and Schedule.** If a Contingency Plan is required, the City will prepare, for Ecology's approval, a recommended plan and schedule for achieving cleanup at a rate, and in a restoration timeframe, that is acceptable to Ecology. The City's plan may include one or more of the following options:

- Continued monitoring based on a recalculated/recalibrated restoration timeframe.
- In situ bioremediation
- Chemical stabilization of arsenic. Chemical stabilization is expected to require additional laboratory testing of site ground water to speciate the arsenic, bench/lab scale testing to select appropriate treatment chemicals, pilot and tracer testing to verify cleanup viability, etc.

The City may also propose additional options for Ecology's consideration.

Ecology's ultimate choice of contingency remedial action is not restricted to those listed above.

(iii) **Work Plans and schedules.** Upon Ecology's approval of a Contingency Plan, the City will provide Ecology with one or more work plans and schedules for Ecology's consideration and approval.

(iv) **Implementation.** Upon Ecology's approval of the City's work plan(s) and schedule(s), the City will carry out the work plan.

f. **Five year periodic site reviews.** Five year periodic site reviews are a MTCA requirement for sites with environmental covenants. Ecology will assess ground water compliance at that time, in addition to the assessments described above.

The RI indicates that HVOCs in ground water at the northern portion of the Site are from the Bothell Service Center Simon & Son site, located 200 feet north and upgradient of the Site. PCE, trichloroethene (TCE), vinyl chloride (VC), and cis-1,2-dichloroethene (1,2-DCE) were detected at concentrations exceeding MTCA cleanup levels in several Site wells and numerous upgradient wells leading to the source area at the Bothell Service Center Simon & Son site. The Bothell Service Center Simon & Son site is also owned by the City, and is undergoing investigation cleanup under a separate Agreed Order with Ecology.

For ground water, the HVOC issues will be addressed under the Bothell Service Center Simon & Son Agreed Order.

There are currently no buildings over the affected areas at the Site. If buildings are planned prior to cleanup in those areas, VI assessment will be conducted under the Bothell Service Center Simon & Son Agreed Order and appropriate vapor mitigation measures implemented for the buildings (e.g., vapor barriers, sub-slab depressurization systems, etc.).

4.3 CLEANUP STANDARDS AND POINT OF COMPLIANCE

Cleanup standards consist of appropriate cleanup levels applied at a defined point of compliance that meet applicable state and federal laws (WAC 173-340-700). Cleanup levels are described below.

4.3.1 Soil

Soil remediation levels proposed in the *Interim Action Work Plan* (Parametrix, 2010) include:

- MTCA Method A Soil Cleanup Levels for Unrestricted Land Use (WAC 173-340, Table 740-1).
- MTCA Method B TPH Soil Cleanup Levels for direct contact and protection of ground water

HWA performed an evaluation of Method B risk-based TPH soil cleanup levels for the Site. The evaluation characterized TPH-impacted soil via analysis of petroleum hydrocarbon fractionation and other target compounds in order to evaluate whether the standard MTCA Method A soil cleanup levels were appropriate for the Site compared to MTCA Method B risk-based soil TPH cleanup levels. The results of the petroleum hydrocarbon fractionation analyses (NWVPH/NWEPH analysis) were input into Ecology's MTCATPH11.1 spreadsheet model (Ecology, 20070 to determine TPH soil cleanup levels protective of human health via direct contact and via leaching to a source of potable ground water. HWA's evaluation of MTCA Method B risk-based cleanup levels for TPH-impacted soil at the Site is presented in Appendix C. The calculated Method B cleanup level for gasoline-range petroleum hydrocarbons at the Site is 3,504 milligrams per kilogram (mg/kg). The Method B TPH cleanup level of 13,263 mg/kg is a calculated value for protection of potable ground water based upon Ecology's three-phase partitioning model (Equation 747-1 in WAC 173-340-747). The MTCA Method A cleanup level for gasoline-range petroleum hydrocarbons with no detectible benzene in soil is 100 mg/kg. The calculated Method B cleanup levels for diesel- and oil-range petroleum hydrocarbons at the Site range between 2,954 and 4,036 mg/kg depending on the mixture of hydrocarbon fractions and specific compounds.

The resulting soil remediation levels used (i.e. the more stringent of Method A or B) meet all the requirements of WAC 173-340-720 through 173-340-760 and should be considered the Site cleanup levels. Soil cleanup levels are summarized below:

Compound	Cleanup level (mg/kg)
TPH Diesel	2000A
TPH Oil	2000A
Gasoline	100/30 A
Benzene	0.03 A
Xylenes	9 A
Arsenic	20 A

A – MTCA Method A soil cleanup level
B - MTCA Method B soil cleanup level

4.3.2 Ground Water

Appropriate levels of cleanup for ground water are determined by the highest beneficial use of that ground water. Shallow ground water present at the Site is not currently used for drinking water, and no water wells are located downgradient of the Site. The appropriate ground water cleanup levels for the Site are MTCA Method A for petroleum hydrocarbons (500 µg/L for TPH Diesel and 500 µg/L for TPH oil) and Maximum Contaminant Level (MCL) of 10.0 µg/L for arsenic in ground water.

4.3.3 Point of Compliance

The point of compliance is the specific location(s) at which a particular cleanup level must be met in order to demonstrate compliance of a cleanup action. MTCA defines standard and conditional points of compliance.

4.3.3.1 Soil

The standard soil point of compliance under MTCA (WAC 173-340-740 (6)(b-(d))) is:

- For soil cleanup levels based on protection of ground water, the point of compliance shall be established throughout the Site
- For soil cleanup levels based on protection from vapors, the point of compliance shall be established throughout the Site from the ground surface to the uppermost ground water saturated zone
- For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance shall be established in the soils throughout the Site from the ground surface to 15 feet below ground surface.

