AFN # 2010779 COV Recorded 03/31/2026 11:22 AM Page: 1 of 99 Filing Instrument $401.50 Matt Beaton, Auditor, Franklin County, WA. SIMPLIFILE

After Recording Return
Original Signed Covenant to:
Christer Loftenius
Toxics Cleanup Program
Department of Ecology
Eastern Region Office
4601 North Monroe St.
Spokane, WA

Environmental Covenant

Grantor: Tidewater Terminal Co. (hereafter "Tidewater")
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: 2900 Sacajawea Park Road, Pasco, Franklin County, Washington 99301; a portion of the southwest quarter of Section 35, Township 09 North, Range 30 East, W.M. Franklin County, Washington.
Tax Parcel No.: A portion of 112-580-020 and 112-580-011
Cross Reference: Consent Decree (State of Washington, Department of Ecology v. Tidewater Terminal Company, Inc.) No. 16 250951 11, filed November 22, 2016 in Franklin County Superior Court, Washington (hereafter "Consent Decree")

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70A.305 RCW, and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The property that is the subject of this Covenant is the site commonly known as the "Tidewater Fuel Line Leak Site," Cleanup Site ID 2331 ("Property"). The Site is legally described in **Exhibit A**, and illustrated in **Exhibit B**, both of which are attached (hereafter "Property"). If there are differences between these two exhibits, the legal description in Exhibit A shall prevail.

c. The Property is located on property owned by Tesoro Logistics Northwest Pipeline LLC, a Delaware limited liability company ("Tesoro Pipeline"), to the south of Sacajawea Park Road having tax parcel number 112-580-020, and by Tesoro Logistics Operations LLC ("Tesoro Logistics") to the north of Sacajawea Park Road having tax parcel number 112-580-011 (together, the "Tesoro Property"). Tesoro Logistics recorded a Covenant on the Tesoro Property on April 28, 2025 under filing number 1998336 in connection with the Chevron Pipe Line Company Pasco Bulk Terminal cleanup site, Cleanup Site ID 55763995, which is the subject of a remedial action conducted by parties unrelated to Tidewater under MTCA. Tesoro Pipeline and Tesoro Logistics agree to the recording of this Covenant.

d. The Property is the subject of remedial action under the Consent Decree that is being conducted by Tidewater under MTCA ("Remedial Action"). The Consent Decree addresses only a limited portion of the Tesoro Property and does not require Tidewater to investigate or remediate any portions of the Tesoro Property outside of the scope of the Consent Decree. The Consent Decree requires Tidewater to record an environmental covenant to restrict future activities and uses of the Property as agreed to by Ecology and Tidewater. This Covenant is required because residual contamination remains in groundwater on the Property after completion of Remedial Actions. Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Groundwater	Petroleum hydrocarbons (benzene, toluene, ethylbenzene, total xylenes, TPH-gasoline, diesel, and heavy range)

e. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of Remedial Actions conducted at the Property. Records describing the extent of residual contamination and the Remedial Action conducted by Tidewater are available through Ecology. A copy of the Consent Decree is attached to this Covenant as **Exhibit C**.

f. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a "Holder" of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 et seq. The rights of Ecology as an "agency" under UECA, other than its' right as a holder, are not an interest in real property.

COVENANT

Tidewater, as Grantor and authorized user of the Property, hereby grants to Ecology, and its successors and assignees, the following covenants.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. **Interference with Remedial Action.** Tidewater shall not engage in any activity on the Property that may impact or interfere with the Remedial Action and any operation, maintenance, inspection or monitoring of that Remedial Action without prior written approval from Ecology.

b. **Protection of Human Health and the Environment.** Tidewater shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the Remedial Action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. **Continued Compliance Required.** Tidewater shall not convey any interest it holds in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of Remedial Actions and continued compliance with this Covenant.

d. **Preservation of Reference Monuments.** Tidewater shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Tidewater shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. The groundwater beneath the area of the Property remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring, or remediation. A figure showing the outline of the impacted groundwater is attached in **Exhibit D** ("Groundwater-impact Area"). Drilling of a well at the Groundwater-impact Area for any water supply purpose is strictly prohibited. Groundwater extracted from within the Groundwater-impact Area for any purpose shall be considered potentially contaminated and any discharge of such extracted groundwater shall be done in accordance with state and federal law.

Section 3. Property Access.

a. Ecology shall have clear access to all Remedial Action components necessary to construct, operate, inspect, monitor and maintain the Remedial Action.

b. Ecology and its authorized representatives, upon reasonable notice, shall have the right to enter the Property at reasonable times to evaluate the effectiveness of this

Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any Remedial Actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. **Conveyance of Any Interest.** Tidewater, when conveying any interest to all or portions of the Property, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

> **NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE FRANKLIN COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.**

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. **Reporting Violations.** Should Tidewater become aware of any violation of this Covenant, Tidewater shall promptly report such violation in writing to Ecology.

c. **Emergencies.** For any emergency or significant change in site conditions due to acts of nature (for example, flood or fire) resulting in a violation of this Covenant, Tidewater and Tesoro are authorized to respond to such an event in accordance with state and federal law. Tidewater must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. **Notification procedure.** Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first-class mail, such as e-mail or other electronic means, may be used for these communications.

William H. Collins Vice President, QHSSE Tidewater Terminal Co. 6305 NW Old Lower River Road Vancouver, WA 98660 (360) 759-0306 Bill.Collins@tidewater.com	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by Tidewater.

b. Within ten (10) days of execution of this Covenant, Tidewater shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. Tidewater shall be responsible for all costs associated with implementation of this Covenant. Furthermore, Tidewater, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

The undersigned warrant that they have authority to execute this Covenant.

EXECUTED this 25th day of Nov., 2025

GRANTOR:

Tidewater Terminal Co.

By: JOHAN SPERLING

Title: PRES & CEO

CORPORATE ACKNOWLEDGMENT

STATE OF WASHINGTON
COUNTY OF CLARK

On this 25th day of Nov., 2025, I certify that JOHAN SPERLING personally appeared before me, acknowledged that they are the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument for said corporation.

KATHIE L NUNN
Notary Public
State of Washington
Commission Number 152399
My Commission Expires
February 15, 2027

Notary Public in and for the State of Washington
Residing at CLARK CTY
My appointment expires 02/15/2027

OWNER:

Tesoro Logistics Northwest Pipeline LLC

Angela Brown

By: Angela Brown

Title: Vice President, Tesoro Logistics Northwest Pipeline LLC

CORPORATE ACKNOWLEDGMENT

STATE OF ~~WASHINGTON~~ Ohio

COUNTY OF ~~Anchorage~~ Hancock

On this 06 day of March, 20 26, I certify that Angela Brown personally appeared before me, acknowledged that they are the Vice President of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument for said corporation.

NOTARIAL SEAL STATE OF OHIO

Cindi Matthews
Notary Public, State of Ohio
My Commission Expires:
November 15, 2027

Cindi Matthews

Notary Public in and for the State of ~~Washington~~ Ohio

Residing at Hancock County

My appointment expires November 15, 2027

OWNER:

Tesoro Logistics Operations LLC

Angela Brown

By: Angela Brown

Title: Vice President, Tesoro Logistics Operations LLC

CORPORATE ACKNOWLEDGMENT

STATE OF ~~WASHINGTON~~ Ohio

COUNTY OF Hancock

On this 06 day of March, 2020, I certify that Angela Brown personally appeared before me, acknowledged that they are the Vice President of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument for said corporation.

NOTARIAL SEAL STATE OF OHIO

Cindi Matthews
Notary Public, State of Ohio
My Commission Expires:
November 15, 2027

Cindi Matthews

Notary Public in and for the State of Washington
Residing at Hancock County
My appointment expires November 15, 2027

The Washington Department of Ecology hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Nicholas M. Acklam

By: _____

Title: TCP- Section Manager

STATE ACKNOWLEDGMENT

STATE OF WASHINGTON
COUNTY OF Spokane

On this 31st day of October, 2025, I certify that Nicholas Acklam personally appeared before me, acknowledged that they are the TCP-Section Manager of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument for said state agency.

