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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by:	AGREED ORDER
City of Bothell at Bothell Riverside MTCA Site - TPH Area	No. DE 16306

TO: Jennifer Phillips
City Manager
City of Bothell
18415 101st Avenue NE
Bothell, WA 98011

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I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and the City of Bothell (City) under this Agreed Order (Order) is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Order requires the City to implement the Cleanup Action Plan (Exhibit B). Ecology believes the actions required by this Order are in the public interest.

II. JURISDICTION

This Order is issued pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

III. PARTIES BOUND

This Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Order and to execute and legally bind such party to comply with this Order. The City agrees to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter the City's responsibility under this Order. The City shall provide a copy of this Order to all agents, contractors, and subcontractors retained to perform work required by this Order, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Order.

IV. DEFINITIONS

Unless otherwise specified herein, the definitions set forth in RCW 70.105D and WAC 173-340 shall control the meanings of the terms in this Order.

A. Site: The Site is referred to as Bothell Riverside MTCA Site - TPH Area. The Site constitutes a facility under RCW 70.105D.020(8). The Site is defined by where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. Based upon factors currently known to Ecology, the Site is generally located at Woodinville Drive (SR 522) and NE 180th Street, Bothell, Washington, as shown in the Site Location Diagram (Exhibit A). The Bothell Riverside MTCA

Site - HVOC Area is being addressed under a separate Agreed Order and is not part of the Site for purposes of this Order.

B. Parties: Refers to the State of Washington, Department of Ecology, and the City of Bothell.

C. Potentially Liable Persons (PLP(s)): Refers to the City.

D. Agreed Order or Order: Refers to this Order and each of the exhibits to this Order. All exhibits are integral and enforceable part of this Order.

V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by the City:

A. The City owns the property at Woodinville Drive (SR 522) and NE 180th Street, Bothell, Washington. The City acquired the property in 1990.

B. The Site is now part of King County Tax Parcel No. 9457200020.

C. The Site contained a former gasoline service station.

D. The northern part of the Site is currently vacant and the southern part of the Site is currently occupied by SR 522.

E. The City has completed several studies of the Site that document the release of hazardous substances which present a threat to human health or the environment under a previous Agreed Order (No. 6295). Public notice and comment on the draft Remedial Investigation and Feasibility Study for TPH were held on October 20 through November 20, 2017. Following review of public comment, Ecology approved as final the two reports, which are available at Ecology's Northwest Regional Office: HWA Geosciences, *Final Remedial Investigation Report, Bothell Riverside Site, Bothell, WA* (Oct. 9, 2015), and HWA Geosciences, *Feasibility Study Rev 2, Bothell Riverside TPH Site, Bothell, WA* (Feb. 5, 2016).

F. Under Agreed Order No. DE 6295 Amendment No. 1 (effective June 9, 2010), the City conducted interim actions at the Site in 2010 and 2017 that included excavation of petroleum-contaminated soil and off-site disposal. As a result of the interim actions, soil and groundwater

within the TPH Area of the former Riverside Site no longer contain hazardous substances at concentrations above MTCA cleanup standards established in the CAP (Exhibit B).

G. Ecology held public comment on the draft Cleanup Action Plan (dCAP) for the Bothell Riverside MTCA Site - TPH Area on October 20 through November 20, 2017.

VI. ECOLOGY DETERMINATIONS

Ecology makes the following determinations, without any express or implied admissions of such determinations (and underlying facts) by the City.

A. The City is an "owner or operator" as defined in RCW 70.105D.020(22) of a "facility" as defined in RCW 70.105D.020(8).

B. Based upon all factors known to Ecology, a "release" or "threatened release" of "hazardous substance(s)" as defined in RCW 70.105D.020(32) and (13), respectively, has occurred at the Site.

C. Based upon credible evidence, Ecology issued a PLP status letter to the City dated November 20, 2008, pursuant to RCW 70.105D.040, .020(26), and WAC 173-340-500. By letter dated November 25, 2008, the City voluntarily waived its rights to notice and comment and accepted Ecology's determination that the City is a PLP under RCW 70.105D.040.

D. Pursuant to RCW 70.105D.030(1) and .050(1), Ecology may require PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances, whenever it believes such action to be in the public interest. Based on the foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.

VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that the City take the following remedial actions at the Site. These remedial actions must be conducted in accordance with WAC 173-340:

A. The City will implement the Cleanup Action Plan (Exhibit B) and all other requirements of this Order.

B. If the City learns of a significant change in conditions at the Site, including but not limited to a statistically significant increase in contaminant and/or chemical concentrations in soil, groundwater, surface water, or air, the City within seven (7) days of learning of the change in condition, shall notify Ecology in writing of said change and provide Ecology with any reports or records (including laboratory analyses, sampling results) relating to the change in conditions.

C. If Ecology determines that the City has failed to make sufficient progress or failed to implement the remedial action, in whole or in part, Ecology may, after notice to the City, perform any or all portions of the remedial action or at Ecology's discretion allow the City opportunity to correct. The City shall reimburse Ecology for the costs of doing such work in accordance with Section VIII.A (Remedial Action Costs). Ecology reserves the right to enforce requirements of this Order under Section X (Enforcement).

D. Except where necessary to abate an emergency situation or where required by law, the City shall not perform any remedial actions at the Site outside those remedial actions required by this Order, unless Ecology concurs, in writing, with such additional remedial actions pursuant to Section VIII.J. (Amendment of Order). In the event of an emergency, or where actions are taken as required by law, the City must notify Ecology in writing of the event and remedial action(s) planned or taken as soon as practical but no later than within twenty-four (24) hours of the discovery of the event. Ecology hereby incorporates into this Order the previous remedial actions described in Section V, Findings of Fact. Reimbursement for specific project tasks under a grant agreement with Ecology is contingent upon a determination by Ecology's Toxics Cleanup Program that the retroactive costs are eligible under WAC 173-332A-320(6), the work performed complies with the substantive requirements of WAC 173-340, and the work is consistent with the remedial actions required under this Order. The costs associated with Ecology's determination on the past remedial actions described in Section V, Findings of Fact, are recoverable under this Order.

VIII. TERMS AND CONDITIONS

A. Payment of Remedial Action Costs

The City shall pay to Ecology costs incurred by Ecology pursuant to this Order and consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or its contractors for, or on, the Site under RCW 70.105D, including remedial actions and Order preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the issuance of this Order. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). For all Ecology costs incurred, the City shall pay the required amount within thirty (30) days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

In addition to other available relief, pursuant to RCW 19.16.500, Ecology may utilize a collection agency and/or, pursuant to RCW 70.105D.055, file a lien against real property subject to the remedial actions to recover unreimbursed remedial action costs.

B. Designated Project Coordinators

The project coordinator for Ecology is:

Sunny Becker
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452
Phone: (425) 649-7187
Email: sunny.becker@ecy.wa.gov

The project coordinator for the City is:

Nduta Mbuthia
Senior Capital Project Engineer
City of Bothell, Public Works Department
18415 101st Avenue NE
Bothell, WA 98011
Phone: (425) 806-6829
Email: Nduta.Mbuthia@bothellwa.gov

Each project coordinator shall be responsible for overseeing the implementation of this Order. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and the City, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Order.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

C. Performance

All geologic and hydrogeologic work performed pursuant to this Order shall be under the supervision and direction of a geologist or hydrogeologist licensed by the State of Washington or under the direct supervision of an engineer registered by the State of Washington, except as otherwise provided for by RCW 18.43 and 18.220.

All engineering work performed pursuant to this Order shall be under the direct supervision of a professional engineer registered by the State of Washington, except as otherwise provided for by RCW 18.43.130.

All construction work performed pursuant to this Order shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered by the State of Washington, except as otherwise provided for by RCW 18.43.130.

Any documents submitted containing geologic, hydrogeologic, or engineering work shall be under the seal of an appropriately licensed professional as required by RCW 18.43 and 18.220.

The City shall notify Ecology in writing of the identity of any engineer(s) and geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms of this Order, in advance of their involvement at the Site.

D. Access

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Site that the City either owns, controls, or has access rights to at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the City's progress in carrying out the terms of this Order; conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by the City. The City shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by the City where remedial activities or investigations will be performed pursuant to this Order. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property owned or controlled by the City unless an emergency prevents such notice. All persons who access the Site pursuant to this section shall comply with any applicable health and safety plan(s). Ecology employees and their representatives shall not be required to sign any liability release or waiver as a condition of Site property access.

E. Sampling, Data Submittal, and Availability

With respect to the implementation of this Order, the City shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf available to Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with Section VII (Work to be Performed), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.

If requested by Ecology, the City shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by the City pursuant to implementation of this Order. The City shall notify Ecology seven (7) days in advance of any sample collection or work activity at the Site. Ecology shall, upon request, allow the City and/or its authorized representative to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Order, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section VIII.D (Access), Ecology shall notify the City prior to any sample collection activity unless an emergency prevents such notice.

In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be conducted by a laboratory accredited under WAC 173-50 for the specific analyses to be conducted, unless otherwise approved by Ecology.

F. Public Participation

Ecology shall maintain the responsibility for public participation at the Site. However, the City shall cooperate with Ecology, and shall:

1. If agreed to by Ecology, develop appropriate mailing lists and prepare drafts of public notices and fact sheets at important stages of the remedial action, such as the submission of work plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets and prepare and distribute public notices of Ecology's presentations and meetings.

2. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before meetings related to remedial action work to be performed at the Site with the interested public and/or local governments. Likewise, Ecology shall notify the City prior to the issuance of all press releases and fact sheets related to the Site, and before meetings related to the Site with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by the City that do not receive prior Ecology approval, the City shall clearly indicate to its

audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

3. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions or as a presenter.

4. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:

a. King County Bothell Library
18215 98th Ave. NE
Bothell, WA 98011

b. Ecology's Northwest Regional Office
3190 160th Ave. SE
Bellevue, WA 98008-5452

Call for an appointment:
Sally Perkins
Phone: (425) 649-7109
Fax: (425) 649-4450
E-mail: nwro_public_request@ecy.wa.gov

c. City of Bothell – City Hall
18415 101st Ave NE
Bothell, WA 98011
Phone: (425) 486-7811

At a minimum, copies of all public notices, fact sheets, and documents relating to public comment periods shall be promptly placed in these repositories. A copy of all documents related to this Site shall be maintained in the repository at Ecology's Northwest Regional Office in Bellevue, Washington.

G. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of work performed pursuant to this Order, the City shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors.

Upon request of Ecology, the City shall make all records available to Ecology and allow access for review within a reasonable time.

Nothing in this Order is intended to waive any right the City may have under applicable law to limit disclosure of documents protected by the attorney work-product privilege and/or the attorney-client privilege. If the City withholds any requested records based on an assertion of privilege, the City shall provide Ecology with a privilege log specifying the records withheld and the applicable privilege. No Site-related data collected pursuant to this Order shall be considered privileged.

H. Resolution of Disputes

1. In the event that the City elects to invoke dispute resolution the City must utilize the procedure set forth below.

a. Upon the triggering event (receipt of Ecology's project coordinator's written decision or an itemized billing statement), the City has fourteen (14) calendar days within which to notify Ecology's project coordinator in writing of its dispute (Informal Dispute Notice).