MTCA recognizes that, for cleanup actions that involve containment or capping, cleanup levels may not be met at the standard point of compliance, but the cleanup action would be determined to comply with cleanup standards provided:

- The selected remedy is permanent to the maximum extent practicable
- The cleanup action is protective of human health and terrestrial ecological receptors
- Institutional controls are implemented to limit activities that could interfere with the long-term integrity of the containment system
- Compliance monitoring and periodic reviews are conducted
- The capped or contained COCs and measures to prevent migration and contact with them are specified in a CAP

The cleanup alternatives are evaluated based on standard soil point of compliance for removal and treatment alternatives (WAC 173-340-740(6)(a)-(e), and for containment remedies (WAC 173-340-740(6)(f)).

4.3.3.2 Ground Water

The standard ground water point of compliance under MTCA (WAC 173-340-720(8)(b)) is in ground water throughout the Site from the uppermost level of the saturated zone to the lowest depth which could potentially be affected.

For this Site, the standard ground water point of compliance is proposed for petroleum hydrocarbon and arsenic impacts, i.e., ground water throughout the Site.

4.4 APPLICABLE, RELEVANT AND APPROPRIATE REQUIREMENTS

Cleanup actions under MTCA (WAC 173-340-710) require the identification of all applicable or relevant and appropriate requirements (ARARs). These requirements are defined as:

"Applicable" requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site.

"Relevant and appropriate" requirements means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site.

The potential ARARs for the Site include three types:

- Chemical-specific
- Location-specific
- Action-specific

Chemical-specific ARARs are typically health- or risk-based values that when applied to site-specific conditions represent cleanup standards. Location-specific ARARs are related to the geographical position and/or physical condition of the site and may affect the type of remedial action selected. Action-specific ARARs are usually technology-based or activity-based

requirements or limitations on actions or conditions taken with respect to specific hazardous substances. The action-specific requirements do not determine the selected remedial alternative, but indicate how or to what level a selected alternative must perform.

Potential ARARs were identified for each medium of potential concern. These potential ARARs are shown in Table 2.

4.5 RESTORATION TIMEFRAME

TPH in soil and ground water - The interim action soil cleanups (which are adopted as the final soil cleanup) were completed in 2013. Institutional controls (environmental covenant) are anticipated to be implemented once the final Agreed Order is effective. MNA is expected to reach cleanup levels within 7 years.

Arsenic in ground water - Institutional controls (environmental covenant) and monitoring are anticipated to be implemented once the final Agreed order is effective.

If monitoring shows elevated arsenic persisting after petroleum hydrocarbon impacts have diminished for an appropriate period of time (two years after five to seven years of combined TPH and arsenic monitoring), arsenic can be attributed to a background condition, and a request can be made to Ecology to remove the institutional controls for ground water at the site.

4.6 COMPLIANCE MONITORING

Compliance monitoring requirements (specified in WAC 173-340-410) include the following elements:

- Protection monitoring to confirm that human health and the environment are adequately protected during implementation of an alternative
- Performance monitoring to confirm that cleanup standards or other performance standards are met
- Confirmational monitoring to monitor the long-term effectiveness of the remedy after completion of the alternative

Petroleum in ground water – The Site remedy would include MNA-based compliance monitoring by ground water monitoring for seven to nine years. Remaining impacts to ground water are as follows:

- HZMW-19 - TPH- oil detected 1 of last 4 rounds (8/2015) at 580 ug/L (cleanup level is 500)

- BLMW-8 - TPH-oil detected 3 of last 4 rounds (12/2014, 3/2015, and 12,2015) at 540, 630, 560, and 510 ug/L (cleanup level is 500)
- BC-16 - TPH-diesel detected 2 of last 4 rounds (12/2014 and 3/2105) at 550 and 600 ug/L, and TPH-oil detected 2 of last 4 rounds (3/2105) at 600 (cleanup level is 500)

Petroleum hydrocarbons were sporadically and inconsistently detected, mostly just above cleanup levels in these wells. The volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylenes (BTEX) have not been detected above Method A cleanup levels following the soil cleanups.

Arsenic in Ground Water - The institutional control remedy for arsenic in ground water provides for compliance monitoring by ground water monitoring for seven to nine years. Remaining arsenic above cleanup levels in ground water are in wells HZMW-1, HZMW-4, HZMW-12, HZMW-17, and BC-16.

A Compliance Monitoring Plan will be submitted as part of the Cleanup Action Plan which describes the monitoring. Compliance monitoring for the remaining petroleum hydrocarbon contamination in ground will be MNA-based. Compliance monitoring for arsenic will be concurrent with petroleum hydrocarbon compliance monitoring (five to seven years), but with an extended period of quarterly monitoring to determine if the arsenic is naturally occurring or induced by the petroleum contamination (two years). Wells to be monitored are:

- TPH-D, TPH–O, MNA parameters: HZMW-19, BLMW-8, BC-16
- Arsenic - HZMW-1, HZMW-4, HZMW-12, HZMW-17, and BC-16

4.7 CONTINGENCY PLAN FOR GROUND WATER

If the petroleum hydrocarbon and arsenic contamination in ground water does not reach compliance within the duration specified in the Compliance Monitoring Plan, additional remedial actions will be assessed for implementation as a contingency action.

If TPH in ground water does not reach cleanup levels or MNA targets, a contingency plan will be developed to treat the ground water via in situ bioremediation. In situ bioremediation may require additional testing to select appropriate treatment. Additional work plans will be provided to Ecology at this point.

If arsenic in ground water is found not to be a background condition, not related to some other variable (e.g., precipitation), and a source of the arsenic can be determined or located, a contingency plan will be developed to treat the ground water via in situ chemical stabilization. Chemical stabilization will require additional laboratory testing of site ground water to speciate the arsenic, bench/lab scale testing to select appropriate treatment chemicals, pilot and tracer

testing to verify cleanup viability, etc. Additional work plans will be provided to Ecology at this point.

Five year periodic site reviews are a requirement under MTCA for sites with environmental covenants. Ecology will assess ground water compliance at that time and also at the end of the compliance monitoring period to determine if MNA is cleaning up the ground water as expected and if compliance has been reached.