Amanda Hiebert

Notary Public in and for the State of Washington
Residing at Spokane County
My appointment expires Jan. 31, 2026

032056\00105\18570438v8

AMANDA HIEBERT
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
01/31/2026
Comm No.
22004512

EXHIBIT A

LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 09 NORTH, RANGE 30 EAST. W.M., FRANKLIN COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION THENCE NORTH 01°12'19" WEST ALONG THE WESTERLY LINE THEREOF 848.58 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF SACAJAWEA PARK ROAD, THENCE NORTH 47°15'33" EAST ALONG SAID LINE 956.61 FEET TO THE TRUE POINT OF BEGINNING;

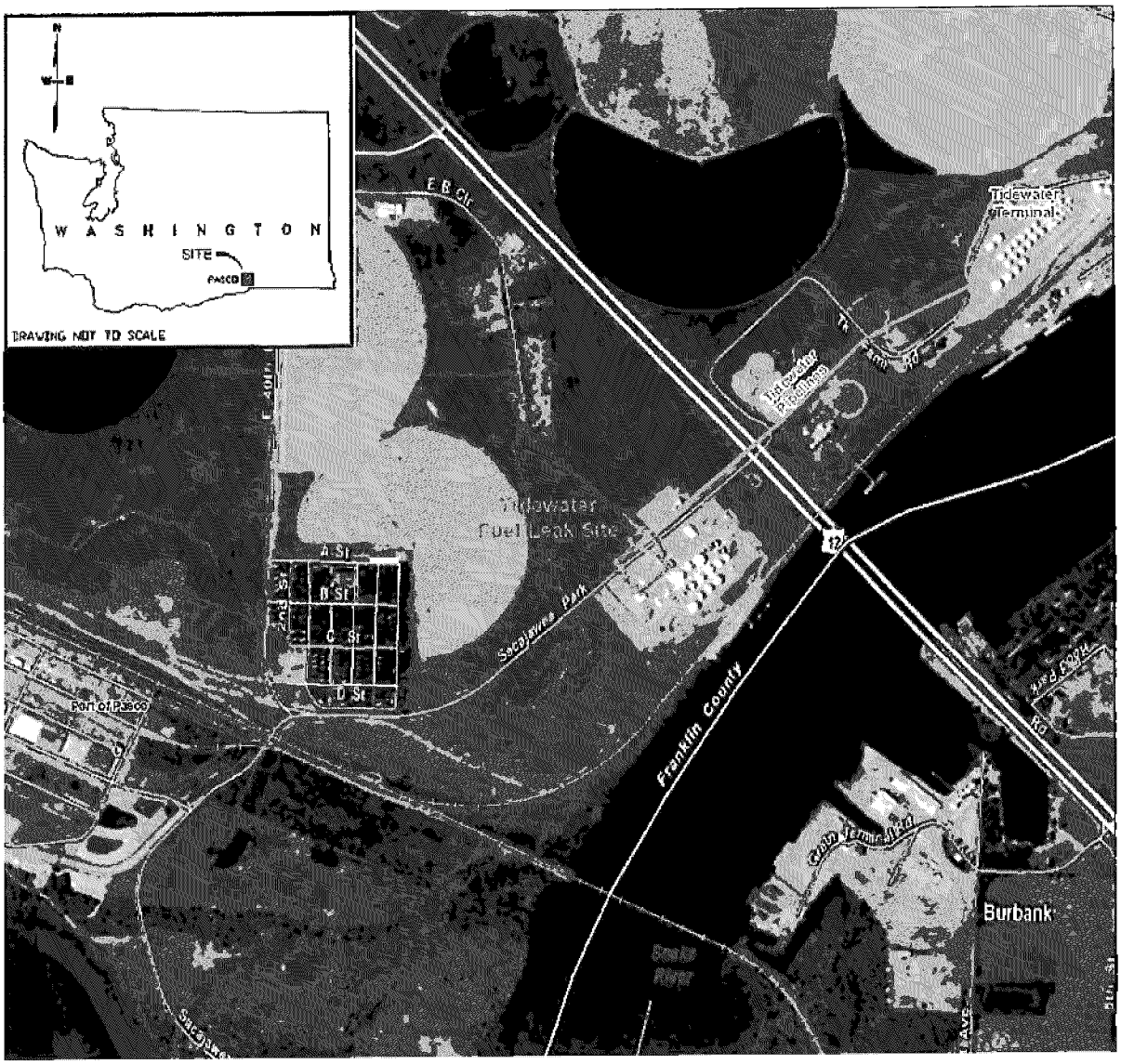
THENCE NORTH 42°44'27" WEST 121.23 FEET;
THENCE NORTH 47°15'33" EAST 396.00 FEET;
THENCE SOUTH 42°44'27" EAST 169.00 FEET;
THENCE SOUTH 47°15'33" WEST 135.00 FEET;
THENCE SOUTH 42°44'27" EAST 237.00 FEET;
THENCE SOUTH 47°15'33" WEST 261.00 FEET;
THENCE NORTH 42°44'27" WEST 284.77 FEET TO THE SAID TRUE POINT OF BEGINNING.

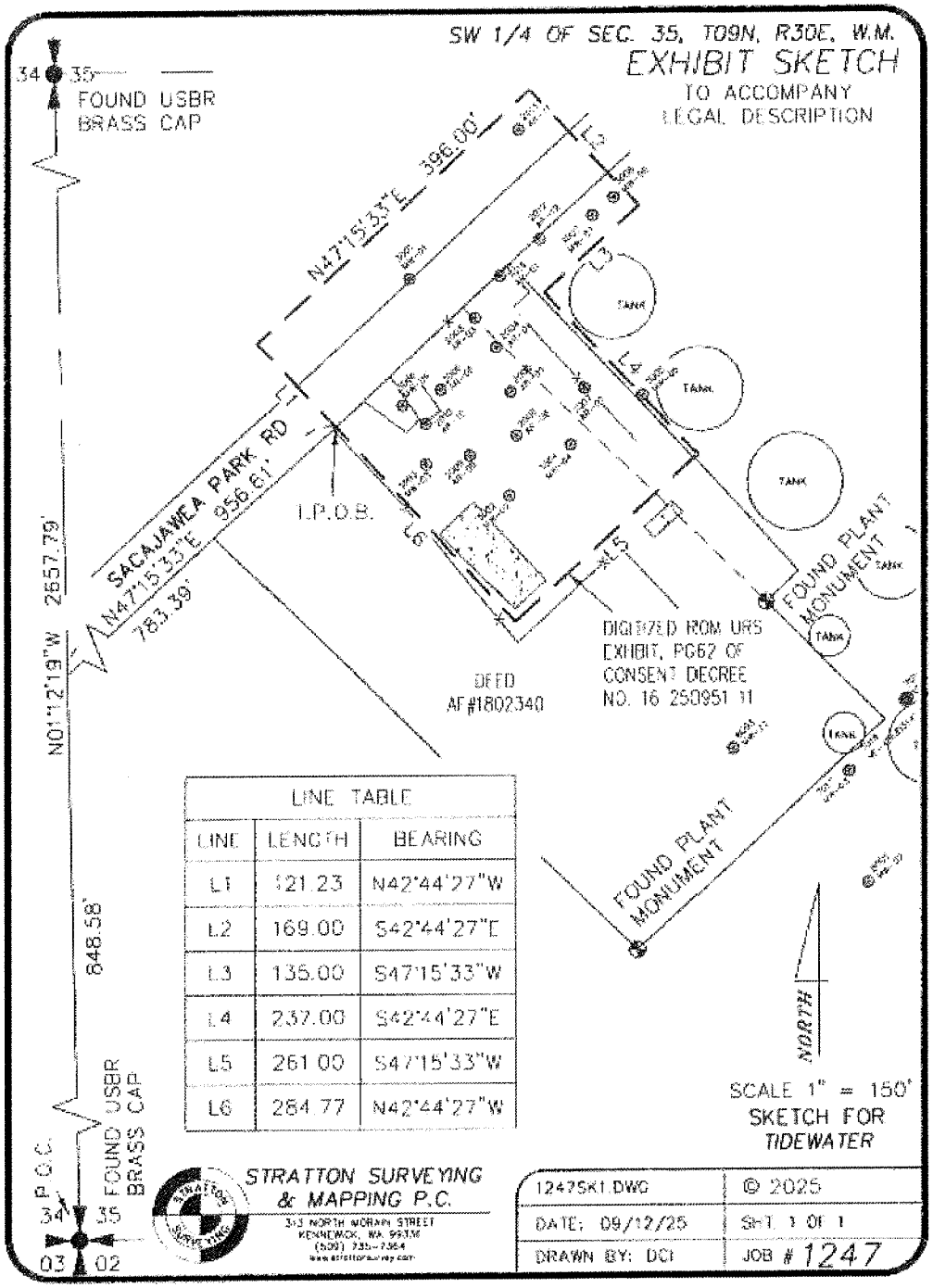
SEE ATTACHED EXHIBIT SKETCH TO ACCOMPANY THIS LEGAL DESCRIPTION.

TOGETHER WITH AND SUBJECT TO EASEMENTS, COVENANTS, RESERVATIONS, RIGHT-OF-WAYS AND RESTRICTIONS OF RECORD AND IN VIEW.

EXHIBIT B

PROPERTY MAP





LINE TABLE

LINE	LENGTH	BEARING
L1	121.23	N42°44'27"W
L2	169.00	S42°44'27"E
L3	135.00	S47°15'33"W
L4	237.00	S42°44'27"E
L5	261.00	S47°15'33"W
L6	284.77	N42°44'27"W

EXHIBIT C

CONSENT DECREE

[Attached]

COPY
ORIGINAL FILED
NOV 22 2016
MICHAEL J. KILLIAN
FRANKLIN COUNTY CLERK

STATE OF WASHINGTON
FRANKLIN COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. TIDEWATER TERMINAL COMPANY, INC., Defendant.	NO. 16 250951 11 CONSENT DECREE

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I. INTRODUCTION

A. The mutual objective of the State of Washington, Department of Ecology (Ecology) and Defendant Tidewater Terminal Company, Inc. (Tidewater) under this Decree is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Decree requires Tidewater to perform the remedial actions at the Tidewater Fuel Line Leak Site (Site) in Pasco, Washington in accordance with the Cleanup Action Plan (CAP) attached as Exhibit B to this Decree.