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute informally. The Parties shall informally confer for up to fourteen (14) calendar days from receipt of the Informal Dispute Notice. If the project coordinators cannot resolve the dispute within those 14 calendar days, then within seven (7) calendar days Ecology's project coordinator shall issue a written decision (Informal Dispute Decision) stating: the nature of the dispute; the City's position with regard to the dispute; Ecology's position with regard to the dispute; and the extent of resolution reached by informal discussion.

c. The City may then request regional management review of the dispute. This request (Formal Dispute Notice) must be submitted in writing to the Northwest Region Toxics Cleanup Section Manager within seven (7) calendar days of receipt of Ecology's Informal Dispute Decision. The Formal Dispute Notice shall include a written statement

of dispute setting forth: the nature of the dispute; the disputing Party's position with respect to the dispute; and the information relied upon to support its position.

d. The Section Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute (Decision on Dispute) within thirty (30) calendar days of receipt of the Formal Dispute Notice. The Decision on Dispute shall be Ecology's final decision on the disputed matter.

2. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used.

3. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Order, unless Ecology agrees in writing to a schedule extension.

4. In case of a dispute, failure to either proceed with the work required by this Order or timely invoke dispute resolution may result in Ecology's determination that insufficient progress is being made in preparation of a deliverable, and may result in Ecology undertaking the work under Section VII.C (Work to be Performed) or initiating enforcement under Section X (Enforcement).

I. Extension of Schedule

1. The City's request for an extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the deadline for which the extension is requested, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify:

a. The deadline that is sought to be extended;

b. The length of the extension sought;

c. The reason(s) for the extension; and

d. Any related deadline or schedule that would be affected if the extension were granted.

2. The burden shall be on the City to demonstrate to the satisfaction of Ecology that the request for such extension has been submitted in a timely fashion and that good cause exists for granting the extension. Good cause may include, but may not be limited to:

a. Circumstances beyond the reasonable control and despite the due diligence of the City including delays caused by unrelated third parties or Ecology, such as (but not limited to) delays by Ecology in reviewing, approving, or modifying documents submitted by the City;

b. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or

c. Endangerment as described in Section VIII.K (Endangerment).

However, neither increased costs of performance of the terms of this Order nor changed economic circumstances shall be considered circumstances beyond the reasonable control of the City.

3. Ecology shall act upon any City written request for extension in a timely fashion. Ecology shall give the City written notification of any extensions granted pursuant to this Order. A requested extension shall not be effective until approved by Ecology. Unless the extension is a substantial change, it shall not be necessary to amend this Order pursuant to Section VIII.J (Amendment of Order) when a schedule extension is granted.

4. At the City's request, an extension shall only be granted for such period of time as Ecology determines is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety (90) days only as a result of:

a. Delays in the issuance of a necessary permit which was applied for in a timely manner;

b. Other circumstances deemed exceptional or extraordinary by Ecology; or

c. Endangerment as described in Section VIII.K (Endangerment).

J. Amendment of Order

The project coordinators may verbally agree to minor changes to the work to be performed without formally amending this Order. Minor changes will be documented in writing by Ecology within seven (7) days of verbal agreement.

Except as provided in Section VIII.L (Reservation of Rights), substantial changes to the work to be performed shall require formal amendment of this Order. This Order may only be formally amended by the written consent of both Ecology and the City. Ecology will provide its written consent to a formal amendment only after public notice and opportunity to comment on the formal amendment.

When requesting a change to the Order, the City shall submit a written request to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request is received. If Ecology determines that the change is substantial, then the Order must be formally amended. Reasons for the disapproval of a proposed change to this Order shall be stated in writing. If Ecology does not agree to a proposed change, the disagreement may be addressed through the dispute resolution procedures described in Section VIII.H (Resolution of Disputes).

K. Endangerment

In the event Ecology determines that any activity being performed at the Site under this Order is creating or has the potential to create a danger to human health or the environment on or surrounding the Site, Ecology may direct the City to cease such activities for such period of time as it deems necessary to abate the danger. The City shall immediately comply with such direction.

In the event the City determines that any activity being performed at the Site under this Order is creating or has the potential to create a danger to human health or the environment, the City may cease such activities. The City shall notify Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after making such determination or ceasing such activities. Upon Ecology's direction, the City shall provide Ecology with documentation of the

basis for the determination or cessation of such activities. If Ecology disagrees with the City's cessation of activities, it may direct the City to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this section, the City's obligations with respect to the ceased activities shall be suspended until Ecology determines the danger is abated, and the time for performance of such activities, as well as the time for any other work dependent upon such activities, shall be extended in accordance with Section VIII.I (Extension of Schedule) for such period of time as Ecology determines is reasonable under the circumstances.

Nothing in this Order shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

L. Reservation of Rights

This Order is not a settlement under RCW 70.105D. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any of Ecology's rights or authority. Ecology will not, however, bring an action against the City to recover remedial action costs paid to and received by Ecology under this Order. In addition, Ecology will not take additional enforcement actions against the City regarding remedial actions required by this Order, provided the City complies with this Order.

Ecology nevertheless reserves its rights under RCW 70.105D, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health or the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

By entering into this Order, the City does not admit to any liability for the Site. Although the City is committing to conducting the work required by this Order under the terms of this Order, the City expressly reserves all rights available under law, including but not limited to the right to seek cost recovery or contribution against third parties, and the right to assert any defenses to liability in the event of enforcement.

M. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by the City without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to the City's transfer of any interest in all or any portion of the Site, and during the effective period of this Order, the City shall provide a copy of this Order to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, the City shall notify Ecology of said transfer. Upon transfer of any interest, the City shall notify all transferees of the restrictions on the activities and uses of the property under this Order and incorporate any such use restrictions into the transfer documents.

N. Compliance with Applicable Laws

1. All actions carried out by the City pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits or approvals, except as provided in RCW 70.105D.090. At this time, no federal, state, or local requirements have been identified as being applicable to the actions required by this Order. The City has a continuing obligation to identify additional applicable federal, state, and local requirements which apply to actions carried out pursuant to this Order, and to comply with those requirements. As additional federal, state, and local requirements are identified by Ecology or the City, Ecology will document in writing if they are applicable to actions carried out pursuant to this Order, and the PLP must implement those requirements.

2. All actions carried out by the City pursuant to this Order shall be done in accordance with relevant and appropriate requirements identified by Ecology. At this time, no relevant and appropriate requirements have been identified as being applicable to the actions required by this Order. If additional relevant and appropriate requirements are identified by Ecology or the City, Ecology will document in writing if they are applicable to actions carried out pursuant to this Order and the PLP must implement those requirements.

3. Pursuant to RCW 70.105D.090(1), the City may be exempt from the procedural requirements of RCW 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 and of any laws requiring or authorizing local government permits or approvals. However, the City shall comply with the substantive requirements of such permits or approvals. For permits and approvals covered under RCW 70.105D.090(1) that have been issued by local government, the Parties agree that Ecology has the non-exclusive ability under this Order to enforce those local government permits and/or approvals. At this time, no state or local permits or approvals have been identified as being applicable but procedurally exempt under this section.

4. The City has a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order. In the event either Ecology or the City determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order, it shall promptly notify the other party of its determination. Ecology shall determine whether Ecology or the City shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, the City shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by the City and on how the City must meet those requirements. Ecology shall inform the City in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. The City shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D.090(1) would result in the loss of approval from a federal agency that is necessary for the state to administer any federal law, the exemption shall not apply and the City shall comply with both the

procedural and substantive requirements of the laws referenced in RCW 70.105D.090(1), including any requirements to obtain permits or approvals.

O. Indemnification

The City agrees to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action (1) for death or injuries to persons, or (2) for loss or damage to property, to the extent arising from or on account of acts or omissions of the City, its officers, employees, agents, or contractors in entering into and implementing this Order. However, the City shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Order.

IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon the City's receipt of written notification from Ecology that the City has completed the remedial activity required by this Order, as amended by any modifications, and that the City has complied with all other provisions of this Agreed Order.

X. ENFORCEMENT

Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

A. The Attorney General may bring an action to enforce this Order in a state or federal court.

B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.

C. A liable party who refuses, without sufficient cause, to comply with any term of this Order will be liable for:

1. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply.

2. Civil penalties of up to twenty-five thousand dollars ($25,000) per day for each day it refuses to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order: 12/5/19

CITY OF BOTHELL

Jennifer Phillips
City Manager
Bothell, WA
(425) 806-6100

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Robert W. Warren
Section Manager
Toxics Cleanup Program
Northwest Regional Office
(425) 649-7054

EXHIBIT A

Site Location Diagram

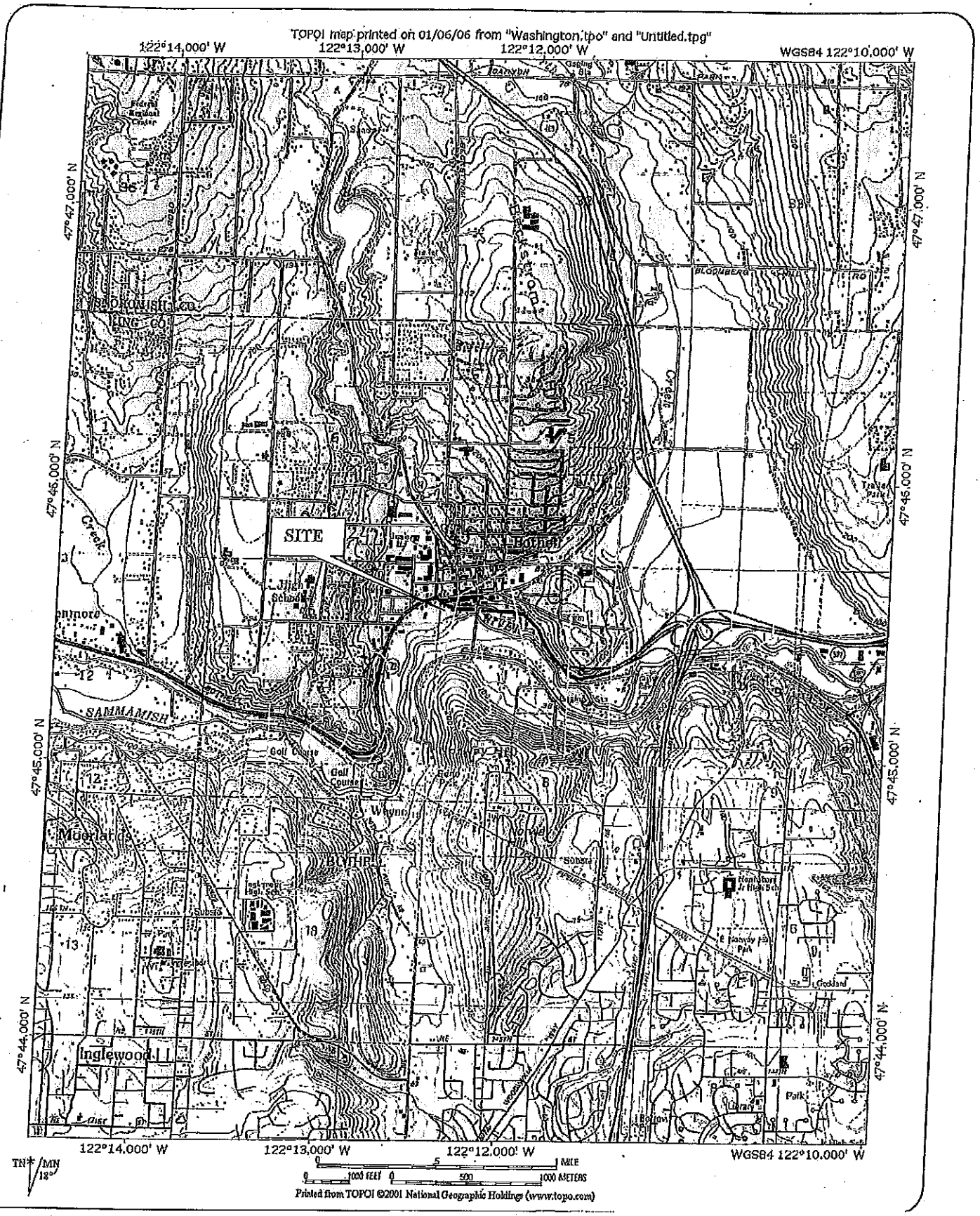

EXHIBIT B

DRAFT CLEANUP ACTION PLAN
BOTHELL RIVERSIDE TPH AREA
BOTHELL, WASHINGTON

City of Bothell

December 18, 2017

Issued by:

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

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DRAFT CLEANUP ACTION PLAN
BOTHELL RIVERSIDE TPH AREA
BOTHELL, WASHINGTON

1. INTRODUCTION

This draft cleanup action plan (dCAP) was prepared for the Bothell Riverside TPH site (Site) located in Bothell, Washington (Figures 1, 2). This dCAP was conducted under Agreed Order DE 6295, executed in 2009 and amended in April 2010 and in 2013, 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 preparation of a remedial investigation (RI) Report followed by the development of a FS and dCAP.

RI and Interim Action activities were performed between December 2009 and April 2017 following Ecology's approval of the final RI/FS Work Plan (Ecology letter dated August 18, 2009) and in accordance with the Ecology-approved project work plans (Parametrix, 2009a; HWA, 2012; HWA, 2013). The RI report (HWA, 2015) documents the results of the RI and interim action soil and ground water cleanups conducted in 2010, 2013, 2014, and 2017 at the Riverside TPH Site.

Three interim action cleanups were conducted prior to the RI: 1) a soil excavation and removal cleanup conducted in 2010 (before roadway realignment) to address total petroleum hydrocarbon (TPH) impacts, and 2) a ground water pump-and-treat system installed in 2014 to address halogenated volatile organic (HVOC) impacts to ground water and surface water, and 3) a second soil excavation and removal cleanup conducted in 2017 to address residual TPH impacts.. These interim actions address different contaminants in different (not co-located) areas from two separate releases. These areas are referred to as the Riverside TPH Site and the Riverside HVOC Site. This FS is for the TPH site only.

The City owns the Riverside TPH site (Site), a portion of which accommodates the newly realigned State Route (SR) 522. The remnant portion of the former property north of the new roadway will be redeveloped as part of the City's overall Downtown Revitalization Plan; the portion of the former property south of the new roadway will be incorporated into the City's park system.

Interim action soil cleanups were conducted at the Riverside TPH site entailing soil excavation and removal cleanups conducted in 2010 (before roadway realignment) and 2017 (after roadway realignment), to address total TPH hydrocarbon (TPH) impacts.

Tasks performed to-date to fulfill the Agreed Order include:

1. Preparation and submittal of the *Remedial Investigation and Feasibility Study Work Plan* (HWA, 2009) to Ecology;
2. Remedial investigation (RI) activities in 2009;
3. Initiation of a feasibility study (FS) in 2009;
4. Preparation and submittal of the *Bothell Riverside Remedial Investigation/Feasibility Study,* and associated *Draft Cleanup Action Plan* which were not finalized or approved pending completion of interim actions and monitoring (Parametrix, 2009a, b);
5. Preparation and submittal to Ecology of the *Remedial Investigation Feasibility Study Final Work Plan, Bothell Landing Site Bothell, Washington,* September 19, 2011 (HWA, 2011) and Addendum 1 adopting the approved area-wide network (December 2011) including wells at the Riverside site
6. Completion of the 2010 initial phase of interim action petroleum soil cleanup and subsequent reporting (*Documentation of Interim Action at Bothell Riverside Site)* (HWA, 2011);
7. Preparation and submittal of a *Focused Feasibility Study* (HWA, 2012) and *Interim Action Work Plan* (HWA, 2013) to Ecology for HVOC impacts to ground water and surface water; and,
8. Installation of a ground water pump-and-treat system to address HVOC impacts to ground water and surface water in 2014.
9. Preparation of a draft Remedial Investigation report (HWA, August 8, 2015).
10. Completion of the 2017 interim action petroleum soil cleanup and subsequent reporting (*Riverside TPH Site Residual Soil Excavation Report, Bothell, Washington)* (HWA, 2017);
11. Preparation of a final Remedial Investigation report (HWA, May 18, 2017).

This dCAP is one of the two final deliverables required to fulfill the terms and conditions of the Agreed Order (Deliverable 7).

1.1 Site Location and Description

Per Section 1.1 of the final RI report, the Bothell Riverside Site was defined in the Agreed Order (prior to completion of the RI) as consisting of the extent of contamination caused by the release of hazardous substances at a location in the general vicinity of Woodinville Drive (SR 522) and NE 180th at a former two-acre property where petroleum hydrocarbon impacts were discovered. The two-acre parcel no longer exists in its original configuration, although the City currently owns that land, which includes public right-of-way for the newly constructed and re-aligned SR 522, and portions of newly formed parcels on the north and south sides of the new roadway. The remnant portions of the former two-acre property and vacated former SR 522 roadway have been conjugated into new City parcels and are being sold to private parties for redevelopment. The southern portion of the property will become a part of the City's park system (HWA, 2015).

Whereas the Site was originally defined as a two-acre property (which no longer exists due to re-platting of parcels and construction of the new roadway) the findings of the RI demonstrated that hazardous substances the Bothell Riverside Site have come to be located as shown in Figure 3. The Riverside Site includes two separate and distinct Sites: 1) the Riverside TPH Site, and 2) the Riverside HVOC Site.

1.2 SITE CONDITIONS

Site conditions (topography, geology, hydrogeology, aquifer and soil properties, surface water hydrology) and nature and extent of contamination (chemicals of concern for soil and ground water) are addressed in the Final RI report (HWA, October 9, 2015).

Per Section 2.1 of the RI, the Site area is generally flat with an elevation of approximately 35 feet above mean sea level. The surrounding land is generally flat or slopes to the south towards the Sammamish River. The Riverside TPH Site is now almost entirely under the new SR 522 roadway, and is around 100 feet north of the Sammamish River (HWA, 2015).

1.3 HISTORIC PROPERTY USE AND PREVIOUS SITE ASSESSMENTS

The City acquired the former two-acre Riverside property in May 1990. Details of historic property use and the several site assessments performed to date at the Site can be found in SEACOR (1990, 1991), RZA AGRA (1992), GTI (1993, 1994), ECOSS (2008), HWA (2008), Parametrix (2009a), and CDM (2009). The following is a summary of those assessments.

A "Flying A" gasoline service station operated between 1946 and the early 1960s. The service station had at least two 1,000 gallon underground storage tanks (USTs); one UST contained gasoline and the other diesel fuel. The service station building was demolished sometime after 1965. The two USTs were apparently removed before 1990. Investigative work in the early 1990s discovered residual soil and ground water contamination attributed to the service station operation. Debris including discarded containers of motor oil, anti-freeze, and transmission fluid were also found (RZA, 1992).

Approximately 4,700 cubic yards of petroleum impacted soil were excavated, treated on-site by bioremediation, and returned to the former excavation and surrounding ground surface in the early 1990s. In 2008 HWA conducted a Phase II environmental site assessment (ESA), a geophysical survey, and a geotechnical investigation. HWA's findings documented the presence of lube oil-range petroleum hydrocarbons in soil at concentrations greater than MTCA cleanup levels within and in the vicinity of the former soil excavation. The geophysical survey identified no USTs remaining at the Site (HWA, 2008).

Additional investigations (CDM, 2009; Parametrix, 2009a) confirmed the presence and extent of petroleum affected soil in the former excavation area.

1.4 CURRENT AND PLANNED SITE USE

Prior to the soil cleanup, the original two-acre property was undeveloped and used for parking. After completion of the re-aligned SR 522 roadway in 2013, the remnant portion of the original two-acre property south of the new roadway is still undeveloped and used for parking. The portion north of the new roadway is currently vacant and hydro-seeded, and awaiting redevelopment as part of the City's overall Downtown Revitalization Plan.

1.5 GEOLOGY

Based on field observations during the RI, soils at the Site typically consist of approximately four to nine feet of silty sand to sandy silt fill with occasional debris, over alluvial soil consisting of inter-bedded silt, sandy silt, peat, and silty sand to a depth of up to 50 feet below ground surface (bgs). A buried soil horizon (paleosol) was observed at some locations at the fill-alluvium contact.

Most fill material appears to be derived from three sources: 1) circa 1940's property development on the north portion within the "former property boundary" along Woodinville Drive, 2) dredge and soil spoils placed on the southerly portion within the "former property boundary" after realignment of the Sammamish River in the 1960s, and 3) approximately 4,700 cubic yards of excavated fill material placed back into its former excavation in 1992 and 1993 along with 1,200 cubic yards of imported fill.

Below the fill is predominantly medium-dense to dense sand with variable gravel, silty sand, silt and peat to a depth of up to 50 feet bgs. Peat or silt beds with high organic content up to 2 feet thick are present within the alluvial soil, generally at depths greater than 10 feet bgs. These organic-rich beds appear to underlie most of the area but may not represent a contiguous layer.

Beneath these alluvial deposits is a stiff to hard clay or silt with a thickness of at least 14 feet. This unit is inferred to be a drift deposit of glacial-lacustrine origin.

1.6 HYDROGEOLOGY

Ground water occurs at both sites approximately 8 to 16 feet bgs, with a shallower depths occurring in the wet season. Based on ground water elevation surveys at and in the vicinity of the sites, ground water flow is inferred to be to the southeast, toward the Sammamish River.

The horizontal hydraulic conductivity for both sites was estimated using slug test data collected during the 2009 RI/FS. Based on evaluation of the results from the slug test, the estimated hydraulic conductivity for shallow, unconfined ground water beneath the sites ranged from 4.8 x 10-3 to 1.8 x 10-2 feet per minute (7 to 26 feet/day); the mean hydraulic conductivity determined from the slug test data is 13.1 feet/day.