If Ecology concludes the remedial actions have not achieved compliance with cleanup levels, Ecology will work with the PLPs to assess whether the remedy remains protective and if additional remedial actions are needed to remediate the contamination remaining in ground water at the site.

4.8 SCHEDULE FOR IMPLEMENTATION

TPH in ground water - The interim action soil cleanups (which are adopted as the final soil cleanup) were completed in 2013. Institutional controls (environmental covenant) are anticipated to be implemented once a final CAP is approved. Monitoring for MNA will be conducted for five to seven years, or until cleanup levels are met for eight consecutive quarters. Combined TPH/MNA/Arsenic monitoring reports will be prepared and submitted to Ecology annually. If TPH compliance with site cleanup levels is reached before five years, no additional data analysis or modelling will be conducted. If cleanup levels aren't reached within five years, statistical and MNA-based analyses will be conducted to ascertain that MNA is occurring at an acceptable rate. If after seven years the analyses indicate MNA is progressing at an acceptable rate, the MNA period may, with Ecology's concurrence, be extended. If not, the TPH contingency plan for additional in situ cleanup may be implemented.

Arsenic in ground water - Institutional controls (environmental covenant) and monitoring are anticipated to be implemented after the CAP is issued and approved, sometime in 2017. Combined TPH/MNA/Arsenic monitoring reports will be prepared and submitted to Ecology annually.

4.9 INSTITUTIONAL CONTROLS

Institutional Controls will be applied to the petroleum and arsenic in ground water impacts. The main component would be environmental covenants restricting access to soil and ground water, as follows:

1. Remnant petroleum contaminated ground water – leave in place and implement:
   - Institutional controls – implement environmental covenants. Option to lift or modify pending compliance monitoring results.

- Ground water monitoring – provide for compliance monitoring under a Compliance Monitoring Plan

2. Ground water arsenic – include institutional controls in new environmental covenant for the arsenic impacted area and provide compliance monitoring for ground water with option to remove arsenic from the covenant if monitoring shows naturally elevated concentrations unrelated to historical or current contamination at the site. For arsenic in ground water, the institutional control could consist of an environmental covenant that documents remaining arsenic contamination in ground water, prohibits withdrawal and use for any purpose other than monitoring, site investigation, or construction-related activities with notification and approval by Ecology. A request to lift the covenant can be made to Ecology if quarterly compliance monitoring from the site shows that the arsenic persists after historical petroleum hydrocarbon ground water contamination has not been detected for an appropriate period of time (two years after five to seven years of combined TPH and arsenic monitoring). If arsenic remains at elevated concentrations over a sufficiently long time period with no other detections of petroleum hydrocarbon contamination, this data can be used to demonstrate that the elevated concentrations represents a locally high natural background for arsenic. Based on this evidence, a request can be made to remove the institutional controls for ground water at the site.

The environmental covenant will document the contamination in soil and ground water. An environmental covenant could prohibit soil excavation and ground water withdrawal for any purpose other than monitoring, and/or site investigation. Excavation or ground water withdrawal for construction-related activities will require notification and approval by Ecology.

4.10 PUBLIC PARTICIPATION

The draft CAP was distributed for public review and comment last April 12 through May 11, 2018. Public participation procedures will be outlined in a Public Participation Plan prepared by Ecology.

Table 1
Decision Table for Ground Water Compliance Monitoring of TPH and Arsenic

Within or at the end of five years, if:	**Actions to be taken:**	**Comments**
TPH and Arsenic are in compliance*	LIFT environmental covenant for site.	
TPH only in compliance	MODIFY environmental covenant for site to take out TPH as COC in ground water.	
	Conduct additional two years quarterly ground water monitoring for arsenic to determine if high concentrations are natural background or not. Use statistical and MNA based analysis for next steps (below).	
	Following additional monitoring, if determined to be natural, MODIFY environmental covenants to take out arsenic as COC. Terminate ground water compliance monitoring. If not, implement contingency plan to remediate arsenic.	
Arsenic only in compliance	MODIFY environmental covenant for site to take out arsenic as COC in ground water only.	
	Implement statistical and MNA analysis for TPH.	
	Based on analysis, if Ecology determines reasonable restoration time can be achieved and compliance monitoring is appropriate remedy, continue TPH monitoring until compliance is achieved. If not, implement contingency plan to remediate TPH.	

Neither TPH or arsenic in compliance	Implement statistical and MNA analysis. Based on results, either implement continued compliance monitoring if a reasonable restoration time is demonstrated, or implement contingency plans to remediate TPH and arsenic.	Requires discussion and approval from Ecology