B. Ecology has determined that these actions are necessary to protect human health and the environment.

C. The Complaint in this action is being filed simultaneously with this Decree. An Answer has not been filed, and there has not been a trial on any issue of fact or law in this case. However, the Parties wish to resolve the issues raised by Ecology's Complaint. In addition, the Parties agree that settlement of these matters without litigation is reasonable and in the public interest, and that entry of this Decree is the most appropriate means of resolving these matters.

D. By signing this Decree, the Parties agree to its entry and agree to be bound by its terms.

E. By entering into this Decree, the Parties do not intend to discharge non-settling parties from any liability they may have with respect to matters alleged in the Complaint. The Parties retain the right to seek reimbursement, in whole or in part, from any liable persons for sums expended under this Decree.

F. This Decree shall not be construed as proof of liability or responsibility for any releases of hazardous substances or cost for remedial action nor an admission of any facts; provided, however, that Tidewater shall not challenge the authority of the Attorney General and Ecology to enforce this Decree.

G. The Court is fully advised of the reasons for entry of this Decree, and good cause having been shown:

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Now, therefore, it is HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

II. JURISDICTION

A. This Court has jurisdiction over the subject matter and over the Parties pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.

B. Authority is conferred upon the Washington State Attorney General by RCW 70.105D.040(4)(a) to agree to a settlement with any potentially liable person (PLP) if, after public notice and any required hearing, Ecology finds the proposed settlement would lead to a more expeditious cleanup of hazardous substances. RCW 70.105D.040(4)(b) requires that such a settlement be entered as a consent decree issued by a court of competent jurisdiction.

C. Ecology has determined that a release or threatened release of hazardous substances has occurred at the Site that is the subject of this Decree.

D. Ecology has given notice to Tidewater of Ecology's determination that Tidewater is a PLP for the Site, as required by RCW 70.105D.020(26) and WAC 173-340-500.

E. The actions to be taken pursuant to this Decree are necessary to protect public health and the environment.

F. This Decree has been subject to public notice and comment.

G. Ecology finds that this Decree will lead to a more expeditious cleanup of hazardous substances at the Site in compliance with the cleanup standards established under RCW 70.105D.030(2)(e) and WAC 173-340.

H. Tidewater has agreed to undertake the actions specified in this Decree and consents to the entry of this Decree under MTCA.

III. PARTIES BOUND

This Decree shall apply to and be binding upon the Parties to this Decree, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Decree and to execute and legally bind such party to

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comply with this Decree. Tidewater agrees to undertake all actions required by the terms and conditions of this Decree. No change in ownership or corporate status shall alter Tidewater's responsibility under this Decree. Tidewater shall provide a copy of this Decree to all agents, contractors, and subcontractors retained to perform work required by this Decree, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Decree.

IV. DEFINITIONS

Unless otherwise specified herein, all definitions in RCW 70.105D.020 and WAC 173-340-200 shall control the meanings of the terms in this Decree.

A. Site: The Site is referred to as the Tidewater Fuel Line Leak Site, and is contained within an easement on the former Chevron Pipe Line Company Pasco Bulk Terminal (Pasco Bulk Fuel Terminal) and is generally located at 2900 Sacajawea Park Road, Pasco, Washington 99301. The Pasco Bulk Fuel Terminal is owned and operated by Tesoro Logistics Operations LLC, and includes approximately three acres. Tidewater owns and operates pipelines located on an easement that crosses the Pasco Bulk Fuel Terminal site. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site and is not limited by property boundaries. The Site includes areas where hazardous substances have been deposited, stored, disposed of, placed, or otherwise come to be located. The Site is more particularly described in the Site Diagram (Exhibit A). The Site constitutes a Facility under RCW 70.105D.020(8).

B. Parties: Refers to the State of Washington, Department of Ecology and Tidewater Terminal Company, Inc.

C. Consent Decree or Decree: Refers to this Consent Decree and each of the exhibits to this Decree. All exhibits are integral and enforceable parts of this Consent Decree. The terms "Consent Decree" or "Decree" shall include all exhibits to this Consent Decree.

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V. FINDINGS OF FACTS

Ecology makes the following findings of fact without any express or implied admissions of such facts by Tidewater.

A. Tesoro Logistics Operations LLC owns, and operates, the former Chevron Pipe Line Company Pasco Bulk Terminal Site (Tesoro Site) at 2900 Sacajawea Park Road, Pasco, Washington. The Tesoro Site has operated as a bulk fuel terminal (Pasco Bulk Fuel Terminal) since September 1950. Prior to June 19, 2013, the Chevron Pipe Line Company (CPL) owned and operated the Pasco Bulk Fuel Terminal. Tidewater and its predecessors own and operate pipelines in an easement at the Pasco Bulk Fuel Terminal.

B. In 1976, Chevron reported a release of 665 barrels or about 28,000 gallons of petroleum at the Pasco Bulk Fuel Terminal. Since the 1976 release, Chevron documented at least 10 additional releases at the Pasco Bulk Fuel Terminal. Ecology's Toxics Cleanup Program conducted an initial investigation of the facility on December 12, 2000, and informed Chevron by letter dated December 12, 2000, that the facility would be listed on Ecology's hazardous sites database. Prior to the initial investigation, the facility was administered by Ecology's Water Quality Program.

C. Franklin County Health District completed a Site Hazard Assessment of the facility in August 2001. The facility received a hazard ranking of three on a scale of one to five pursuant to MTCA, with one being considered the greatest potential threat to human health and the environment.

D. In July 2000, Tidewater reported a fuel line leak to Ecology. The leak occurred at one of Tidewater's fuel transfer lines at the Pasco Bulk Fuel Terminal facility. The emergency response phase of the release was administered by the Spills Program. The Tidewater release was transferred to the Toxics Cleanup Program in August 2000. The Toxics Cleanup Program conducted an initial investigation of the Tidewater release on August 9, 2000. In September of 2000, Ecology sent a letter to Tidewater that informed Tidewater that

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Ecology believed that a release of hazardous substances had occurred at the Pasco Bulk Fuel Terminal and that Ecology intended to add the Tidewater property to its database of suspected hazardous waste sites.

E. Tidewater conducted various remedial activities to remove petroleum hydrocarbons from the groundwater and vadose zone from 2000 to 2003. These remedial activities included free product pumping, vapor enhanced free product pumping, vadose zone vapor extraction, and air sparge/enhanced bioremediation skimming in groundwater. These activities were conducted under the Voluntary Cleanup Program under the Toxics Cleanup Program. The active remedial activities were discontinued after free product was no longer observed, soil vapor extraction discharge levels were asymptotic, and monitoring indicated plume stabilization and contraction (reduction in plume extent and concentration in groundwater).

F. Tidewater has performed groundwater monitoring at the Pasco Terminal since 2000. Groundwater monitoring reports were submitted quarterly through 2003, with additional monitoring conducted in 2006 and 2010. Post remediation sampling has shown removal of free product and reductions in lateral extent and concentration of petroleum hydrocarbons in groundwater.

G. Since the discoveries of the separate releases, there have been investigations and independent interim remedial measures conducted in association with the fuel terminal and pipeline leak as described in subsections D and E above.

H. On December 4, 2009, Ecology, CPL, and Tidewater entered into Agreed Order No. 7294 that required CPL and Tidewater to conduct a terminal-wide remedial investigation/ feasibility study (RI/FS) at the Pasco Bulk Fuel Terminal.

I. As part of the RI/FS, CPL and Tidewater conducted further sampling of monitoring wells at the terminal. One sampling event took place in June 2010 using existing

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CPL and Tidewater monitoring wells and a second site-wide sampling event took place in December 2010.

J. In September 2011, CPL and Tidewater finalized the draft RI/FS report for the Pasco Bulk Fuel Terminal. The FS presented an evaluation of the chemicals identified in the RI, evaluated cleanup action alternatives, and recommended a preferred remedial alternative. The RI/FS's findings are as follows:

- Liquid-phase petroleum hydrocarbons have been sufficiently removed and addressed at the Site based on observations and analytical data from the June 2010 and December 2010 sampling events.
- Residual dissolved-phase petroleum hydrocarbons still remain on-site within localized areas. The lateral extent of the dissolved-phase plume has continued to decrease since active remedial actions were discontinued.

K. The RI/FS report was finalized in March 2012 after a 30-day public comment period. Ecology prepared a responsiveness summary to address the three comments received during the 30-day public review of the RI/FS report.

L. On June 19, 2013, CPL transferred ownership of its property at the Pasco Bulk Fuel Terminal to Tesoro Logistics Operations LLC.

M. Routine groundwater sampling, which continued after the RI/FS report was finalized, demonstrated that historic releases and contaminated groundwater associated with the Tidewater portion of the terminal were separate, distinct, and not comingled with those associated with the portions of the Pasco Bulk Fuel Terminal property formerly owned by CPL.

N. In order to best facilitate site cleanup, in July 2015 Ecology separated the terminal into two distinct and unique sites: the Tidewater Fuel Line Leak Site and the former Chevron Pipe Line Company Pasco Bulk Terminal Site. The Tidewater Fuel Line Leak Site is the area associated with the Tidewater fuel line release and related groundwater plume. The

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former Chevron Pipe Line Company Pasco Bulk Terminal Site is the area associated with the former Chevron releases and related groundwater plumes.

VI. WORK TO BE PERFORMED

This Decree contains a program designed to protect human health and the environment from the known release, or threatened release, of hazardous substances or contaminants at, on, or from the Site.