HWA estimated the travel time of shallow ground water at both sites. Ground water particle velocity is described by the following relationship:

V = K i / P, where: V= particle velocity
K= hydraulic conductivity
i = hydraulic gradient
P = effective porosity

Based on estimates of horizontal hydraulic conductivity of around 7 to 26 feet/day, an assumed effective porosity of 0.25 (typical of sands), and measured gradients of 0.032 to 0.042 foot/foot, estimated horizontal ground water particle flow velocity may range from approximately 1 to 4 feet per day in the shallow aquifer.

Other physical characteristics of soil in the shallow, unconfined ground water zone include an estimated porosity (based on ex-situ analysis) ranging from 0.25 to 0.32, wet density ranging from 123.2 to 139.5 pounds per cubic foot, and dry density ranging from 107.2 to 127.4 pounds per cubic foot (Parametrix, 2009a).

1.7 SURFACE WATER HYDROLOGY

Surface water features in the vicinity include:

1) Horse Creek, which exits from a culvert beneath the adjacent Bothell Landing property to the west, and runs south along that boundary. It then flows under 180th street in a culvert and discharges to the Sammamish River. Flow to this drainage will be largely re-routed to a new drainage system (consisting of pipes and open channel segments) constructed some 300 feet west of the old Horse Creek channel, sometime in 2016.

2) The Sammamish River, which is located approximately 100 feet south of the Riverside TPH site.

1.8 INTERIM ACTION

Interim action cleanups were performed in 2010 (before the SR522 roadway realignment) and 2017 (after the SR522 roadway realignment), to address petroleum hydrocarbon impacts in soil. The interim actions for contaminated soil at the Riverside TPH Site included excavation and off-site disposal of impacted soils.

2010 - The City engaged a construction contractor, Hos Brothers Construction of Woodinville, Washington (Contractor), to perform the interim action in September 2010. Prior to soil cleanup, the Contractor fenced and grubbed the work area in preparation for the soil cleanup and subsequent construction of the SR 522 realignment. HWA, acting as environmental consultant

for the City of Bothell, monitored the soil excavation and off-site transport, and sampled soil to confirm cleanup levels in soil were achieved.

2017 – In July 2016, the City informed Ecology that as part of their due diligence, a prospective developer represented by Farallon Consulting (Farallon) had encountered petroleum contaminated soils during a Limited Subsurface Investigation on the northern portion of the Riverside Site. The City subsequently met with Ecology and submitted a "Residual Soil Excavation Work Plan" (October 12, 2016), thereafter receiving Ecology's concurrence to implement the remediation work.

According to Farallon's report, soil samples collected from four borings indicated that residual petroleum impacted soils above MTCA Method A cleanup levels were present in one of the soil borings, FB-5 (Figures 4, 5). Based on the results of the Farallon FB-5 boring, a residual soil excavation interim action was conducted to address the remaining TPH contaminated soils at the Bothell Riverside TPH Site. This soil cleanup at the Site included excavation and off-site disposal of all accessible impacted soils.

The interim action for contaminated soil at the Riverside TPH Site included excavation and off-site disposal of impacted soils. The City engaged a construction contractor, Interwest Construction Inc. (ICI) of Burlington, Washington to perform the interim action soil cleanup during January 2017 excavation activities, and Kane Environmental Inc. (Kane) with subcontractor Spooner Contracting, LLC, to perform the interim action soil cleanup during the second round of cleanup in March/April 2017. HWA personnel monitored the cleanup activities and sampled soil to confirm successful cleanup.

1.8.1 Pre-Cleanup Characterization

2010 - Prior to large scale excavation activities at the Riverside TPH site, HWA personnel conducted test pit characterization (i.e., "pot holing") to delineate clean overburden soils, and to assess the lateral and vertical extent of TPH-impacted soils with respect to previous investigations.

Test pit characterization included collecting samples of TPH-impacted soil for analysis of petroleum hydrocarbon fractionation and other target compounds in order to calculate MTCA Method B risk-based soil cleanup levels for protection of human health and potable ground water. The results of the of the Method B risk analysis are included in Appendix C and summarized in Table 1.

Eleven test pits were excavated on September 22 and 23, 2010. Test pits were excavated to a maximum depth of 7 feet bgs. HWA collected 21 representative soil samples at various depths from the test pits and submitted 17 of the samples for chemical analysis. Test pit data indicated

that an estimated 470 cubic yards (approximately 750 tons) of soil could be stockpiled on site for subsequent reuse.

2017 - Prior to the 2017 excavation activities at the Site, HWA personnel reviewed documentation of previous investigations and remedial excavations to assess the lateral and vertical extent of TPH-impacted soils in the vicinity of the Farallon FB-5 boring. HWA then marked the estimated excavation area and completed utility locates to identify all public and private underground utilities.

1.8.2 Soil Excavation

2010 - The Contractor excavated contaminated soil at the Riverside TPH Site on September 27 and 28, 2010. HWA personnel directed the cleanup based upon prior sampling, as well as field screening information such as soil color, odor, and photoionization detector readings. When the screening information indicated clean soil, HWA collected confirmation samples for laboratory analysis to document that the soils left in-place met Site cleanup levels.

Contaminated soil was excavated generally to depth of previous test pit and other exploration sampling which was found to meet the cleanup levels. The approximate limits of soil excavation are shown on Figure 2. The final excavation was approximately 100 by 70 feet in its maximum width and length. The depth of the excavation was approximately 4 feet below ground surface. This is consistent with descriptions of the 1992-1993 cleanup, in which clean imported fill was placed in the bottom of the (then) 8 to 9 foot-deep cleanup excavation, and pre-existing soils that were bio-treated were subsequently placed on top of the imported fill (RZA, 1992). Based on these finding, it appears the 1992 bio-treatment was not entirely successful in meeting cleanup levels.

The Contractor excavated and transported 971.65 tons of soil to the CEMEX USA (formerly Rinker) Inert Materials Landfill facility in Everett, Washington for thermal desorption treatment followed by permitted landfill disposal. Assuming a bulk density of 1.6 tons per bank cubic yard, the volume of soil excavated and transported to CEMEX was approximately 610 cubic yards.

2017 - During the first round of excavation activities, ICI excavated contaminated soil at the Site on January 10, 12, 13, and 18, 2017. During the second round, Kane/Spooner continued excavation activities at the Site on March 20, 23, 24, 27 through 31, and April 3, 2017. HWA personnel directed the cleanup based upon prior investigations and remedial excavation activities, as well as field screening information such as soil color, odor, and photoionization detector readings. When the screening information indicated clean soil, HWA collected confirmation samples for laboratory analysis to document that the soils left in place met the Site cleanup levels.

Contaminated soil was excavated generally to a depth ranging from 10 to 12.5 feet below ground surface (bgs), which was found to meet the cleanup levels for the bottom of the excavation. The approximate limits of soil excavation are shown on Figure 5. The final excavation was approximately 65 by 55 feet in its maximum width and length, respectively.

During the January cleanup, ICI excavated and transported 934.22 tons of soil to the CEMEX USA (formerly Rinker) Inert Materials Landfill facility in Everett, Washington for thermal desorption treatment followed by permitted landfill disposal.

During the March/April cleanup, 333.64 tons of soil were excavated and transported to CEMEX. An additional 613.41 tons were transported to a Waste Management transfer station in Woodinville, Washington, for transport and permitted disposal at the Waste Management landfill in Columbia Ridge, Oregon, for a total of approximately 947 tons excavated and disposed of properly during the March/April round of cleanup, and approximately 1,881 tons for all 2017 cleanup excavations.

1.8.3 Confirmation Sampling

2010 - HWA collected excavation sidewall and bottom samples to confirm soil cleanup. Chemical analysis results for soil samples from the Riverside TPH excavation indicate that the interim action achieved Site cleanup levels.

2017 - During the January 2017 excavation activities, HWA personnel collected a total of 21 excavation sidewall and 4 excavation bottom samples to confirm soil cleanup (Table 1). Of the 21 sidewall and 4 bottom samples, 7 of the sidewall and 2 of the bottom location samples were over-excavated due to laboratory results indicating contaminants of concern (COC)s were above the MTCA regulatory cleanup levels. In addition, three confirmation samples collected, one from the northwest sidewall (sample R-PEX-32-10) and two from the south (sample R-PEX-19-10) and southeast (sample R-PEX-28-10) sidewalls, exhibited gasoline concentrations of 39, 64 and 86 mg/kg, respectively, which is above the established MTCA Method A cleanup level of 30 mg/kg. Soils in these areas were temporarily left in place but were later over-excavated during the second round of excavating in March/April 2017.

During the March/April 2017 excavation activities, HWA personnel collected a total of 23 sidewall and 5 excavation bottom samples to confirm soil cleanup (Table 1). Of the 23 sidewall and 5 bottom samples, 5 of the sidewall and 1 of the bottom location samples were over-excavated and re-sampled due to cleanup level exceedances.

Figure 5 depicts confirmation sample locations. Table 1 includes laboratory data for the interim action residual soil cleanup conducted at the Site.

1.8.4 Ground Water Management

2010 - The excavation depth was approximately 4 feet below ground surface and did not encounter ground water. Nor did precipitation water accumulate in the open excavation in quantities requiring removal. Thus, the Contractor did not need to manage ground water during soil excavation. Instead, the Contractor graded the excavation to allow precipitation water to accumulate in a sump at the north end of the excavation where it infiltrated into the soil.

2017 - The excavation depth ranged from 10 to 12.5 feet bgs. Minimal perched ground water seepage was encountered at a depth of approximately 8 feet bgs in the excavation. In addition, precipitation that occurred during excavation activities accumulated in the excavation. During the January 2017 excavation activities, ICI managed the water accumulation by pumping water from the excavation into a Baker holding tank, allowing sediments to settle, and discharging of the water utilizing an existing King County Industrial Waste Division permit obtained by ICI for temporary discharge of water generated during dewatering activities. During the March/April 2017 excavation activities, Kane contracted Marine Vacuum Services, Inc. to remove any groundwater encountered and/or accumulated precipitation using a 2,500-gallon Vacuum truck to dewater the excavation prior to digging.

1.8.5 Riverside TPH Site Restoration

2010 - After excavation of contaminated soil and receipt of confirmation sample analytical results, the Contractor backfilled and compacted the excavation with a combination of clean, imported, structural fill soils meeting the requirements of Select Borrow, per WSDOT Standard Specification 2-03.3(14)K, and previously excavated soils from the Riverside TPH Site that were tested and found to meet cleanup levels. The imported select borrow was obtained from CEMEX, who mined the sandy soils from a quarry in Granite Falls, Washington (i.e. native quarry materials not excavated or reused from any developed property).

The select borrow and native soils were compacted to Method B of WSDOT Standard Specification 2-03.3(14)C (i.e. 90 percent of maximum dry density as determined using test method ASTM D 1557 [Modified Proctor]) below two feet bgs, and 95 percent of maximum dry density for the upper two feet. A portion of the remediation area was hydro-seeded for erosion control, while the remainder was graded with weather-resistant surfacing material.