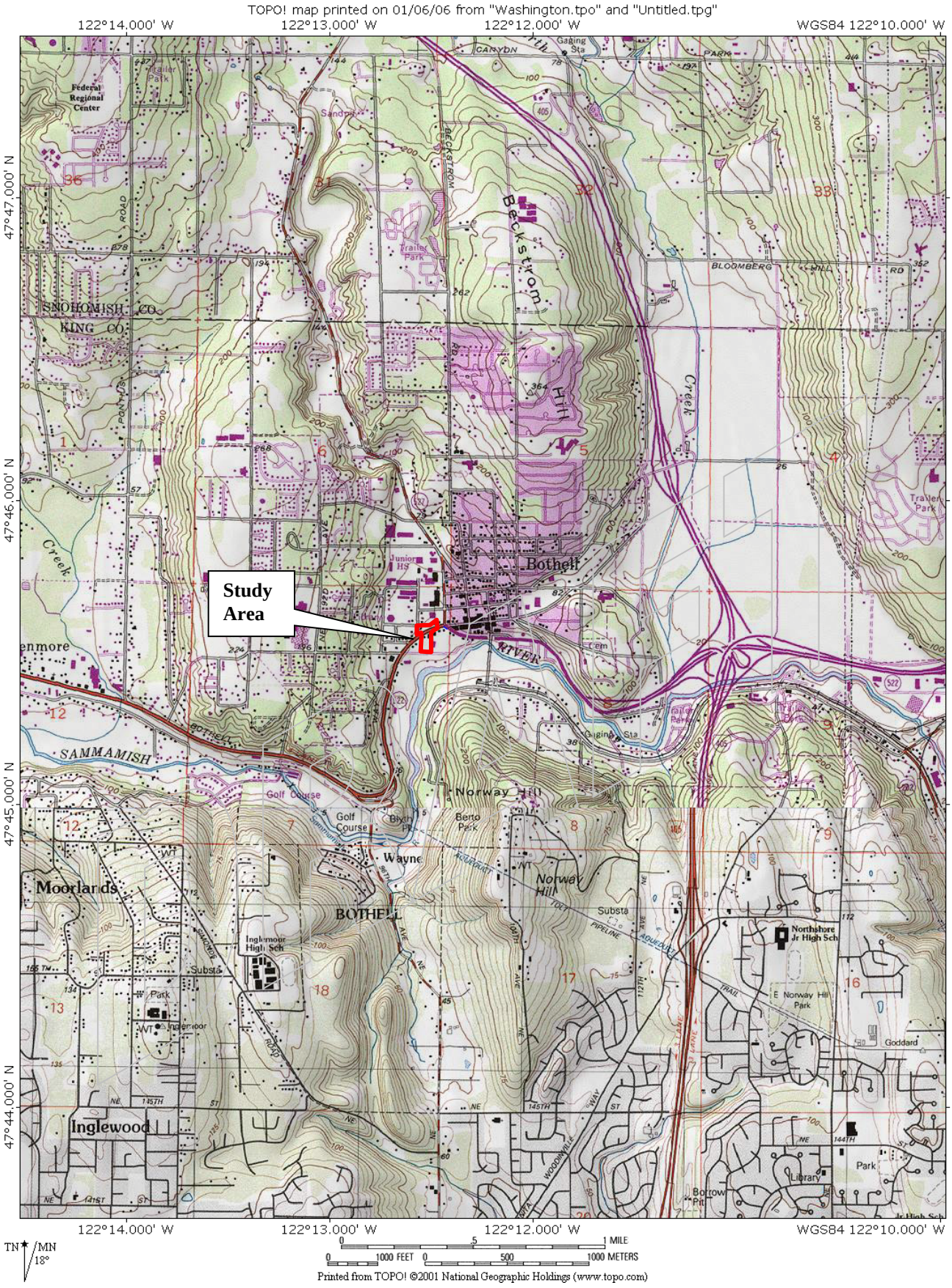
* Compliance with cleanup levels in ground water is defined as eight (8) consecutive quarters at or below MTCA cleanup levels adopted in this cleanup plan.

Table 2. Potential Applicable or Relevant and Appropriate Requirements (ARARs)

ARAR	Description	Applicability
Soil		
Model Toxics Control Act (WAC 173-340-740, -747)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for soil, including derivation of soil concentrations protective of groundwater.	MTCA cleanup levels are applicable to Site soil.
Groundwater		
Safe Drinking Water Act, Primary Drinking Water Regulations (40 Code of Federal Regulations [CFR] 141.50 and 141.61(a))	These regulations protect the quality of public drinking water supplies through regulation of chemical parameters and constituent concentrations as maximum concentration limits (MCLs).	MCLs are potentially relevant and appropriate where groundwater is a potential source of drinking water.
Model Toxics Control Act (WAC 173-340-720)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for groundwater.	MTCA cleanup levels are applicable to Site groundwater.
Surface Water		
Clean Water Act, Section 304, National Recommended Water Quality Criteria, EPA Office of Science and Technology (4304T, 2004).	There are no ambient water quality criteria for PCE for protection of freshwater organisms.	Surface water quality criteria are potentially relevant and appropriate to ambient surface water quality for point-source discharges to Horse Creek.
Clean Water Act, National Pollutant Discharge Elimination System (40 CFR Part 122) and Washington State National Pollutant Discharge Elimination System Permit Program (WAC 173-220).	The National Pollutant Discharge Elimination System (NPDES) program requires that permits be obtained for point-source discharges of pollutants to surface water. Under this regulation, a point-source discharge to a surface water body cannot cause an exceedance of water quality standards in the receiving water body outside the mixing zone.	Substantive regulatory requirements of the NPDES permit program are potentially applicable to the direct discharge of treated groundwater to a surface water body such as Horse Creek or Sammamish River.
Clean Water Act's National Toxics Rule (NTR) (40 CFR 131.36)	Provides values that have to be met for point-source discharges to surface water.	Potentially applicable to point-source discharges to Horse Creek should remedial activities cause release to surface water. If applicable, these values would have to be met at the mixing zone boundary established for the discharge.
Clean Water Act, General Pretreatment Regulations (40 CFR Part 403).	The regulations limit pollutants in wastewater discharges to sanitary sewer systems to protect publicly owned treatment works (POTWs) from accepting wastewater that would damage their system or cause them to exceed their NPDES permit discharge limits.	These regulations are potentially applicable to the discharge of treated groundwater to City of Bothell POTWs.
Washington State Water Quality Standards for Surface Waters (WAC 173-201A)	Washington State water quality standards protect freshwater aquatic life by specifying protection criteria by stretch of surface waters. WAC 173-201A provides limitations on other parameters such as turbidity, temperature, dissolved oxygen, and pH for protection of organisms. Tributaries of waters whose uses are designated salmon and trout spawning, core rearing and migration, or extraordinary primary contact recreation are protected at the same level as the waters themselves.	The substantive requirements of this regulation are potentially applicable for remedial actions affecting Horse Creek.
Washington Surface Water Quality Standards, Short-Term Modifications (WAC 173-201A-410)	Washington State provides for short-term modifications of standards for specific water bodies on a short-term basis when necessary to accommodate essential activities, respond to emergencies, or to otherwise protect the public interest.	These would be potentially applicable to remedial actions affecting Horse Creek.
Model Toxics Control Act (WAC 173-340-730)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for surface water.	MTCA cleanup levels may be applicable to the Site if remedial activities cause a release to surface water.
Air		
National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 261)	Establishes specific emissions levels allowed for toxic air pollutants.	Applicable to treatment alternatives that may emit toxic pollutants to the air.
Washington Clean Air Act and Implementing Regulations (WAC 173-400; WAC 173-460; WAC 173-490)	WAC 173-400 requires air emissions at the Site boundary to fall below the acceptable source impact limit (ASIL). WAC 173-400 also requires control of fugitive dust emissions during construction and defines general emission discharge treatment requirements. WAC 173-460 requires systemic control of new sources emitting air pollutants. WAC 173-490 sets emission standards and source control for volatile organic compounds.	Applicable for air stripping/sparging remedial technology.
Model Toxics Control Act (WAC 173-340-750)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for air.	MTCA cleanup levels may be applicable to the Site if remedial activities cause a release to air.