A. Tidewater shall perform all tasks set forth in the Cleanup Action Plan (CAP) (Exhibit B) and implement the CAP in accordance with the CAP's schedule, including, but not limited to the following activities:

1. The Site groundwater will be monitored to assess the on-going natural attenuation.

2. A compliance monitoring plan will be developed that identifies the wells, parameters, and monitoring frequency.

3. Provide for and maintain institutional controls in the form of restrictive covenants, fences, and signs.

B. Tidewater agrees not to perform any remedial actions to address the releases that are the subject of this Decree outside the scope of this Decree unless the Parties agree or the work is required by an emergency. All work conducted by Tidewater under this Decree shall be done in accordance with WAC chapter 173-340 unless otherwise provided herein.

C. All plans or other deliverables submitted by Tidewater for Ecology's review and approval under the Scope of Work and Schedule (Exhibit C) shall, upon Ecology's approval, become integral and enforceable parts of this Decree.

VII. DESIGNATED PROJECT COORDINATORS

The project coordinator for Ecology is:

Patrick Cabbage, P.G.
4601 North Monroe Street
Spokane, WA 99205-1295

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Ecology Division
PO Box 40117
Olympia, WA 98504-0117
(360) 586-6770

Phone: (509) 329-3543
E-mail: pcab461@ecy.wa.gov

The project coordinator for Tidewater is:

William H. Collins
Tidewater Terminal Company, Inc.
P.O. Box 1210
Vancouver, WA 98666-1210

Each project coordinator shall be responsible for overseeing the implementation of this Decree. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and Tidewater and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree 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 Decree.

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.

VIII. PERFORMANCE

All geologic and hydrogeologic work performed pursuant to this Decree 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 Decree 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 Decree shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of

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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, hydrologic, or engineering work shall be under the seal of an appropriately licensed professional as required by RCW 18.43 and 18.220.

Tidewater 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 Decree, in advance of their involvement at the Site.

IX. ACCESS

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Site that Tidewater 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 Decree; reviewing Tidewater's progress in carrying out the terms of this Decree; 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 Decree; and verifying the data submitted to Ecology by Tidewater. Tidewater shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by Tidewater where remedial activities or investigations will be performed pursuant to this Decree. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property owned or controlled by Tidewater unless an emergency prevents such notice. All Parties 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.

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X. SAMPLING, DATA SUBMITTAL, AND AVAILABILITY

With respect to the implementation of this Decree, Tidewater 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 XI (Progress Reports), 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, Tidewater shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by Tidewater pursuant to the implementation of this Decree. Tidewater shall notify Ecology seven (7) days in advance of any sample collection or work activity at the Site. Ecology shall, upon request, allow Tidewater and/or its authorized representative to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Decree, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section IX (Access), Ecology shall notify Tidewater 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.

XI. PROGRESS REPORTS

Tidewater shall submit to Ecology written Progress Reports that describe the actions taken to implement the requirements of this Decree. The Progress Reports shall include the following:

A. A list of on-site activities that have taken place during the reporting period;

B. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests;

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C. Description of all deviations from the Scope of Work and Schedule (Exhibit C) during the current reporting period and any planned deviations in the upcoming reporting period;

D. For any deviations in schedule, a plan for recovering lost time and maintaining compliance with the schedule;

E. All raw data (including laboratory analyses) received by Tidewater during the past reporting period and an identification of the source of the sample; and

F. A list of deliverables for the upcoming reporting period if different from the schedule.

All Progress Reports shall be submitted by the tenth (10th) day of the month in which they are due after the effective date of this Decree. Unless otherwise specified, Progress Reports and any other documents submitted pursuant to this Decree shall be sent by certified mail, return receipt requested, to Ecology's project coordinator.

XII. RETENTION OF RECORDS

During the pendency of this Decree, and for ten (10) years from the date this Decree is no longer in effect as provided in Section XXVIII (Duration of Decree), Tidewater shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Decree and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, Tidewater shall make all records available to Ecology and allow access for review within a reasonable time.

Nothing in this Decree is intended by Tidewater to waive any right it may have under applicable law to limit disclosure of documents protected by the attorney work-product privilege and/or the attorney-client privilege. If Tidewater withholds any requested records based on an assertion of privilege, Tidewater shall provide Ecology with a privilege log

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specifying the records withheld and the applicable privilege. No Site-related data collected pursuant to this Decree shall be considered privileged.

XIII. 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 Tidewater without provision for continued operation and maintenance of any containment system, treatment system, and/or monitoring system installed or implemented pursuant to this Decree.

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

XIV. RESOLUTION OF DISPUTES

A. In the event that Tidewater elects to invoke dispute resolution, Tidewater must utilize the procedure set forth below.

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

2. 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

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Decision) stating: the nature of the dispute; the Tidewater's position with regards to the dispute; Ecology's position with regards to the dispute; and the extent of resolution reached by informal discussion.

3. Tidewater may then request regional management review of the dispute. This request (Formal Dispute Notice) must be submitted in writing to the Eastern 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.

4. 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.

5. If Tidewater finds Ecology's Regional Section Manager's decision unacceptable, Tidewater may then request final management review of the decision. This request (Final Review Request) shall be submitted in writing to the Toxics Cleanup Program Manager within seven (7) calendar days of Tidewater's receipt of the Decision on Dispute. The Final Review Request 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.

6. Ecology's Toxics Cleanup Program Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute (Final Decision on Dispute) within thirty (30) calendar days of receipt of the Final Review Request. The Toxics Cleanup Program Manager's decision shall be Ecology's final decision on the disputed matter.

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B. If Ecology's Final Decision on Dispute is unacceptable to Tidewater, Tidewater has the right to submit the dispute to the Court for resolution. The Parties agree that one judge should retain jurisdiction over this case and shall, as necessary, resolve any dispute arising under this Decree. In the event Tidewater presents an issue to the Court for review, the Court shall review the action or decision of Ecology on the basis of whether such action or decision was arbitrary and capricious and render a decision based on such standard of review.

C. 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. Where either party utilizes the dispute resolution process in bad faith or for purposes of delay, the other party may seek sanctions.

D. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule extension or the Court so orders.

E. In case of a dispute, failure to either proceed with the work required by this Decree 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 XXV (Implementation of Remedial Action).

XV. AMENDMENT OF DECREE

The project coordinators may agree to minor changes to the work to be performed without formally amending this Decree. Minor changes will be documented in writing by Ecology.

Substantial changes to the work to be performed shall require formal amendment of this Decree. This Decree may only be formally amended by a written stipulation among the Parties that is entered by the Court, or by order of the Court. Such amendment shall become effective upon entry by the Court. Agreement to amend the Decree shall not be unreasonably withheld by any party.

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Tidewater shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request for amendment is received. If the amendment to the Decree is a substantial change, Ecology will provide public notice and opportunity for comment. Reasons for the disapproval of a proposed amendment to the Decree shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section XIV (Resolution of Disputes).

XVI. EXTENSION OF SCHEDULE

A. 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:

1. The deadline that is sought to be extended;

2. The length of the extension sought;

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

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

B. The burden shall be on Tidewater 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:

1. Circumstances beyond the reasonable control and despite the due diligence of Tidewater 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 Tidewater;

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

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3. Endangerment as described in Section XVII (Endangerment).

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

C. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give Tidewater written notification of any extensions granted pursuant to this Decree. A requested extension shall not be effective until approved by Ecology or, if required, by the Court. Unless the extension is a substantial change, it shall not be necessary to amend this Decree pursuant to Section XV (Amendment of Decree) when a schedule extension is granted.

D. 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:

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

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

3. Endangerment as described in Section XVII (Endangerment).

XVII. ENDANGERMENT

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

In the event Tidewater determines that any activity being performed at the Site under this Decree is creating or has the potential to create a danger to human health or the environment, Tidewater may cease such activities. Tidewater shall notify Ecology's project

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

If Ecology concurs with or orders a work stoppage pursuant to this section, Tidewater'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 XVI (Extension of Schedule), for such period of time as Ecology determines is reasonable under the circumstances.

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

XVIII. COVENANT NOT TO SUE

A. Covenant Not to Sue: In consideration of Tidewater's compliance with the terms and conditions of this Decree, Ecology covenants not to institute legal or administrative actions against Tidewater regarding the release or threatened release of hazardous substances covered by this Decree.

This Decree covers only the Site specifically identified in the Site Diagram (Exhibit A) and those hazardous substances that Ecology knows are located at the Site as of the date of entry of this Decree. This Decree does not cover any other hazardous substance or area. Ecology retains all of its authority relative to any substance or area not covered by this Decree.

This Covenant Not to Sue shall have no applicability whatsoever to:

1. Criminal liability;
2. Liability for damages to natural resources; and

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3. Any Ecology action, including cost recovery, against PLPs not a party to this Decree.

If factors not known at the time of entry of this Decree are discovered and present a previously unknown threat to human health or the environment, the Court shall amend this Covenant Not to Sue.