2017 - Due to contaminated soils being temporarily left in place after the January cleanup on the northwest, south and southeast sidewalls of the January excavation, a layer of polyethylene sheeting (Visqueen) was placed along the sidewalls of the excavation as an indicator of the boundary between the contaminated soils and the clean backfill and in an effort to keep clean backfill soils from becoming adversely impacted. ICI then backfilled and compacted the excavation with clean imported structural fill soils meeting the requirements of Select Borrow, per WSDOT Standard Specification 2-03.3(14)K. The imported select borrow was obtained from

Wetlands Creations, who mined the soils from their facility in Monroe, Washington (i.e., native quarry materials not excavated or reused from any developed property).

During the March/April round of excavation and prior to backfilling and compaction activities, Kane imported and placed one to two feet of quarry spalls, obtained from CalPortland located in Kenmore, Washington, on the bottom of the excavation to approximately one foot above the ground water level. This was performed to ensure ground water did not mix with the structural fill soils, ultimately helping with compaction efforts. A filter fabric was placed on top of the layer of quarry spalls and the excavation was then backfilled and compacted with clean imported gravel borrow from CalPortland. Additionally, a layer of 5/8-inch minus crushed rock was placed and compacted in the top six inches of fill where the original paved driveway was located just off of State Route 522 leading into the Baskin Robbins and Gallo De Oro Mexican restaurant parking lot. This was to act as a temporary driveway until repaving could be completed at a later date.

During backfilling activities, the select and gravel borrow were compacted to Method B of WSDOT Standard Specification 2-03.3(14)C, i.e., 90 percent of maximum dry density as determined using test method ASTM D 1557 (Modified Proctor) below four bgs, and 95 percent of maximum dry density for the upper four feet. Due to softer soils (peat) encountered in the bottom of the excavation, the first two lifts of backfill were placed and spread in layers of approximately two-feet of uncompacted thickness. Subsequent backfill lifts were placed and spread in layers not more than 10 inches in uncompacted thickness.

2 DRAFT CLEANUP ACTION PLAN

This dCAP presents proposed remedial action to be conducted at the Site. Per MTCA, a dCAP includes the following elements, all of which are included in the RI and FS:

- Description of proposed cleanup
- Rationale for selecting the proposed alternative
- Other alternatives evaluated
- Cleanup standards
- Schedule for cleanup implementation, restoration time frame (if known)
- Institutional controls, if any
- Applicable state and federal laws
- A preliminary determination by Ecology that the proposed cleanup action will comply with threshold and other MTCA requirements in WAC 173-340-360
- For on-site containment, specification of the types, levels, and amounts of hazardous substances remaining on site and measures used to prevent migration and contact with those substances

2.1 DESCRIPTION OF PROPOSED CLEANUP

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 alternative for the Site (developed in accordance with WAC 173-340-350 through 173-340-390) is excavation and off-site disposal of soil, which has already been completed as an interim action.

The COCs at the TPH site are:

- Soil - Lube oil-range total petroleum hydrocarbons
- Ground water - None

The interim actions completed in 2010 and 2017 at the Riverside TPH Site included excavation and off-site disposal of impacted soils. Contaminated soil was excavated to depths of up to 12.5 feet below ground surfaceA total of 2,953 tons of sol were excavated and transported offsite for treatment and/or permitted landfill disposal.

HWA collected excavation sidewall and bottom samples to confirm soil cleanup. Confirmation sample locations are shown on Figures 4 and 5. Pre-excavation test pit samples collected at the limits of the excavation, and test pit samples collected beyond the limits of excavation are included in Table 1 as confirmation samples because the soils represented by those samples did not contain chemicals of potential concern at concentrations exceeding cleanup levels. Chemical

analysis results for soil samples from the Riverside TPH excavation indicate that the interim action achieved Site cleanup levels.

2.2 RATIONALE FOR SELECTING THE PROPOSED ALTERNATIVE

Per Section 3 of the Feasibility Study (FS) for the Riverside TPH site (HWA, Feasibility Study Rev 2 February 5 2016), the proposed alternative was selected based on compliance with remedial action objectives and cleanup standards (i.e., achieving cleanup levels at the point of compliance). The proposed alternative also achieved compliance with threshold and other MTCA requirements. The cleanup alternative (excavation and off-site disposal of soil), which has already been completed as an interim action, was the most protective, fastest time frame alternative, and met all cleanup standards.

2.3 OTHER ALTERNATIVES EVALUATED

Per Section 3 of the FS, soil remediation technologies evaluted included:

- Natural Attenuation with Cap (In Situ Biological)
- Chemical Oxidation (In Situ Physical/Chemical)
- Chemical Reduction/Oxidation (Ex Situ Physical/Chemical)
- Excavation and Off-site Disposal (Containment)

2.4 CLEANUP STANDARDS

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). TPH Site cleanup levels are described below.

2.4.1 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

An evaluation of Method B risk-based TPH soil cleanup levels for the Site was specified in Section 3.1.1.1 of the *Compliance Monitoring Quality Assurance Project Plan* (CMQAPP) appendix of the *Interim Action Work Plan* (Parametrix, 2010). The CMQAPP called for characterization of 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 MTCA TPH 11.1 spreadsheet model 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 included in the RI report. Table 2 summarizes the results of the analysis. The calculated Method B cleanup levels for gasoline-range petroleum hydrocarbons at the Site range between 84 and 246 milligrams per kilogram (mg/kg) depending on the mixture of hydrocarbon fractions and specific compounds such as benzene. The Method B TPH cleanup level of 84 mg/kg is a calculated value for protection of potable ground water from contamination by benzene 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 detectible benzene in soil is 30 mg/kg. The calculated Method B cleanup levels for diesel- and oil-range petroleum hydrocarbons at the Site range between 3,130 and 5,225 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) are extremely conservative, as much of the Site will be covered by roadway or buildings, eliminating the direct contact pathway, and reducing ground water recharge by precipitation. These remediation levels meet all the requirements of WAC 173-340-720 through 173-340-760 and should be considered the Site cleanup levels.

2.4.2 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 TPH 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 ground water.

2.4.3 Terrestrial Ecological Evaluation

The TPH Site qualifies for an exclusion from a terrestrial ecological evaluation (TEE), due to the absence of more than 1.5 acres contiguous undeveloped land within 500 feet of the Site. The nearest undeveloped land to the Site is the 30 to 40 foot-wide strip of vegetated river bank adjoining the Site. The large, undeveloped, wooded portion of the Park at Bothell Landing is located some 800 feet southwest of the Site. Currently vacant land north of the Site is slated for development in the near future, and is currently covered by gravel and hydroseeding (i.e. no native vegetation or habitat potential).

2.5 VAPOR INTRUSION

Per the MTCA, RIs must include evaluation of vapor intrusion (VI) impacts to indoor air quality when volatile hazardous substances are present in the subsurface. The Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State (Ecology, 2009) provides a process for evaluating the VI pathway during an RI/FS (WAC 173-340-350) and subsurface media cleanup levels protective of indoor air quality. This process applies to buildings currently on a site, or future buildings, i.e., cleanup standards and actions must be protective of current and potential future site uses.

The guidance employs a tiered approach, starting with a preliminary assessment, and moving to Tier I and II assessments, if warranted. Initial screening steps in the preliminary assessment include the following:

- Are chemicals of sufficient volatility and toxicity known or reasonably suspected to be present?
- Are occupied buildings present (or could they be constructed in the future) above or near site contamination?

For the TPH Site, the first criterion is not met, as no ground water TPH impacts remain exceeding VI screening criteria, thus no further VI evaluation is necessary.

2.6 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. Proposed points of compliance are described below.

2.6.1 Soil

The standard soil point of compliance under MTCA (WAC 173-340-740 (6)(b)) 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 bgs.

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)).

2.6.2 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 properties near or adjoining surface water bodies, a conditional point of compliance off the property may be approved, as close as practicable to the source and not to exceed the point or points where the ground water flows into the surface water (typically at the ground water to surface water discharge area).

For this Site, the standard ground water point of compliance is proposed for TPH impacts, i.e., ground water throughout the Site.

2.7 SCHEDULE FOR CLEANUP IMPLEMENTATION, RESTORATION TIME FRAME

The interim action cleanups occurred in 2010 and 2017.

2.8 INSTITUTIONAL CONTROLS

Because the cleanup met all cleanup standards, no institutional controls are needed.

2.9 APPLICABLE STATE AND FEDERAL LAWS

Per Section 2.6 of the FS, the cleanup met all applicable or relevant and appropriate requirements (ARARs).

2.10 PRELIMINARY DETERMINATION BY THE DEPARTMENT OF ECOLOGY

This dCAP recommends that the Department of Ecology determine that the selected remedy for contaminated soil at the site complies with WAC 173-340-360 because it was the most protective, fastest time frame alternative, and met all cleanup standards.

2.11 HAZARDOUS SUBSTANCES REMAINING ON SITE

The selected remedy does not include any containment so there is no need to comply with WAC 173-340-380(1)(ix), which states:

> (ix) Where the cleanup action involves on-site containment, specification of the types, levels, and amounts of hazardous substances remaining on site and the measures that will be used to prevent migration and contact with those substances.

3 SUMMARY & CONCLUSIONS

The Bothell Riverside TPH site boundary was discussed in the final RI report, HWA, October 2015 (Figure 3).

Petroleum contaminated soil was excavated and removed from the Site in an interim action in 2010. Site cleanup levels for soil are selected as the more stringent of MTCA Method A or Method B (see Table 2). Cleanup levels for ground water are selected as MTCA Method A. Points of compliance are as follows:

- Soil
  - Standard point of compliance (throughout the Site) based on protection of ground water
  - From the ground surface to 15 feet below ground surface based on direct contact exposure
- Ground water
  - The standard ground water point of compliance is proposed, i.e., ground water throughout the Site

The interim action complied with WAC 173-340-360 because it was the most protective, fastest time frame alternative, and met all cleanup standards. 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 alternative at the Riverside TPH Site (developed in accordance with WAC 173-340-350 through 173-340-390) for contaminated soil and ground water is to adopt the completed interim actions as the final cleanup.

4 REFERENCES

HWA GeoSciences, 2009, *Remedial Investigation And Feasibility Study Work Plan Riverside Property Bothell, Washington,* August 26, 2009.

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HWA, 2015, *Final Remedial Investigation Report, Bothell Riverside Site, Bothell, Washington,* October 9, 2015

HWA, 2016, *Feasibility Study Rev 2, Bothell Riverside TPH Site, Bothell, Washington,* February 5 2016

Parametrix, 2009a, *Bothell Riverside Remedial Investigation/Feasibility Study*, Revision No. 0, Prepared by Parametrix, Bellevue, Washington, November 2009.

Parametrix, 2009b. *Bothell Riverside Draft Cleanup Action Plan*, Revision No. 1. Prepared by Parametrix, Bellevue, Washington, December 2009.

Washington State Department of Ecology, 2007, *Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC*, Publication No. 94-06, dated October 12.

Washington Department of Ecology, 2009, *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action,* Washington State Department of Ecology, Toxics Cleanup Program, Publication no. 09-09-047, Review DRAFT, October 2009.