Table 2. Potential Applicable or Relevant and Appropriate Requirements (ARARs)

ARAR	Description	Applicability
Miscellaneous		
Protection of Wetlands, Executive Order 11990 (40 CFR Part 6, Appendix A)	This executive order mandates that response actions taken by federal agencies must be designed to avoid long- and short-term impacts to wetlands. If remediation activities are located near/in wetlands, the activities must be designed to avoid adverse impact to the wetlands wherever possible, including minimizing wetlands destruction and preserving wetland values.	This Act would be potentially applicable to remedial activities at the Site.
Endangered Species Act (50 CFR Parts 17, 402)	Section 7 of the Endangered Species Act (ESA) and 40 CFR Part 402 require that federal agencies consider the effects of their proposed actions on federal listed species. It requires consultation between the agency proposing the action and the U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries, as appropriate. Preparation of a biological assessment is conducted, addressing the potential effects to listed species in the area and methods to minimize those effects.	The ESA is potentially applicable to remedial actions at the Site because the USFWS has determined that federal threatened species (bald eagle and bull trout) may use the project area. Therefore, they could potentially be affected by these actions.
Native American Graves Protection and Repatriation Act (43 CFR Part 10)	Native American Graves Protection and Repatriation Act regulations protect Native American burials from desecration through the removal and trafficking of human remains and “cultural items,” including funerary and sacred objects.	This Act is potentially applicable to remedial actions at the Site because it is possible that the disturbance of Native American materials could occur as a result of work in the stream bed or subsurface excavations elsewhere at the Site. Such materials are not known to be present at the Site, but could be inadvertently uncovered during soil or sediment removal.
National Historic Preservation Act (36 CFR Parts 60, 63, and 800)	National Historic Preservation Act (NHPA) regulations require federal agencies to consider the possible effects on historic sites or structures of actions proposed for federal funding or approval. Historic sites or structures as defined in the regulations are those on or eligible for the National Register of Historic Places, generally at least 50 years old.	This Act is potentially applicable to stream bed or other subsurface work at the Site. No such sites are known to be present in the area.
Washington Hazardous Waste Management Act (WAC 173-303)	Establishes standards for the generation, transport, treatment, storage, or disposal of designated dangerous waste in the state.	This regulation is potentially applicable to alternatives that would involve handling of contaminated media at the Site. The area of contamination policy allows contaminated media to be consolidated within the same area of a site without triggering Resource Conservation and Recovery Act or Washington dangerous waste regulations.
Department of Transportation of Hazardous Wastes (49 CFR 105 – 180)	Establishes specific U.S. Department of Transportation rules and technical guidelines for the off-site transport of hazardous materials.	Applicable to remedial activities that involve the off-site transportation of hazardous waste.
Washington Solid Waste Handling Standards (WAC 173-350)	Establishes standards for handling and disposal of solid non-hazardous waste in Washington.	These regulations are potentially applicable to solid nonhazardous wastes and are potentially relevant and appropriate to on-site remedial actions governing contaminated media management.
Washington Water Well Construction Act Regulations (WAC 173-160)	Provides requirements for water well construction.	These regulations are potentially applicable to the installation, operation, or closure of monitoring and treatment wells at the Site.



SITE VICINITY

HWA GEOSCIENCES INC.

BOTHELL FORMER HERTZ FACILITY
RI/FS/DCAP
BOTHELL, WASHINGTON

FIGURE NO.
1

PROJECT NO.
2007-098

EXPLANATION OF SYMBOLS

- MW — AREA WIDE WELLS MONITORED
- UCCMW — ULTRA CUSTOM CARE CLEANERS WELL MONITORED
- MW — RIVERSIDE WELLS MONITORED
- MW — BOTHELL PAINT WELLS MONITORED
- MW — WELLS NOT MONITORED
- MW — DECOMMISSIONED WELLS
- SB — SOIL BORINGS
- CLEANUP CONFIRMATION SOIL SAMPLE > MTCA
- SOIL CLEANUP AREAS
- SITE
- HVOC PLUMES
- ORIGINAL PARCELS
- NEW PARCELS

N W E S

0 25 50 75 100

ULTRA CUSTOM CARE CLEANERS

Ultra Custom Care Cleaners HVOC Plume

BOTHELL HERTZ SITE AND INSTITUTIONAL CONTROL AREA

BOTHELL SERVICE CENTER

Riverside HVOC Plume

BOTHELL PAINT ARSENIC AND TPH INSTITUTIONAL CONTROL AREA

LOT C

LOT D

BOTHELL LANDING

LOT E,F,G

RIVERSIDE TPH

RIVERSIDE HVOCs

BOTHELL HERTZ

CITY ROW

CITY PARCEL

NEW HORSE CREEK CHANNEL

FORMER HORSE CREEK CHANNEL

SR-522 BOTHELL WAY NE

NE 183rd ST

MAIN ST

HWA GEOSCIENCES INC.