B. Reopeners: Ecology specifically reserves the right to institute legal or administrative action against Tidewater to require it to perform additional remedial actions at the Site and to pursue appropriate cost recovery, pursuant to RCW 70.105D.050 under the following circumstances:

1. Upon Tidewater's failure to meet the requirements of this Decree;

2. Failure of the remedial action to meet the cleanup standards identified in the CAP (Exhibit B);

3. Upon Ecology's determination that remedial action beyond the terms of this Decree is necessary to abate an imminent and substantial endangerment to human health or the environment;

4. Upon the availability of new information regarding factors previously unknown to Ecology, including the nature or quantity of hazardous substances at the Site, and Ecology's determination, in light of this information, that further remedial action is necessary at the Site to protect human health or the environment; or

5. Upon Ecology's determination that additional remedial actions are necessary to achieve cleanup standards within the reasonable restoration time frame set forth in the CAP.

C. Except in the case of an emergency, prior to instituting legal or administrative action against Tidewater pursuant to this section, Ecology shall provide Tidewater with fifteen (15) calendar days' notice of such action.

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XIX. CONTRIBUTION PROTECTION

With regard to claims for contribution against Tidewater, the Parties agree that Tidewater is entitled to protection against claims for contribution for matters addressed in this Decree as provided by RCW 70.105D.040(4)(d).

XX. LAND USE RESTRICTIONS

In consultation with Tidewater, Ecology will prepare the Environmental (Restrictive) Covenant consistent with WAC 173-340-440 and RCW 64.70. Tidewater shall record the Environmental (Restrictive) Covenant with the office of the Franklin County Auditor within ten (10) days of the completion of the first performance monitoring event. The Environmental (Restrictive) Covenant shall restrict future activities and uses of the Site as agreed to by Ecology and Tidewater. Tidewater shall provide Ecology with the original recorded Environmental (Restrictive) Covenant within thirty (30) days of the recording date.

XXI. INDEMNIFICATION

Tidewater 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 Tidewater, its officers, employees, agents, or contractors in entering into and implementing this Decree. However, Tidewater 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 Decree.

XXII. COMPLIANCE WITH APPLICABLE LAWS

A. All actions carried out by Tidewater pursuant to this Decree shall be done in accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits, except as provided in RCW 70.105D.090. The permits or other

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federal, state, or local requirements that the agency has determined are applicable and that are known at the time of entry of this Decree have been identified in the CAP (Exhibit B).

B. Pursuant to RCW 70.105D.090(1), Tidewater is 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, Tidewater shall comply with the substantive requirements of such permits or approvals. The exempt permits or approvals and the applicable substantive requirements of those permits or approvals, as they are known at the time of entry of this Decree, have been identified in the CAP (Exhibit B).

Tidewater 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 Decree. In the event either Ecology or Tidewater determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree, it shall promptly notify the other party of this determination. Ecology shall determine whether Ecology or Tidewater shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Tidewater 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 Tidewater and on how Tidewater must meet those requirements. Ecology shall inform Tidewater in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Decree. Tidewater shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

C. 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

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necessary for the state to administer any federal law, the exemption shall not apply and Tidewater 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.

XXIII. REMEDIAL ACTION COSTS

Tidewater shall pay to Ecology costs incurred by Ecology pursuant to this Decree 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 Decree preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the entry of this Decree. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). Tidewater 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 70.105D.055, Ecology has authority to recover unreimbursed remedial action costs by filing a lien against real property subject to the remedial actions.

XXIV. IMPLEMENTATION OF REMEDIAL ACTION

If Ecology determines that Tidewater has failed to make sufficient progress or failed to implement the remedial action, in whole or in part, Ecology may, after notice to Tidewater, perform any or all portions of the remedial action or, at Ecology's discretion, allow Tidewater opportunity to correct. Tidewater shall reimburse Ecology for the costs of doing such work in accordance with Section XXIV (Remedial Action Costs).

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Except where necessary to abate an emergency situation, Tidewater shall not perform any remedial actions at the Site outside those remedial actions required by this Decree, unless Ecology concurs, in writing, with such additional remedial actions pursuant to Section XV (Amendment of Decree).

XXV. PERIODIC REVIEW

As remedial action, including groundwater monitoring, continues at the Site, the Parties agree to review the progress of remedial action at the Site, and to review the data accumulated as a result of monitoring the Site as often as is necessary and appropriate under the circumstances. At least every five (5) years after the initiation of cleanup action at the Site the Parties shall meet to discuss the status of the Site and the need, if any, for further remedial action at the Site. Under Section XVIII (Covenant Not to Sue), Ecology reserves the right to require further remedial action at the Site under appropriate circumstances. This provision shall remain in effect for the duration of this Decree.

XXVI. PUBLIC PARTICIPATION

A Public Participation Plan (Exhibit D) is required for this Site. Ecology shall review any existing Public Participation Plan to determine its continued appropriateness and whether it requires amendment, or if no plan exists, Ecology shall develop a Public Participation Plan alone or in conjunction with Tidewater.

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

A. If agreed to by Ecology, develop appropriate mailing lists, 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.

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B. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before major meetings with the interested public and local governments. Likewise, Ecology shall notify Tidewater prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by Tidewater that do not receive prior Ecology approval, Tidewater shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

C. 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.

D. When requested by Ecology, arrange and/or continue information repositories at the following locations:

1. Mid-Columbia Library
1320 West Hopkins Street
Pasco, WA 99301

2. Ecology's Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

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 Eastern Regional Office in Spokane, Washington.

XXVII. DURATION OF DECREE

The remedial program required pursuant to this Decree shall be maintained and continued until Tidewater has received written notification from Ecology that the requirements of this Decree have been satisfactorily completed. This Decree shall remain in effect until

dismissed by the Court. When dismissed, Section XVIII (Covenant Not to Sue) and Section XIX (Contribution Protection) shall survive.

XXVIII. CLAIMS AGAINST THE STATE

Tidewater hereby agrees that it will not seek to recover any costs accrued in implementing the remedial action required by this Decree from the State of Washington or any of its agencies; and further, that Tidewater will make no claim against the State Toxics Control Account or any local Toxics Control Account for any costs incurred in implementing this Decree. Except as provided above, however, Tidewater expressly reserves its right to seek to recover any costs incurred in implementing this Decree from any other PLP. This section does not limit or address funding that may be provided under WAC 173-322.

XXIX. EFFECTIVE DATE

This Decree is effective upon the date it is entered by the Court.

XXX. WITHDRAWAL OF CONSENT

If the Court withholds or withdraws its consent to this Decree, it shall be null and void at the option of any party and the accompanying Complaint shall be dismissed without costs and without prejudice. In such an event, no party shall be bound by the requirements of this Decree.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

JAMES PENDOWSKI
Program Manager
Toxics Cleanup Program
(360) 407-7177

Date: 11/15/16

ROBERT W. FERGUSON
Attorney General

JOHN A. LEVEL, WSBA # 20439
Assistant Attorney General
(360) 586-6753

Date: 11/15/16

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TIDEWATER TERMINAL COMPANY, INC.

ROBERT A. CURCIO
President & CEO
(360) 693-1491

Date: 8/12/16

ENTERED this 22nd day of NOV. 2016.

JUDGE
Franklin County Superior Court
CAMERON MITCHELL

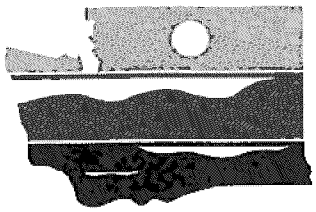
Exhibit A

EXHIBIT A

Former Chevron Pipe Line Company Pasco Bulk Terminal Site



Exhibit B



DEPARTMENT OF
ECOLOGY
State of Washington

Cleanup Action Plan
Tidewater Fuel Line Leak
Facility Site ID 39378684
Cleanup Site 2331

Prepared by
Washington State Department of Ecology
Eastern Regional Office
Toxics Cleanup Program
Spokane, WA

November 2016

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1.0 INTRODUCTION

This Cleanup Action Plan (CAP) sets cleanup standards and selects a cleanup action that meets cleanup standards for the Tidewater Fuel Line Leak Site (Site). This facility is owned and operated by Tidewater Terminal Company (Tidewater). The Site is located on an easement that crosses the former Chevron Pipe Line Company Pasco Bulk Terminal Site, owned by Tesoro Logistics Operations LLC (Tesoro), which is a bulk fuel storage terminal supplied by pipeline and barge and is situated east of the city of Pasco, Franklin County, Washington. The Site is located at 2900 Sacajawea Park Road, which is southwest of the intersection of U.S. Highway 12 and Sacajawea Park Road (Figure 1). The cleanup action selected for the Site is based upon information contained in the Washington Department of Ecology's (Ecology) files, and the remedial investigation and feasibility study (RI/FS) completed by URS and CH2M HILL on behalf of Chevron Pipe Line Company(CPL) and Tidewater. Tesoro purchased the Chevron Pipe Line Company Pasco Bulk Terminal Site from Chevron Pipe Line Company in 2015. CPL, Tesoro and Tidewater were identified and named as potentially liable persons (PLPs) for the Site.

At the time of the RI/FS, the Site encompassed the CPL Bulk Fuel Terminal and the Tidewater Pipeline. In order to best facilitate site cleanup, in July 2015 Ecology made the decision to separate the Site into two Sites. One site is the area associated with the Tidewater pipeline release and related groundwater plume. The other site is that the area associated with the Tesoro (former CPL) releases and related groundwater plumes on Tesoro property.