TABLE 1
SOIL CLEANUP ANALYTICAL RESULTS
BOTHELL RIVERSIDE SITE
(all results in milligrams per kilogram (mg/kg))

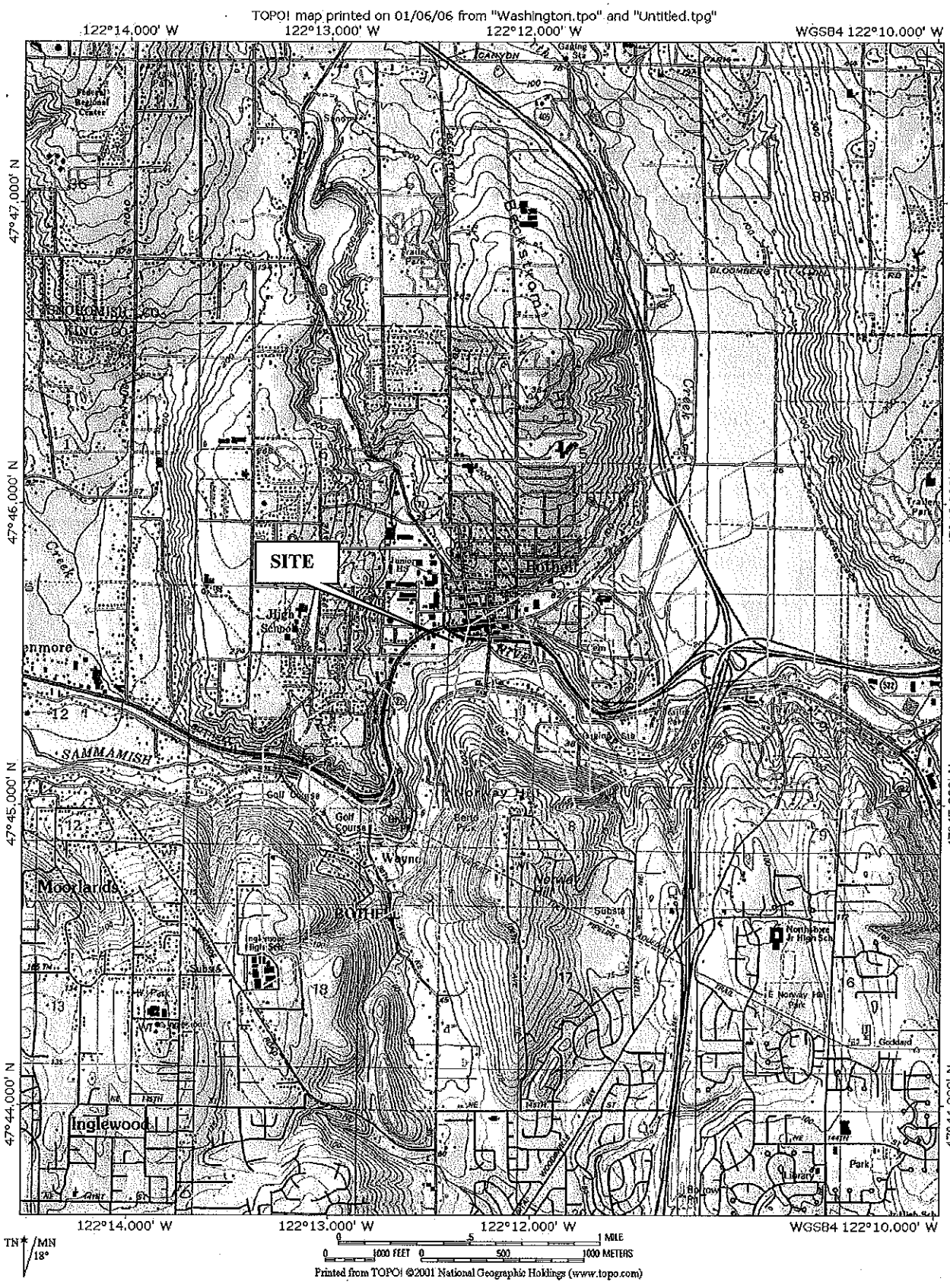
Sample Location	Sample Depth ft bgs	Confirmation Sample: Sidewall	Confirmation Sample: Bottom	Diesel	Oil	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	Total Naphthalenes[2]	cPAHs TEC[3]	NOTES
R-TP-1-3	3			<140	1100						0.017	0.016	Excavated
R-TP-1-7	7			<79	440								Excavated
R-TP-2-3	3			130	820						0.056	0.009	Excavated
R-TP-3-3	3	X		<27	<54								
R-TP-4-4	4	X		<130	840								
R-TP-4-6	6												
R-TP-5-3	3	X		<110	650								
R-TP-6-2	2	X		<75	490								
R-TP-6-6	6			<37	320								
R-TP-7-3	3			<130	750						0.040	0.001	Excavated
R-TP-7-7	7			<28	160								Excavated
R-TP-8-3	3			<160	940						0.045	0.010	Excavated
R-TP-8-6	6			<40	300								Excavated
R-TP-9-2	2			<67	550						0.1439	0.017	Excavated
R-TP-9-7	7			<28	220								Excavated
R-TP-10-4	4	X		<110	680								
R-TP-11-3	3			74	660								
R-TP-11-5	5			<28	<57								
R-PEX-1-4	4		X	72	720								
R-PEX-2-4	4		X	84	690								
R-PEX-3-4	4		X	52	530								
R-PEX-4-2	2	X		<94	640								
R-PEX-5-2	2	X		78	710								
R-PEX-6-2	2	X		<140	1800								
R-PEX-7-4	4		X	81	710								
2017 Residual Soil Cleanup													
R-PEX-8-11	11		X	<110	500	44	<0.080	<0.40	<0.40	1.1			Excavated, Sample ID REX-B1-11 in Laboratory Report
R-PEX-9-11	11		X	<110	760	150	<0.080	<0.40	<0.40	32.58			Excavated, Sample ID REX-B2-11 in Laboratory Report
R-PEX-10-10	10	X		<67	300	420	0.064	0.097	0.32	0.64			Excavated, Sample ID REX-1-10 in Laboratory Report
R-PEX-11-10	10	X		<70	<60	420	0.089	0.18	0.44	1.19			Excavated, Sample ID REX-EW-10 in Laboratory Report
R-PEX-12-5	5	X		<27	88	15	<0.020	<0.056	<0.056	<0.056			Excavated, Sample ID REX-EW-5 in Laboratory Report
R-PEX-13-10	10	X		<73	240	34	<0.020	<0.063	<0.063	<0.063			Excavated, Sample ID REX-SW-10 in Laboratory Report
R-PEX-14-5	5	X		<460	3500	16	0.04	<0.060	<0.060	0.08			Excavated, Sample ID REX-SW-5 in Laboratory Report
R-PEX-15-10	10	X		<890	<57	3200	1.6	1.5	1.7	6.5			Excavated, Sample ID REX-WW-10 in Laboratory Report
R-PEX-16-5	5	X		<27	<54	<5.4	<0.020	<0.054	<0.054	<0.054			Excavated, Sample ID REX-WW-5 in Laboratory Report
R-PEX-17-10	10	X		<32	<64	11	<0.020	<0.068	<0.068	<0.068			Sample ID REX-NW-10 in Laboratory Report
R-PEX-18-5	5	X		<27	70	<5.4	<0.020	<0.054	<0.054	<0.054			Sample ID REX-NW-5 in Laboratory Report
R-PEX-19-10	10	X		<37	190	64	0.021	<0.061	0.23	0.21			Excavated
R-PEX-20-5	5	X		69	690	<5.6	<0.020	<0.056	<0.056	<0.056			
R-PEX-21-10	10	X		<30	<60	8.7	<0.020	<0.061	<0.061	<0.061			
R-PEX-22-5	5	X		<27	<54	<5.7	<0.020	<0.057	<0.057	<0.057			
R-PEX-23-12.5	12.5		X	<54	<110	<15	<0.029	<0.15	<0.15	0.28			
R-PEX-24-12.5	12.5		X	<110	350	<35	<0.071	<0.35	<0.35	<0.35			
R-PEX-25-5	5	X		<27	<54	<5.5	<0.020	<0.055	<0.055	<0.055			
R-PEX-26-10	10	X		<29	<57	12	<0.020	<0.049	<0.049	<0.049			
R-PEX-27-5	5	X		<26	<53	<5.5	<0.020	<0.055	<0.055	<0.055			
R-PEX-28-10	10	X		<60	270	86	<0.020	<0.069	<0.069	0.17			Excavated
R-PEX-29-5	5	X		150	1100	22	<0.020	<0.061	<0.061	<0.061			
R-PEX-30-10	10	X		110	450	<5.3	<0.020	<0.053	<0.053	<0.053			
R-PEX-31-5	5	X		<27	<55	<5.9	<0.020	<0.059	<0.059	<0.059			
R-PEX-32-10	10	X		<29	<56	39	<0.020	<0.059	<0.059	<0.059			Excavated
R-PEX-33-8	8	X		<830	130	740	0.59	<0.65	4.5	<1.3			Excavated
R-PEX-34-8	8	X		110	620	130	0.33	<0.47	0.46	<0.47			Excavated
R-PEX-35-10	10'	X		<310	1200	380	0.46	<0.42	2.4	3.35			Excavated
R-PEX-36-5	5'	X		<27	<54	<5.0	<0.020	<0.060	<0.060	<0.060			Excavated
R-PEX-37-9	9'	X		520	140	1500	0.13	<0.65	5.1	<2.6			Excavated
R-PEX-38-8	8'	X		<28	<58	<5.8	<0.020	<0.058	<0.058	<0.058			
R-PEX-39-11	11'	X		140	470	81	0.02	<0.064	0.073	<0.064			Excavated
R-PEX-40-5	5'	X		<27	<53	<5.4	<0.020	<0.054	<0.054	<0.054			
R-PEX-41-9	9'	X		<29	<57	<5.6	<0.020	<0.056	<0.056	<0.056			
R-PEX-42-10	10'		X	<90	490	<42	<0.085	<0.42	<0.42	1.6			
R-PEX-43-11	11'		X	<60	230	<23	<0.045	<0.23	<0.23	<0.23			
R-PEX-44-5	5'	X		<89	310	<40	<0.081	<0.40	<0.40	<0.40			
R-PEX-45-9	9'	X		<31	<62	<6.3	<0.020	<0.063	<0.063	<0.063			
R-PEX-46-11	11'		X	<52	120	<19	<0.037	<0.19	<0.19	<0.19			
R-PEX-47-5	5'	X		<32	<65	<7.2	<0.020	<0.072	<0.072	<0.072			
R-PEX-48-10	10'	X		<30	<61	<6.4	<0.020	<0.064	<0.064	<0.064			
R-PEX-49-5	5'	X		69	1100	<4.8	0.025	<0.048	<0.048	<0.048			
R-PEX-50-12	12'	X		<29	<58	<6.0	<0.20	<0.060	<0.060	<0.060			
R-PEX-51-5	5'	X		120	970	<6.4	0.023	<0.064	<0.064	<0.064			
R-PEX-52-11	11'	X		<28	<57	<6.0	<0.020	<0.060	<0.060	<0.060			
R-PEX-53-6	6'	X		69	680	<6.1	<0.020	<0.061	<0.061	<0.061			
R-PEX-54-10	10'	X		<31	70	<6.1	<0.020	<0.061	<0.061	<0.061			
R-PEX-55-5	5'	X		<31	<62	<7.2	<0.020	<0.072	<0.072	<0.072			
R-PEX-56-10	10'	X		<30	64	<6.1	<0.020	<0.061	<0.061	<0.061			
R-PEX-57	11'		X	<29	76	<5.6	<0.020	<0.056	<0.056	<0.056			
R-PEX-58-9	9'	X		<30	<59	<6.0	<0.020	<0.060	<0.060	<0.060			
R-PEX-59-9	9'	X		<31	<62	<6.3	<0.020	<0.063	<0.063	<0.063			
R-PEX-60-11	11'		X	<31	120	<6.7	<0.020	<0.067	<0.067	<0.067			
2017 Residual Soil Cleanup Backfill													
Backfill #1	NA	NA	NA	<27	240	<4.2	<0.020	<0.042	<0.042	<0.042			January 2017, Soil rejected, this backfill not used
Backfill #2	NA	NA	NA	<27	<55	<4.3	<0.020	<0.043	<0.043	<0.043			January 2017, second backfill source accepted
Backfill #4	NA	NA	NA	<26	<53	<5.6	<0.020	<0.056	<0.056	<0.056			March 2017 backfill, accepted
Backfill #5	NA	NA	NA	<26	<53	<6.5	<0.020	<0.065	<0.065	<0.065			March 2017 backfill, accepted
Backfill #6	NA	NA	NA	<27	<53	<6.0	<0.020	<0.060	<0.060	<0.060			March 2017 backfill, accepted
Stockpile													
R-TP-1-3	3			<140	1100						0.017	0.016	
R-TP-2-3	3			130	820						0.056	0.009	
R-TP-5-3	3			<110	650								
R-TP-6-2	2			<75	490								
R-TP-7-3	3			<130	750						0.040	0.001	
R-TP-9-2	2			<67	550						0.1439	0.017	
MTCA Method A Cleanup Level[4]				2000		100/30[5]	0.03	7	6	9	5	0.100	
MTCA Method B Cleanup Level[5]				1824		84							