BOTHELL HERTZ RI/FS
BOTHELL WASHINGTON

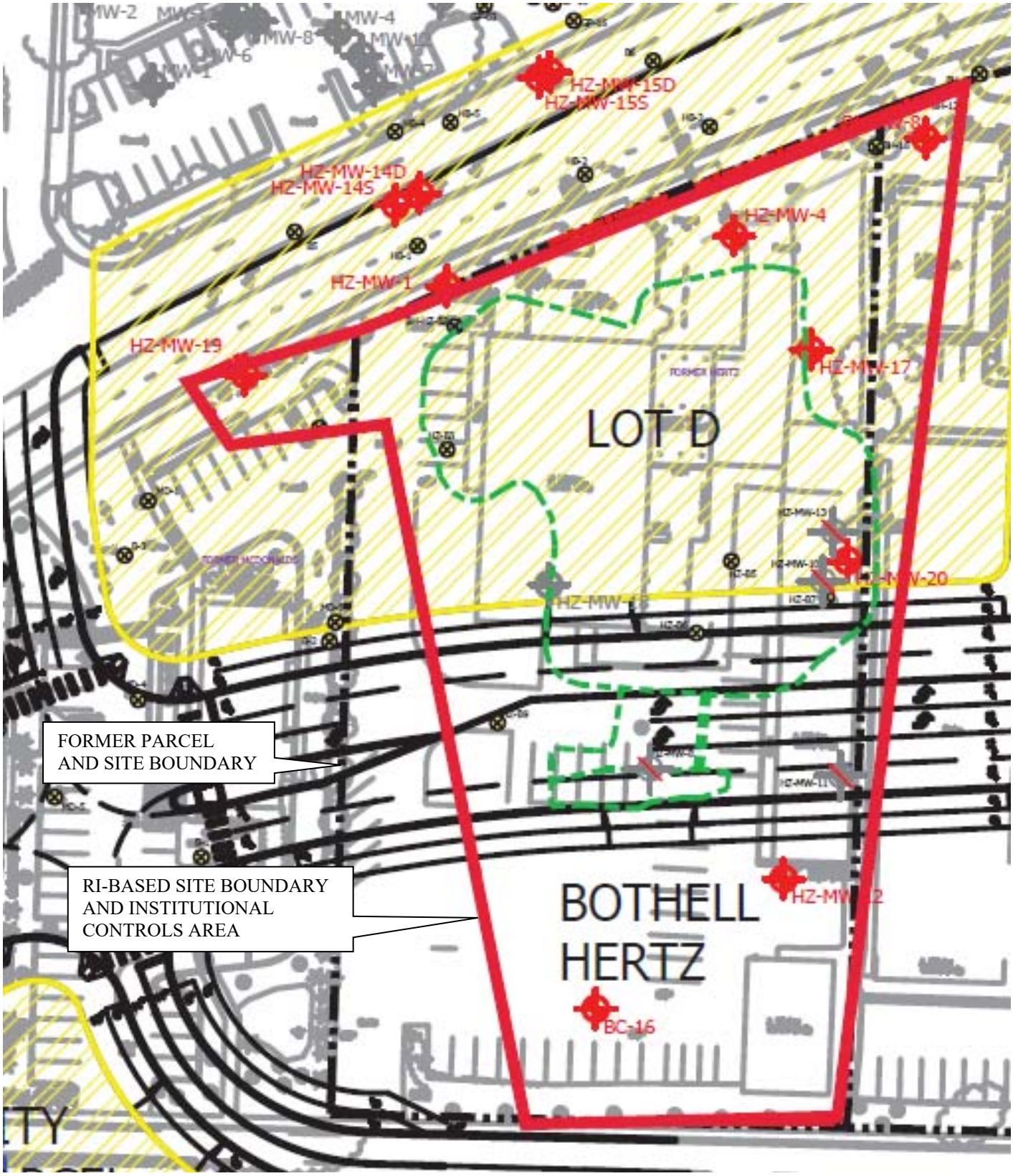
SITE LOCATION AND ADJACENT PROPERTIES

DRAWN BY EFK
CHECK BY NN
DATE

FIGURE NO. 2

PROJECT NO. 2007-098 T2020

C:\USERS\COMPUTER\GOOGLE DRIVE\COMPANIES\CLIENTS\HWA GEOSCIENCES\05_04_2016\HWA 2007-098-21 T2020 (FIG2).DWG 11x17 all wells (2) Plotted: 5/22/2015 9:11 AM