Ecology is responsible for the cleanup action selection and the completion of the CAP. The selected cleanup action is intended to fulfill the requirements of the Model Toxics Control Act (MTCA) RCW 70.105D. The objectives of this document are to satisfy the MTCA requirements set forth in WAC 173-340-380(1) and will include the following:

- A brief Site history description;
- A description of the nature and extent of Site contamination summarized from the remedial investigation (RI);
- Establishment of cleanup standards for each contaminated medium protective of human health and the environment;
- Presentation of proposed remedial alternatives summarized from the feasibility study (FS); and
- Ecology's selected cleanup action.

1.1 APPLICABILITY

This CAP is applicable only to the Tidewater Fuel Line Leak Site (Site) in Pasco, Franklin County, Washington. The Facility Site Identification number is FSID 39378684. The remedial actions to be taken at this Site were developed to meet the threshold requirements and other requirements of WAC 173-340-360. Cleanup standards have been developed and cleanup actions selected as an overall remediation process being conducted under Ecology oversight using MTCA authority. Ecology's decisions regarding these matters should not be considered as setting precedent for other sites.

1.2 ADMINISTRATIVE DOCUMENTATION

Documents used to develop this CAP and the decisions contained herein are contained in Ecology's files. The administrative record for this Site is on file and available for public review by appointment at Ecology's Eastern Regional Office, located at 4601 N. Monroe, Spokane, Washington 99205-1295. Documents made available for public comment are also available at the Mid-Columbia Library in Pasco, Washington. The following documents were used to develop the proposed cleanup action and include documentation for the Tidewater Site and the former Chevron Pipeline Pasco Bulk Terminal Site:

- Azure Environmental and CH2M Hill, 2014, 1st Semi-Annual 2014 Ground-Water Monitoring Report, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, August 20, 2014.
- Azure Environmental, 2014, Confirmation Sampling Workplan, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, November 12, 2014.
- Azure Environmental and CH2M Hill, 2014, 2nd Semi-Annual 2014 Ground-Water Monitoring Report, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, November 24, 2014.
- Azure Environmental, 2015, Vapor Sample Data Transmittal, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, March 9, 2015.
- Azure Environmental and CH2M Hill, 2015, 1st Semi-Annual 2015 Ground-Water Monitoring Report and Exploratory Boring Data Transmittal, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, July 31, 2015.
- Azure Environmental and CH2M Hill, 2015, 2nd Semi-Annual 2015 Ground-Water Monitoring Report, Tesoro Logistics (former Chevron) Pasco Bulk Terminal, November 20, 2015.
- Briggs, Phillip R., 1992, Chevron U.S.A. Letter to Carl Nuechterlein, Washington Department of Ecology, April 16, 1992.
- CH2M HILL, 2000, Status Report #1: Status of Site Investigation and Proposed Interim Fuel Recovery Measures: Tidewater Pipeline Release – Pasco, WA, August 15, 2000.
- CH2M HILL, 2000, Status Report #2: Tidewater Pipeline Release – Pasco, WA, September 1, 2000.
- CH2M HILL, 2000, Tidewater Pipeline Release: Status Letter Report for Emergency Response Remedial Systems, October 11, 2000.
- CH2M HILL, 2000, Status Report #3: Tidewater Pipeline Release – Pasco, WA, October 30, 2000.
- CH2M HILL, 2001, Status Report #4: Tidewater Pipeline Release – Pasco, WA, January 30, 2001.
- CH2M HILL, 2001, Status Report #5 (August 2000 – February 2001): Tidewater Pipeline Release – Pasco, WA, April 26, 2001.
- CH2M HILL, 2001, Construction, System Start-up and Operations Report, September 2001.
- CH2M HILL, 2001, Tidewater Remedial Action – Groundwater Sampling and Analysis Report, October 2001.

- CH2M HILL, 2002, Remediation Progress Summary and November 2001 Groundwater Sampling Results - Tidewater Barge Lines, Pasco Fuel Release Site, February 2002.
- CH2M HILL, 2002, Remediation Progress Summary and July 2002 Groundwater Sampling Results - Tidewater Barge Lines, Pasco Fuel Release Site, October 2002.
- CH2M HILL, 2002, Remediation Progress Summary and November 2002 Groundwater Sampling Results - Tidewater Barge Lines, Pasco Fuel Release Site, January 2003.
- CH2M HILL, 2003, Remediation Progress Summary and February 2003 Groundwater Sampling Results - Tidewater Barge Lines, Pasco Fuel Release Site, May 2003.
- CH2M HILL, 2003, Ecology Status Meeting and Presentation titled "Pasco Fuel Release: Site Review, Cleanup Status and Path Forward", June 2003.
- CH2M HILL, 2003, June 2003 Groundwater Sampling Results - Tidewater Barge Lines, Pasco Fuel Release Site, July 2003.
- CH2M HILL, 2004, Rounds 3 and 4 Post-Remediation System Sampling Results, Tidewater Barge Lines, Pasco Fuel Release Site, February 2004.
- CH2M HILL, 2005, Tidewater Remediation System Decommissioning and Performance Monitoring Plan, Tidewater Barge Lines, Pasco Fuel Release Site, June 2005.
- CH2M HILL, 2005, Supplemental Groundwater Sampling, Tidewater Barge Lines, Pasco Fuel Release Site, May 16, 2006.
- GeoEngineers Inc., 1987, Report of Geotechnical Services , East Pasco Fuel Terminal, Pasco, Washington, for Chevron U.S.A., Inc., June 22, 1987.
- Maxim Technologies Inc., 2000a. Progress Toward Site Closure, Pasco Bulk Terminal, 3000 Sacajawea Road, Pasco, WA, July 10, 2000.
- Maxim Technologies Inc., 2000b. Progress Toward Site Closure, Pasco Bulk Terminal, 3000 Sacajawea Road, Pasco, WA, July 14, 2000.
- Maxim Technologies Inc., 2000c. Summary of Site Conditions and Petroleum Release History, Pasco Bulk Terminal, 3000 Sacajawea Road, Pasco, WA, October 10, 2000.
- Maxim Technologies Inc., 2000d. Groundwater Sampling, Pasco Bulk Terminal, 3000 Sacajawea Road, Pasco, WA, October 27, 2000.
- Maxim Technologies Inc., 2001. Groundwater Sampling, Pasco Bulk Terminal, 3000 Sacajawea Road, Pasco, WA, February 6, 2001.
- Rittenhouse-Zeman & Associates, Inc., 1988a. Free-Phase Petroleum Hydrocarbon Recovery Operations Status and Updated Recommendations, January 25, 1988.
- Rittenhouse-Zeman & Associates, Inc., 1988b. Status Report for May 10 to 31, 1988, June 1, 1988.
- Rittenhouse-Zeman & Associates, Inc., 1989a. Analytical Chemistry Results for Groundwater Discharge to Unlined Pond, February 17, 1989.

- Rittenhouse-Zeman & Associates, Inc., 1989c. Continued Subsurface Hydrocarbon Exploration and Free-Phase Petroleum Hydrocarbon Recovery System Installation, May 19, 1989.
- Rittenhouse-Zeman & Associates, Inc., 1989d. Bioventing System for Chevron U.S.A., Inc., November 29, 1989.
- Rittenhouse-Zeman & Associates, Inc., 1990a. Quarterly Status Report, April 30, 1990.
- Rittenhouse-Zeman & Associates, Inc., 1990b. Quarterly Status Report, September 17, 1990.
- Rittenhouse-Zeman & Associates, Inc., 1990c. Quarterly Status Report and Monitoring Well Sampling Results, December 6, 1990.
- Rittenhouse-Zeman & Associates, Inc., 1991a. Quarterly Status Report and Monitoring Well Sampling Results, March 7, 1991.
- Rittenhouse-Zeman & Associates, Inc., 1991b. Quarterly Status Report and Monitoring Well Sampling Results, June 7, 1991.
- Rittenhouse-Zeman & Associates, Inc., 1991c. Quarterly Status Report and Monitoring Well Sampling Results, September 9, 1991.
- Rittenhouse-Zeman & Associates, Inc., 1993a. Status Report, March 11, 1993.
- Rittenhouse-Zeman & Associates, Inc., 1993b. Quarterly Operations and Maintenance Report, May 20, 1993.
- TCM Northwest, Inc., 2000. Emergency Response Subsurface Site Investigation Report, December 20, 2000.
- URS Corporation, 2009. 2007-2008 Groundwater Monitoring Report, NWTC Pasco Terminal, June 3, 2009.
- URS Corporation and CH2M HILL, 2011. Remedial Investigation and Feasibility Study (RI/FS) for the NWTC Pasco Terminal, Pasco, WA, September 29, 2011.
- Washington Department of Ecology, 2001, revised 2007. Model Toxics Control Act, Chapter 173-340 WAC. Publication No. 94-06.
- Washington Department of Ecology, 2001. Cleanup Levels and Risk Calculations under the Model Toxics Control Act, Version 3.1. Publication No. 94-145.

1.3 CLEANUP PROCESS

Cleanup conducted under the MTCA process requires specific documents to be completed and submitted for Ecology review. The CAP and Public Participation Plan are documents completed by Ecology. These documents are used by Ecology to obtain more detailed information and determine the remedial actions to be conducted, and the associated monitoring requirements, prior to and following a cleanup action. These procedural tasks and resulting documents, along with the MTCA section that requires their completion, are listed below with a brief description of each task.