Notes:
< - Not detected at laboratory's reporting limit
Blank - Sample was not analyzed for this constituent
NA - Not applicable
Bold - Analyte Detected
Bold/Highligh - Analyte detected above MTCA Method A soil cleanup level
[redacted] - Sample in area that was subsequently excavated
1 - Confirmation that soil remaining in place meets MTCA cleanup levels
2 - Sum of Naphthalene + 1-Methylnaphthalene + 2-Methylnaphthalene
3 - Toxic Equivalent Concentration of carcinogenic polynuclear aromatic hydrocarbons (cPAHs) per WAC 173-340-708(e)
4 - Washington Model Toxics Control Act Method A (Table 740-1) soil cleanup levels for unrestricted land use
5 - Method B TPH cleanup levels are site specific values calculated using MTCATPH1.1

Table 2
Summary of Method B Soil TPH Risk Calculations
Bothell Riverside Site

Release area	Former service station(s)				
TPH Type	Lubricating oil				
Sample	**R-TP-1-3**	**R-TP-2-3**	**R-TP-7-3**	**R-TP-8-3**	**R-TP-9-2**
Calculated Method B TPH cleanup level for direct skin contact (mg/Kg)	4,977	5,013	6,403	6,666	1,824
Most stringent soil risk criterion for direct skin contact	cPAHs mixture	Hazard Index	Hazard Index	cPAHs mixture	cPAHs mixture
Method B soil TPH concentration protective of ground water (mg/Kg)	100% NAPL[1]	100% NAPL	100% NAPL	100% NAPL	100% NAPL
Most stringent soil risk criterion for protection of ground water	Hazard Index Total risk 1E-5 cPAHs mixture	Hazard Index Total risk 1E-5 cPAHs mixture	Hazard Index Total risk 1E-5 cPAHs mixture	Hazard Index Total risk 1E-5 cPAHs mixture	Hazard Index Total risk 1E-5 cPAHs mixture
Method A soil cleanup levels (mg/Kg)	2000 (D) 2000 (O) 5 (Naphthalenes)[2] 0.10 (cPAHs TEC)[3]				

Notes:
1 - 100% NAPL means soil containing free product would not produce a TPH concentration ≥800 µg/L in ground water
2 - Sum of Naphthalene + 1-Methylnaphthalene + 2-Methylnaphthalene
3 - Toxic Equivalent Concentration of carcinogenic polynuclear aromatic hydrocarbons (cPAHs) per WAC 173-340-708(e)



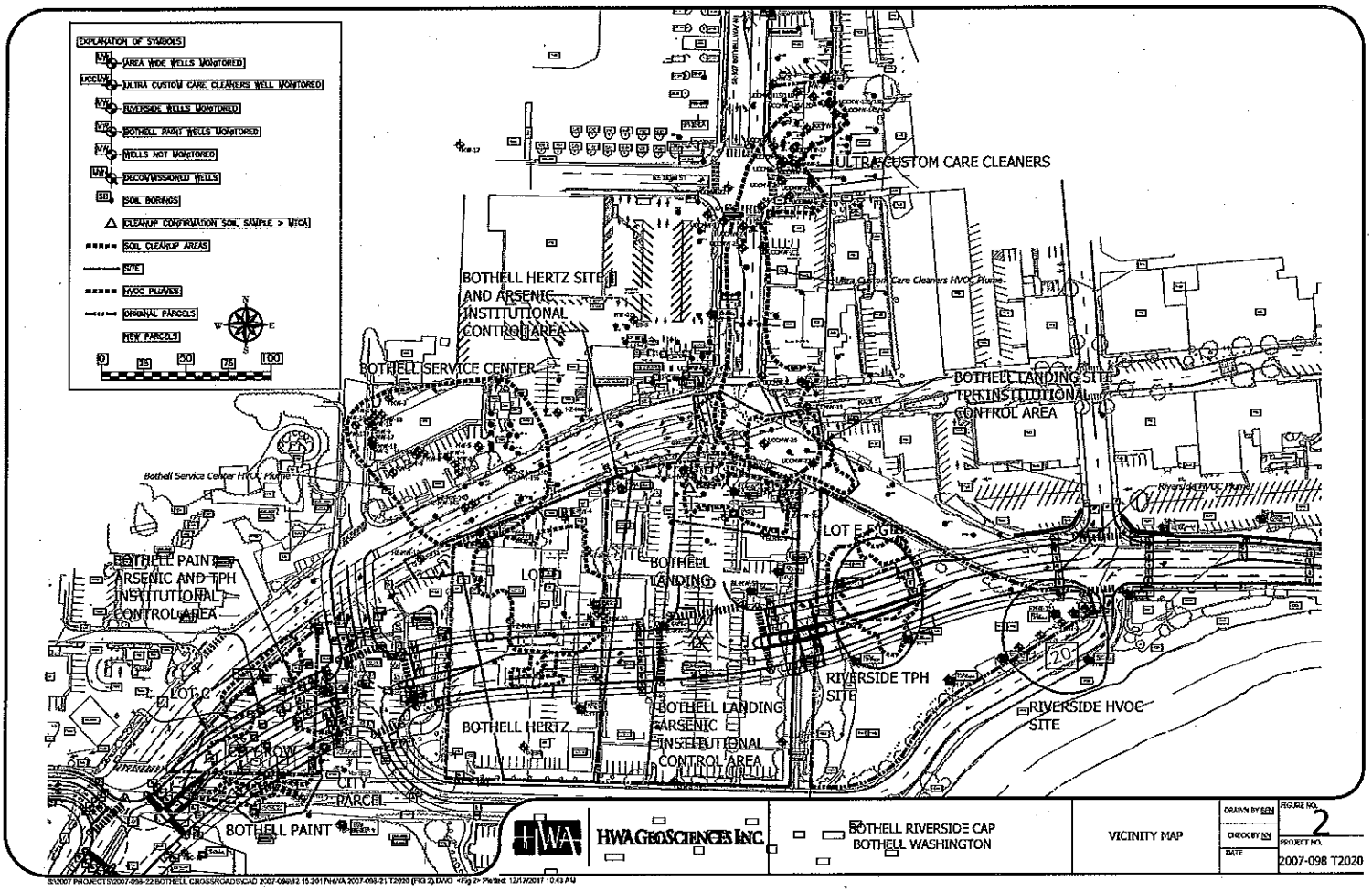
SITE VICINITY

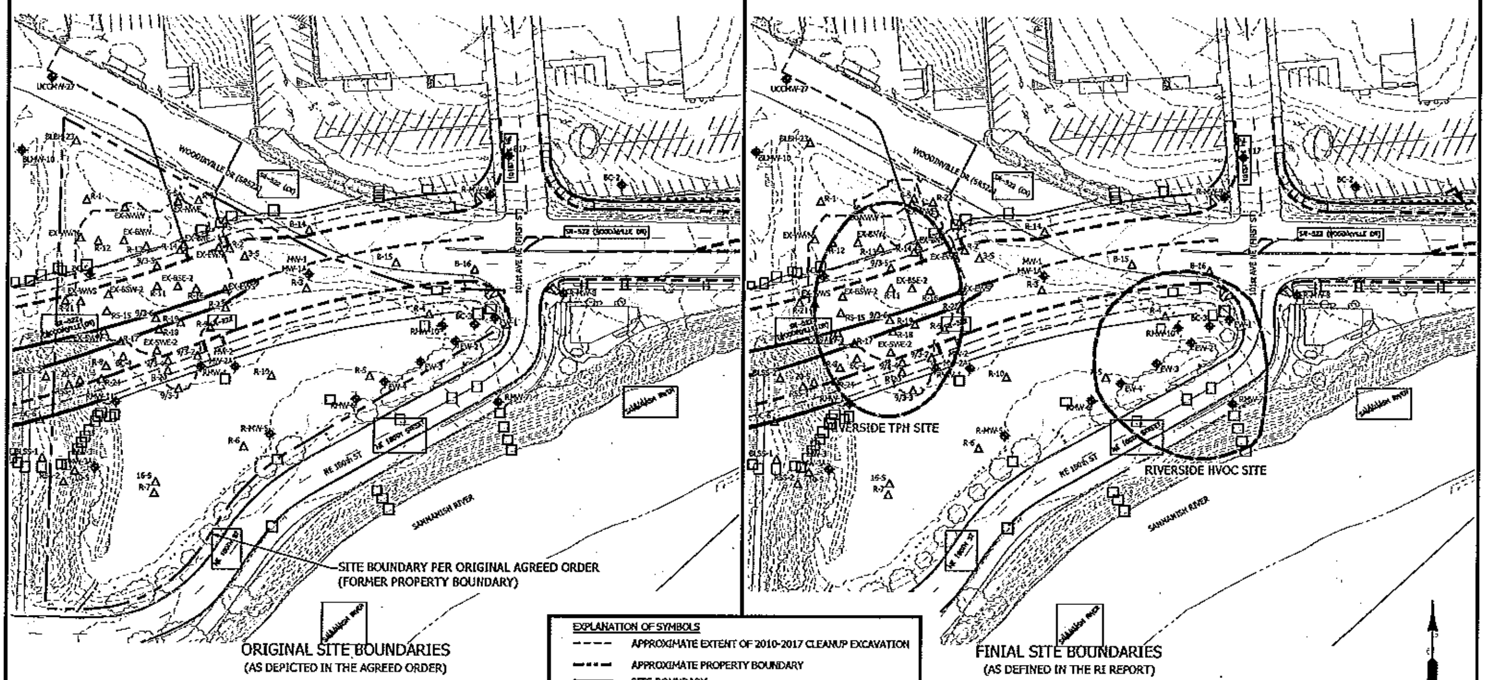
FIGURE NO. 1

HWA GEOSCIENCES INC.