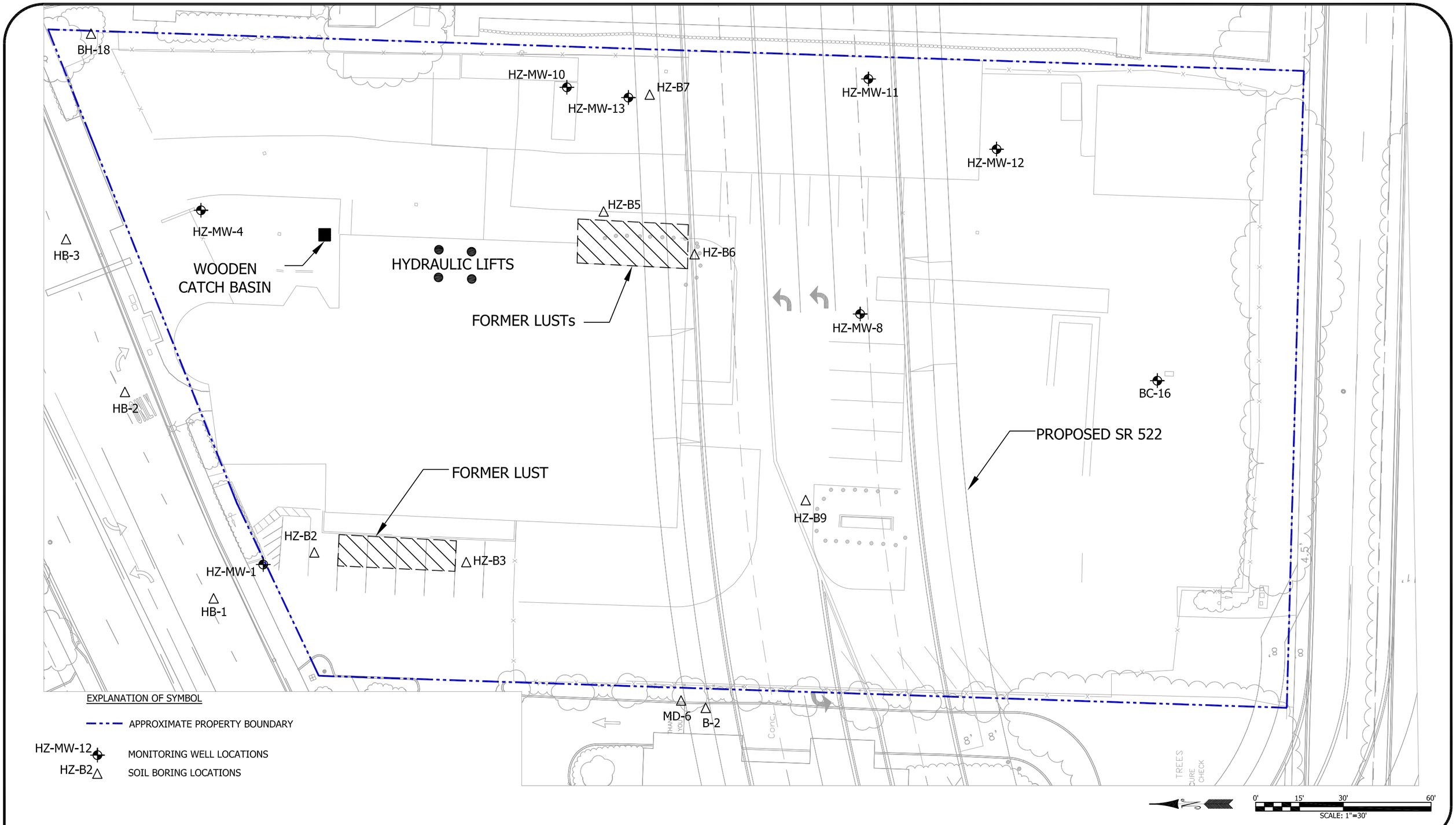
HWA GeoSciences Inc.

SITE BOUNDARIES

BOTHELL FORMER HERTZ FACILITY
RI/FS/DCAP
BOTHELL, WASHINGTON

FIGURE NO.
3

PROJECT NO.
2007-098



BASE MAP PROVIDED BY PARAMETRIX

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD\HWA 2007-098-21 T210.DWG <HERTZ PRIOR FIG 3> Plotted: 1/21/2011 10:30 AM

HWA GEOSCIENCES INC.