- Remedial Investigation and Feasibility Study - WAC 173-340-350
- Cleanup Action Plan - WAC 173-340-380

- Engineering Design Report - WAC 173-340-400
- Construction Plans and Specifications - WAC 173-340-400
- Operation and Maintenance Plan(s) - WAC 173-340-400
- Cleanup Action Report - WAC 173-340-400
- Compliance Monitoring Plan - WAC 173-340-410
- Public Participation Plan - WAC 173-340-600

The Remedial Investigation and Feasibility Study (RI/FS) process documents the investigations and the engineering evaluations conducted at the Site from the discovery phase to the final RI/FS. The investigations are designed to characterize the type and extent of contamination and the associated risks posed by the contamination to human health and the environment. The FS presents and evaluates different Site cleanup alternatives and proposes the preferred cleanup alternative. The RI/FS Report was reviewed and made available for public review and comment by Ecology, and then finalized. Ecology received three comments and responded to the comments in a responsiveness summary. The CAP sets the cleanup standards for the Site and selects the cleanup actions intended to achieve the cleanup standards. After public comment and any revisions made following public comment, the draft CAP is finalized with an attached responsiveness summary and becomes the CAP.

The Engineering Design Report outlines the engineered system and design components of the CAP. Construction Plans and Specifications provide the technical drawings and specifications for design and implementation of the CAP.

The Operation and Maintenance (O&M) Plan(s) summarizes the requirements for inspection and maintenance as well as the regulatory and technical necessities to assure effective operations. The O&M Plan(s) outline the actions required to operate and maintain any equipment, structures, or other remedial facilities used in the cleanup action.

A Cleanup Action Report will be completed following implementation of the selected cleanup action. The report will detail the activities performed for the Site cleanup action and provide documentation of adherence to or variance from the CAP.

Compliance Monitoring Plans are designed to serve the following three purposes:

- Protection – Confirm human health and the environment are being protected during construction and O&M tasks for the cleanup action at the Site.
- Performance – Confirm the cleanup action has attained cleanup standards.
- Confirmational – Confirm the long-term effectiveness of the cleanup action after cleanup standards have been attained.

The Public Participation Plan is the framework to provide the public with information and give it the opportunity for participation in a site. This plan is tailored to meet the public's needs and coordinate its effort in the MTCA process.

An Engineering Design Report, Construction Plans and Specifications, O&M Plan, and Cleanup Action Report are not required for the selected remedy described in Sections 6.5.1 and 7.0. The information normally provided in these documents will be addressed in the Compliance Monitoring Plan.

2.0 SITE HISTORY

The following paragraphs provide a brief summary of ownership, operational, and regulatory history of the Site. The information provided herein was provided in RI reports completed by CH2M HILL, GeoEngineers, Maxim Technologies, Inc., Rittenhouse-Zeman & Associates, Inc., and URS Corporation.

The former Chevron Pipeline Pasco Bulk Fuel Terminal (Pasco Terminal) is used to store refined fuel products delivered by pipelines and barges. The Pasco Terminal has been in operation since 1950 and currently uses eighteen (18) aboveground storage tanks to store gasoline, diesel, jet fuel, and ethanol.

Tidewater owns and operates pipelines that transfer fuel products between barges, the Pasco Terminal, and the adjacent Tidewater Terminal. The Tidewater fuel transfer pipelines are located within an easement that crosses a portion of the Pasco Terminal. These pipelines allowed CPL, and now Tesoro, and Tidewater to transfer fuel products between the Pasco and Tidewater terminals.

During its operational history, the Pasco Terminal has documented and addressed releases from tanks, pipelines, and loading racks at the Site. The facility has documented 27 releases from 1972 to 2010. The releases vary in size from a few gallons to about 41,000 gallons.

The Chevron Pipe Line Pasco Bulk Terminal Site and Tidewater Fuel Line Leak Sites were placed on the Washington State Hazardous Sites List in August 2000. In addition, a site hazard assessment (SHA) was completed which resulted in a site ranking of 3 for each site. This site's ranking, on a scale of one to five with one being the highest, is relative to all other Washington State sites assessed at this time.

3.0 PHYSICAL SETTING

The property is located in Section 35, Township 9 North, Range 30 East, Willamette Meridian (Figure 1). Topographic map coverage of the Site and vicinity is provided by the Pasco Quadrangle, U.S. Geological Survey, 7.5-minute series dated 1992. The upland portion of the Site is about 420 feet above sea level using the National Geodetic Vertical Datum (NGVD) of 1929.

The 33-acre former CPL Pasco Bulk Fuel Terminal Site is situated along the north bank of the Snake River (Lake Wallula) and is bordered by unimproved land on three sides (Figure 2). The Tidewater Fuel Line Leak Site is situated along an easement which crosses the Pasco Bulk Fuel Terminal Site and encompasses about three acres. (Figure 3) Land use in the vicinity is limited with most of it being agricultural. The general land slope is relatively flat with a sharp decline from the tank storage area to the Snake River (Figure 1). The Pasco Bulk Fuel Terminal is mostly compacted sand and gravel with a paved parking lot and entrance road.

The bulk storage terminal consists of eighteen (18) aboveground tanks that store gasoline, diesel, jet fuel, and ethanol. Pipelines transfer the products between the storage tanks, the barge facility on the river, and the adjacent Tidewater terminal. The remainder of the terminal is comprised of an office, pump station building, truck loading rack, warehouses, garages, storage rooms, welding shop, and workshops. A Site layout is presented in Figure 3.

3.1 REGIONAL AND SITE GEOLOGY

The Site is situated within the Pasco Basin. The basin is underlain by three major stratigraphic units, which are in ascending order: the Columbia River Basalt Group; the Ringold Formation; and the Hanford Formation. The thick sequence of flood basalts was deposited during the Miocene Era resulting in a total thickness of over 15,000 feet (Drost, et. al, 1997). The basalt formations found in the area include the Saddle Mountains Basalt that overlies the Wanapum Basalt which in turn overlies the Grande Ronde. Overlaying the basalt is the Ringold Formation. The Ringold, deposited during the Pliocene, consists of four units recognized by textural class and consist of the following soil types listed in ascending order:

- Basal units consisting of sand and gravel;
- Lower unit comprised of silt and clay;
- Middle unit composed of sand, gravel and silt; and
- Upper unit consisting of sand and silt.

Pleistocene glacial flood deposits sit atop the Ringold Formation. The Pleistocene age Hanford Formation is composed of two units: the lower Pasco Gravels; and the overlying Touchet Beds. The Pasco gravels are comprised of sand or sand and gravel while the Touchet Beds consist of silt and sand.

The Site geologic interpretation is made from logs of soil borings and monitoring wells installed on-site. A geologic cross section is presented as Figure 4. The upper soil profile consists of brown to gray, fine to coarse-grained sand with some gravel. The gravel amount appears to increase with depth. The gravel is dense, mostly fine to coarse with some sand and trace amounts of silt as a matrix. The gravel parent lithology is mostly basalt and is typically sub-angular to sub-rounded.

3.2 REGIONAL HYDROGEOLOGY

The Pasco Basin is a subset of the regional Columbia Plateau aquifer system. The Columbia Plateau Regional Aquifer System (CPRAS) covers over 50,000 square miles of eastern Oregon and Washington and western Idaho (Kahle, et. al, 2011). The basalts may be as thick as 16,000 feet in the Site area (Drost , et al. 1990). The Columbia River Basalt Group (CRBG) are the primary aquifers in the region. However, the alluvial aquifers are important in some areas of the Columbia Plateau since they are readily accessible and are capable of high yields. The groundwater flow direction in the alluvial and basalt aquifers is typically toward the rivers.

The alluvial aquifers in the Site area range in thickness from 50 to 200 feet (Whitehead, 1994). In the Site area, yields as high as 3,500 gallons per minute (gpm) have been reported in wells completed in the Pasco Gravels.

Site Hydrogeology

Groundwater levels have been monitored at the Pasco Bulk Fuel Terminal since the first monitoring wells were installed in 1983. Based upon Site groundwater elevations, groundwater beneath the Site generally flows to the southeast toward the Snake River. The aquifer at the Site is unconfined and is usually encountered about 80 feet bgs in the upland part of the Site. Groundwater levels can fluctuate between 2 to 5.5 feet over a season as observed during the more than 32 years of monitoring.

The hydraulic gradient at the Tidewater Site ranges from about 0.0002 to 0.0003 foot per foot. The flat hydraulic gradient is likely moderated by the reservoir conditions maintained in this reach of the Snake River due to the operations at McNary Dam.

3.3 SURFACE WATER

The Snake River borders the Site to the southeast, and joins the Columbia River about one mile west-southwest of the Site. The McNary Dam reservoir on the Columbia River backs up the Snake River in the Site area to form Lake Wallula. The pool height in the Site area is maintained between 335 and 340 feet above sea level. The river stage is controlled for navigational and hydroelectric power generation purposes.

4.0 REMEDIAL INVESTIGATION

In July 2000, a leak in a Tidewater pipeline resulted in the release of an estimated 41,000 gallons of gasoline at the Site. The release occurred in the northwest portion of the Pasco Bulk Fuel Terminal and is referred to as the Tidewater area (Figure 2). An emergency response effort was undertaken to characterize the release and begin remedial efforts to minimize impacts of the release. The investigations and remedial action are further described in the next section.