BOTHELL RIVERSIDE TPH SITE
draft CLEANUP ACTION PLAN
BOTHELL, WASHINGTON

PROJECT NO. 2007-098


EXPLANATION OF SYMBOLS
AREA HVOC WELLS MONITORED
ULTRA CUSTOM CARE CLEANERS WELL MONITORED
RIVERSIDE WELLS MONITORED
BOTHELL PAINT WELLS MONITORED
WELLS NOT MONITORED
DECOMMISSIONED WELLS
SOIL BORINGS
CLEANUP CONFIRMATION SOIL SAMPLE > MTCA
SOIL CLEANUP AREAS
SITE
HVOC PLUMES
ORIGINAL PARCELS
NEW PARCELS
0 25 50 75 100
ULTRA CUSTOM CARE CLEANERS
BOTHELL HERTZ SITE AND ARSENIC INSTITUTIONAL CONTROL AREA
Ultra Custom Care Cleaners HVOC Plume
BOTHELL SERVICE CENTER
BOTHELL LANDING SITE TPH INSTITUTIONAL CONTROL AREA
Bothell Service Center HVOC Plume
Riverside HVOC Plume
BOTHELL PAINT ARSENIC AND TPH INSTITUTIONAL CONTROL AREA
LOT D
BOTHELL LANDING
LOT E
LOT C
RIVERSIDE TPH SITE
RIVERSIDE HVOC SITE
BOTHELL HERTZ
BOTHELL LANDING ARSENIC INSTITUTIONAL CONTROL AREA
CITY PARCEL
BOTHELL PAINT
HWA GEOSCIENCES INC.
BOTHELL RIVERSIDE CAP
BOTHELL WASHINGTON
VICINITY MAP
DRAWN BY SEN
CHECK BY SN
DATE
FIGURE NO. 2
PROJECT NO. 2007-098 T2020

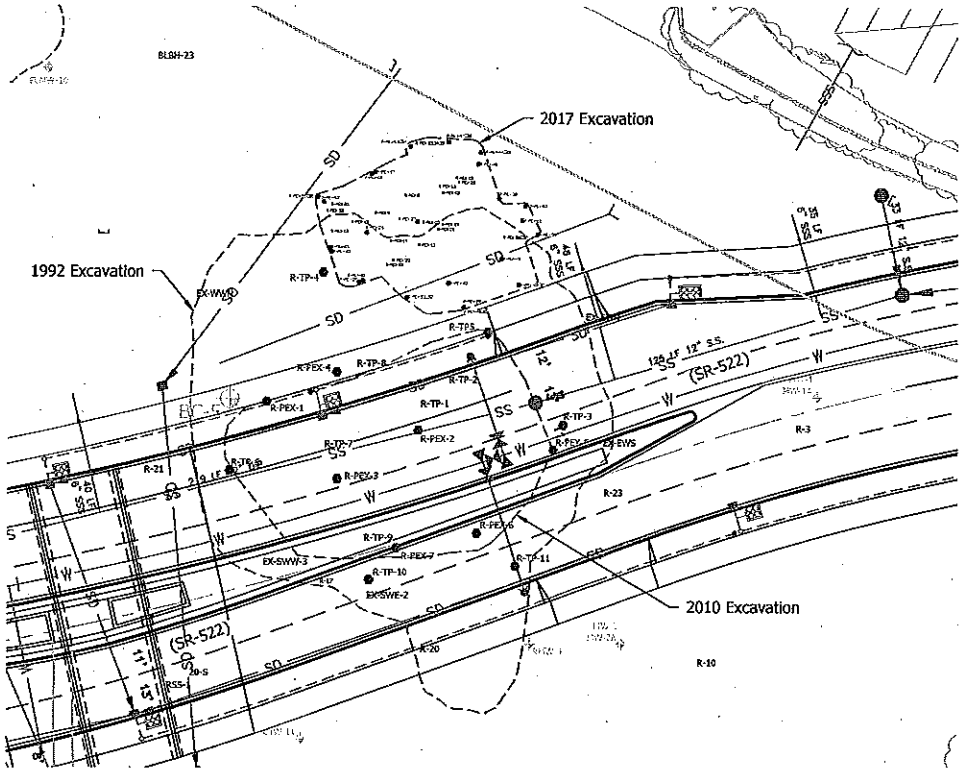


EXPLANATION OF SYMBOLS

- APPROXIMATE EXTENT OF 2010-2017 CLEANUP EXCAVATION
- APPROXIMATE PROPERTY BOUNDARY
- SITE BOUNDARY
- R-8 SOIL BORING OR TEST PIT LOCATIONS
- R-MW-10 MONITORING WELL LOCATIONS

HWA GEOSCIENCES INC.	BOTHELL RIVERSIDE CAP BOTHELL, WASHINGTON	SITE BOUNDARIES	DRAWN BY EFM CHECK BY AS DATE 09.23.15	FIGURE NO. 3 PROJECT NO. 2007-098 T2018

HVOC Fig 3A> Plotted 12/17/2017 12:32 PM



EXPLANATION OF SYMBOL

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMITS OF CONTAMINATED SOIL EXCAVATION

R-PEX-9 — APPROXIMATE LOCATION OF CONFIRMATION SOIL SAMPLE LEFT IN PLACE WITH CONCENTRATIONS EMTCA

R-PEX-8 — APPROXIMATE LOCATION OF SOIL SAMPLE IN AREA THAT WAS SUBSEQUENTLY EXCAVATED

PRE-INTERIM ACTION SOIL SAMPLE MEETING MTCA CLEANUP LEVELS

R-TP-4 — TEST PIT LOCATION WITH CONCENTRATIONS EMTCA

HWA GEOSCIENCES INC.

BOTHELL RIVERSIDE SITE
RI/FS
BOTHELL, WASHINGTON

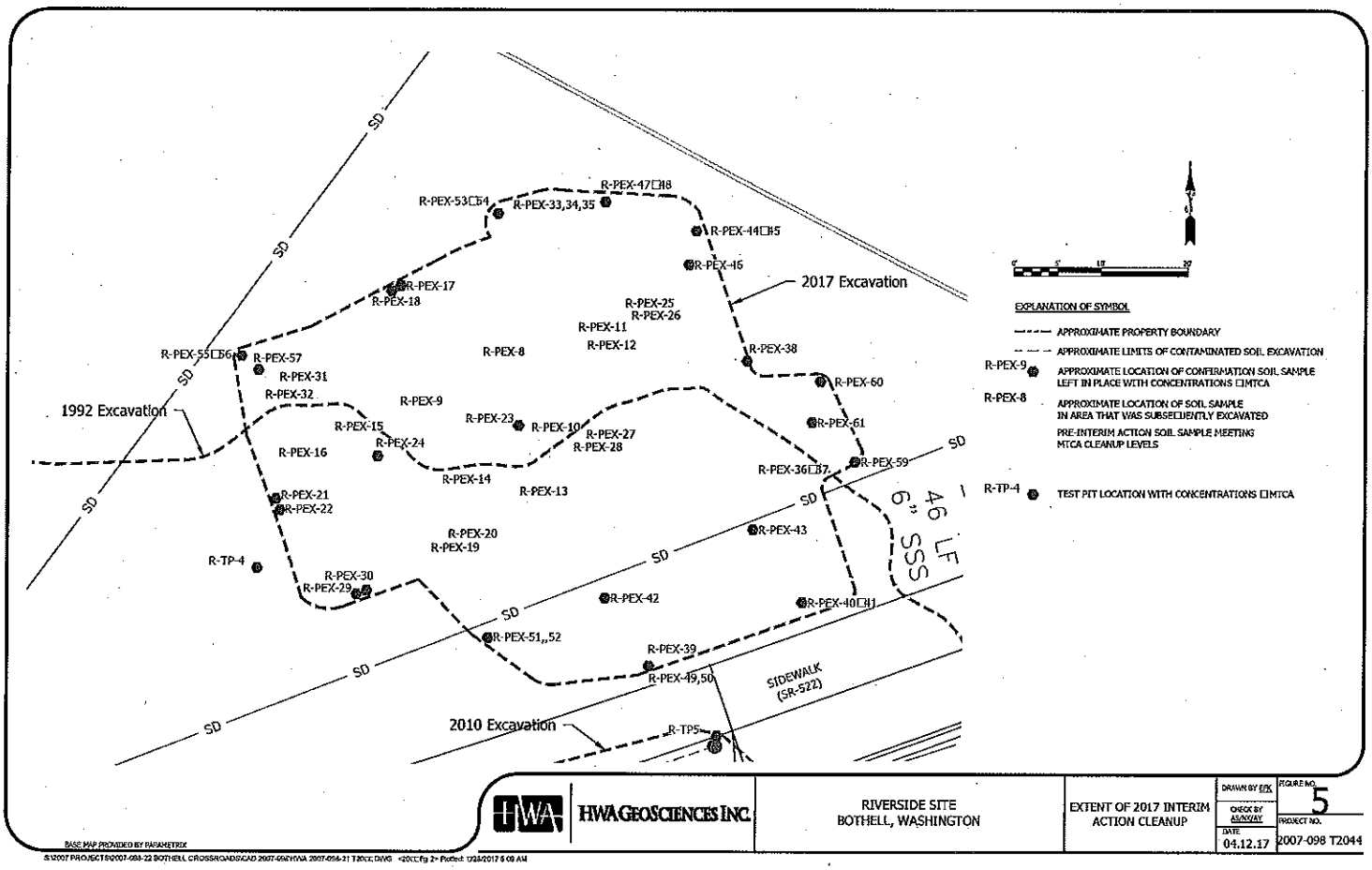
EXTENT OF INTERIM ACTION CLEANUP

DRAWN BY: EPK
CHECK BY: AS, AY
DATE: 04.12.17

FIGURE NO. 4
PROJECT NO. 2007-098 T919

BASE MAP PROVIDED BY PARAMETREX

S:\2007 PROJECT\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2R1C.DWG 4 Fig 8 EXC CB (2) Plotted: 07/6/2017 8:09 AM



HWA GeoSciences Inc.

RIVERSIDE SITE
BOTHELL, WASHINGTON

EXTENT OF 2017 INTERIM ACTION CLEANUP

DRAWN BY EJK
CHECK BY ASANWAY
DATE 04.12.17

FIGURE NO. 5
PROJECT NO. 2007-098 T2044

BASE MAP PROVIDED BY PARAMETRIX

S:\2007 PROJECT\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T3DCX.DWG <2DCX Fig 2> Plotted: 12/4/2017 8:08 AM