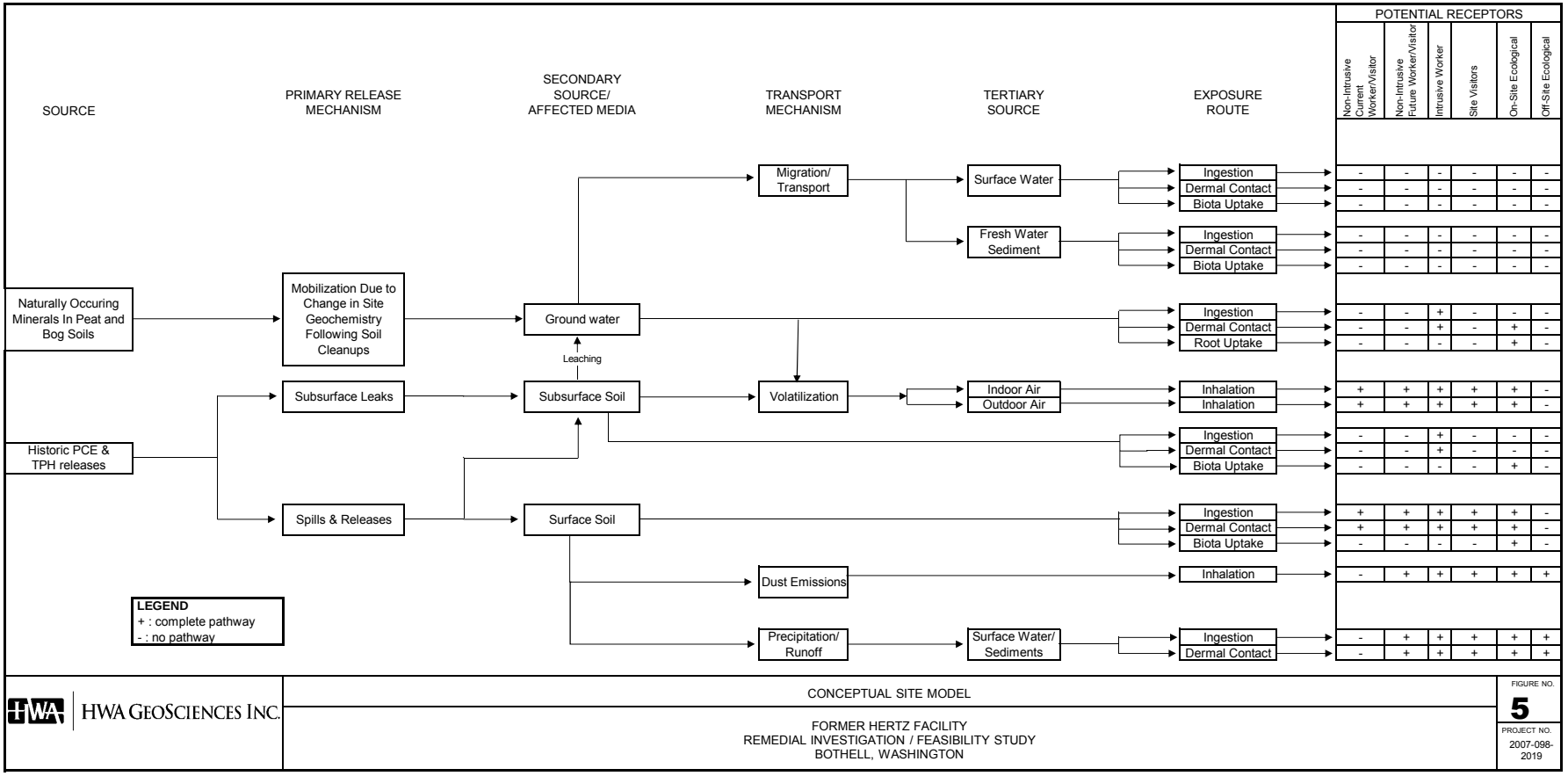
BOTHELL FORMER HERTZ FACILITY
SOIL CLEANUP
BOTHELL, WASHINGTON

SITE PLAN
PRIOR TO CLEANUP

DRAWN BY EFK
CHECK BY NN
DATE 12.22.10

FIGURE NO. 4

PROJECT NO. 2007-098 T921



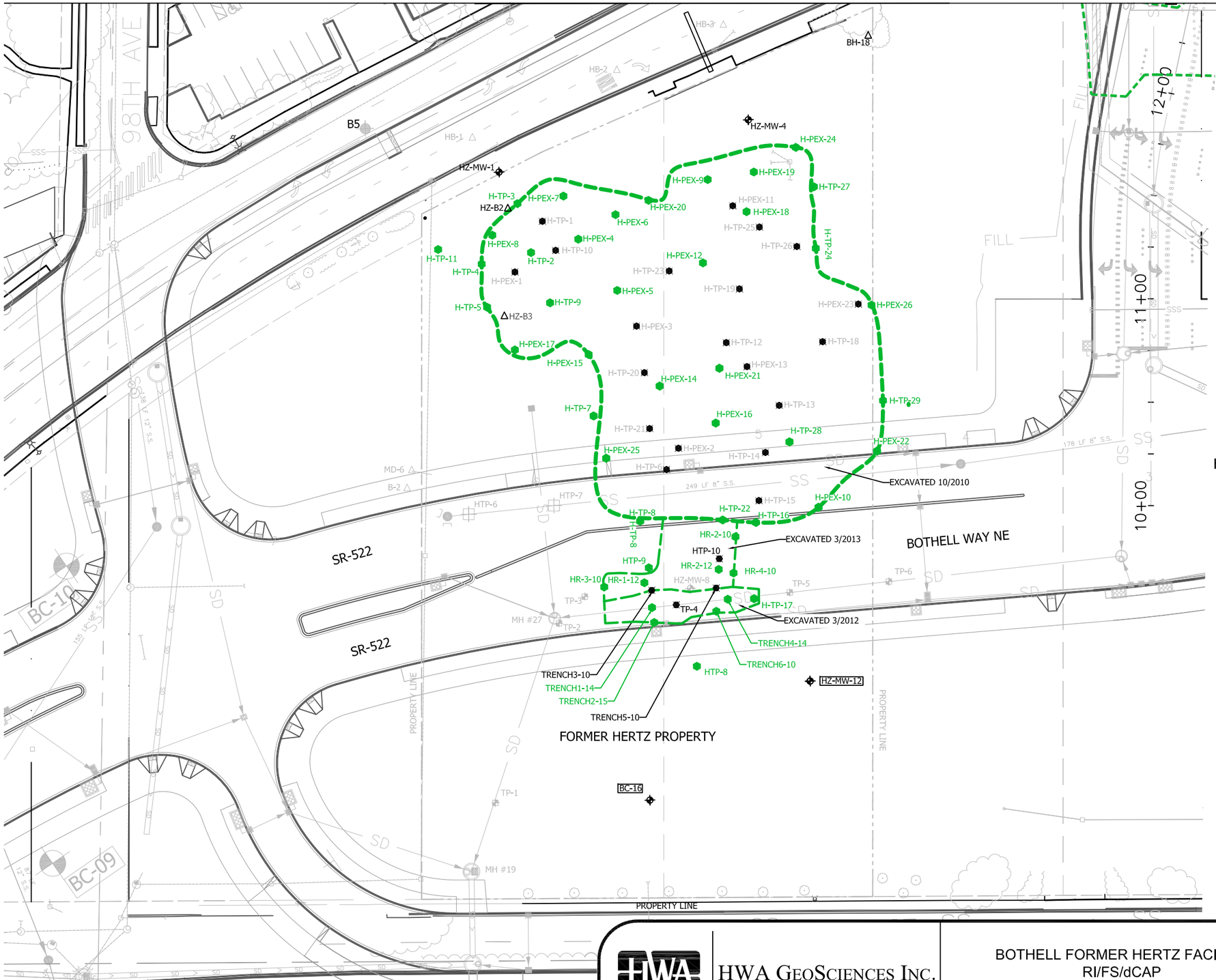
HWA GeoSciences Inc.

CONCEPTUAL SITE MODEL

FORMER HERTZ FACILITY
REMEDIAL INVESTIGATION / FEASIBILITY STUDY
BOTHELL, WASHINGTON

FIGURE NO. 5

PROJECT NO. 2007-098-2019



EXPLANATION OF SYMBOL

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMITS OF CONTAMINATED SOIL EXCAVATION
- H-PEX-9 — CONFIRMATION SOIL SAMPLE LOCATION
- H-TP-9 — CONFIRMATION SOIL SAMPLE LOCATION IN AREA THAT WAS SUBSEQUENTLY EXCAVATED
- HZ-MW-12 / HZ-B2 — PRE-CLEANUP SOIL SAMPLE MEETING MTCA CLEANUP LEVELS
- TP-21 — UTILITY TEST PIT SOIL SAMPLE MEETING CLEANUP LEVELS

0 25 50 75 100

BASE MAP PROVIDED BY:

HWA GeoSciences Inc.

BOTHELL FORMER HERTZ FACILITY
RI/FS/dCAP
BOTHELL, WASHINGTON

EXTENT OF SOIL CLEANUP

DRAWN BY	EFK
CHECK BY	AS
DATE:	04.08.14
FIGURE #	6
PROJECT #	2007-098-21 TASK T994

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD\HWA 2007-098-21 T994B.DWG <T969 fig 8> Plotted: 4/8/2015 8:29 AM