4.1 Tidewater Activities

The July 2000 Tidewater pipeline leak resulted in an estimated 41,000 gallons of unleaded gasoline being released into the environment before the leak was repaired. During the emergency response phase, Ecology's Spill Response Program provided oversight to the efforts conducted to address the release. The efforts were directed at identifying the extent of contamination and beginning free product recovery. By September 2000, the emergency response phase of the project was concluded when Tidewater demonstrated the free product plume was contained.

Prior to September 2000, Tidewater installed twelve monitoring wells in the release area to characterize the extent of free product. Four vapor extraction wells were installed within the soil contaminant area to assist in defining the free product plume. Total fluids recovery pumps were placed in several monitoring wells. About 8,000 gallons of liquid phase free product were recovered and sent off-site for reprocessing and eventual re-use.

Along with the monitoring wells, an SVE system was installed during the emergency phase to assist in product recovery. Vapor phase recovery removed between 25,000 to 27,000 gallons of petroleum hydrocarbons which were destroyed on-site with thermal or catalytic oxidation.

In February and March 2001, additional investigation work was completed at the Site to support the design and installation of an air sparging system. Eight additional monitoring wells along with seventeen sparge points were completed in and adjacent to the free product pool. The air sparging in combination with the SVE system was designed to reduce the free product pool and enhance biodegradation in the upper saturated zone.

By February 2003, the free product pool had diminished to the point where only sheen was visible in some monitoring wells. Tidewater monitoring wells were sampled from February 2003 through December 2003. The sampling results indicated the remedial actions successfully addressed the free product plume while stabilizing the dissolved phase plume.

Supplemental sampling completed in March 2006 confirmed the results of the 2003 sampling events. The dissolved phase plume decreased in size as well as concentration.

4.2 CPL AND SITE-WIDE ACTIVITIES

In 2007 and 2008, CPL completed two sampling events that included the sampling of CPL's wells and a limited number of Tidewater monitoring wells. Free product was not observed in any of the CPL or Tidewater monitoring wells during the sampling. Sheen was observed on purge water collected from five of the Tidewater wells sampled in 2007.

In 2010, a joint field investigation was conducted by URS (representing CPL) and CH2M HILL (representing Tidewater). The investigation included well maintenance and rehabilitation, a civil survey of monitoring wells, and groundwater sampling. The civil survey placed site wells on the same vertical datum, which allowed for preparing groundwater elevation contour, flow direction, and gradient maps.

A site-wide groundwater sampling event was completed in June 2010. Nine CPL wells and eleven Tidewater wells were sampled for this event. Some CPL wells were not sampled during this round because of well construction issues or, in the case of Tidewater's wells, sheen was observed in the well purge water. Another site-wide groundwater sampling event was performed in December 2010. The groundwater sampling results from both events indicate petroleum hydrocarbon concentrations have decreased or remain stable at the Site.

5.0 CLEANUP STANDARDS

The cleanup standard development process is used to determine which hazardous substances contribute to an overall threat to human health and the environment at a site. Once these substances are identified, an evaluation is made to determine at what concentration these substances are considered to be protective of human health and the environment. A point of compliance is then established on the site, which is a point or points where these cleanup levels must be attained (WAC 173-340-200). Cleanup standards include both cleanup levels and points of compliance for those cleanup levels.

MTCA provides three main methods for establishing cleanup levels at a site. These are Method A, B, and C. Method A provides cleanup levels for routine cleanup actions or sites with relatively few hazardous substances. Methods B and C cleanup concentrations are calculated from applicable or relevant and appropriate requirements (ARARs) and from using the formulas provided in WAC 173-340-720 through WAC 173-340-760. Method B is the standard method for establishing cleanup levels and is applicable to all sites. Method C is a conditional method for use at sites subject to specified uses.

Following establishment of cleanup levels, media having concentrations above cleanup levels must be addressed using one or more technologies selected as part of the remedy. Criteria for remedy selection are outlined in WAC 173-340-360.

Groundwater is the contaminated medium of focus. Petroleum hydrocarbons (TPH), ranging from gasoline to heavy oil, and benzene, toluene, ethylbenzene, and xylene (BTEX) are the indicator substances (as defined in Section 5.1 below) identified in this medium. The contamination is a direct result of the historic 2000 release at the Site. Two exposure pathways have been considered in establishing cleanup standards for this Site. The pathways are the protection of groundwater and surface water. Since Site groundwater is not withdrawn from the same alluvial aquifer and contamination does not leave the Site, Ecology has determined the current most reasonable exposure scenario is through accidental ingestion of drinking water and other domestic uses.

Groundwater cleanup standards are set according to WAC 173-340-720. As stated previously, the highest beneficial use of Site groundwater is as a current and future drinking water source. Ecology has determined the reasonable maximum exposure expected is through accidental ingestion of groundwater and other domestic uses (WAC 173-340-720 (1) (a)). A Method A cleanup standard will be used for establishing groundwater cleanup levels at the Site.

5.1 INDICATOR SUBSTANCES

Indicator substances as defined by WAC 173-340-200 are a subset of hazardous substances present at a site selected under WAC 173-340-708 for monitoring and analysis. TPH and associated BTEX components have been identified as the chemicals of concern at the Site. Indicator substances are selected from the list of chemicals of concern. The criteria found in WAC 173-340-708 (2) are used to screen the list of chemicals. Following the selection of indicator substances, cleanup levels are developed for the list of substances used to calculate the total site risk. Since Method A cleanup levels are selected for the Site, overall site risk is not considered. Method A cleanup values are developed to be protective in the selected medium.

Groundwater Indicator Substances

The highest beneficial use of Site groundwater is as a current and future drinking water source. Gasoline-, diesel-, and heavy oil-range TPH and BTEX are the indicator substances for groundwater at the Site. Groundwater indicator substance screening results for the Site are presented in Table 1.

5.2 CLEANUP STANDARD DEVELOPMENT

The indicator substance screening resulted in the selection of seven groundwater contaminants that will be carried forward for cleanup standard development. Groundwater cleanup levels will be set to be protective of human health via ingestion and other domestic uses as well as protection of surface water.

Groundwater Cleanup Levels

Groundwater levels set under Method A for groundwater must be at least as stringent as the criteria in WAC 173-340-720(3)(b), which includes the following:

i) Concentrations listed in Table 720-1 and compliance with the corresponding footnotes;

ii) Concentrations established under applicable state and federal laws, including the requirements in WAC 173-340-720(3)(b)(ii), which includes the following:

   (A) Maximum contaminant levels established under the Safe Drinking Water Act and published in 40 C.F.R. 141;

   (B) Maximum contaminant level goals for noncarcinogens established under the Safe Drinking Water Act and published in 40 C.F.R. 141;

   (C) Maximum contaminant levels established by the state board of health and published in chapter 246-290 WAC.

iii) For hazardous substances deemed indicator hazardous substances for groundwater under WAC 173-340-708 (2) and for which there is no value in Table 720-1 or applicable state and federal laws, concentrations that do not exceed natural background or the practical quantitation limit, subject to the limitations of the chapter.

iv) For protection of surface water beneficial uses.

To develop cleanup levels for the Site, Ecology evaluated existing Site groundwater data and compared these data to Method A groundwater levels. While Site groundwater eventually discharges to the Snake River, the RI empirically demonstrated indicator substance concentrations in groundwater do not pose a threat to surface water. This is supported by the non-detections for petroleum in adjacent monitoring wells downgradient of the contaminated wells. Therefore, groundwater cleanup levels do not need to be set at surface water cleanup levels.

Gasoline-range TPH has a cleanup level of 800 micrograms per liter (ug/L), while diesel- and heavy oil-range TPH each have a cleanup level of 500 ug/L. The benzene cleanup level of 5 ug/L is based on the Federal and State Primary Drinking Water Maximum Contaminant Level (MCL) groundwater concentration criteria. The ethylbenzene cleanup level is 700 ug\L. The toluene and xylene cleanup levels are 1,000 ug\L, respectively.

A point of compliance (WAC 173-340-200) is the point or points where cleanup levels established in accordance with WAC 173-340-720 through 173-340-760 shall be

attained. Once those cleanup levels have been attained at that point, a site is no longer considered a threat to human health and the environment. If a conditional point of compliance is established (see below), institutional controls must remain in place to prevent exposure where hazardous substances remain on-site above cleanup levels.

Under MTCA, the standard groundwater point of compliance is throughout a site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site (WAC 173-340-720(8)(b)).

Where hazardous substances remain on-site as part of the cleanup action, a groundwater conditional point of compliance, which shall be as close as practicable to the source of hazardous substances that does not to exceed the property boundary, may be used. If a conditional point of compliance is used, the proponent shall demonstrate all practicable methods of treatment are utilized in the cleanup action (WAC 173-340-720(8)(c)).

A standard point of compliance has been selected for use at the Site. The remedy selected for the Site includes natural attenuation and institutional controls. Natural attenuation has been occurring at the Site since the cessation of interim remedial measures, as demonstrated by the reduction in contaminant concentrations and the stable or shrinking contaminant plume.

6.0 REMEDIAL ALTERNATIVES

Over time, independent and emergency response actions have occurred at the Site. These remedial actions have reduced the contamination mass and appear to have stabilized the groundwater contamination plume. With this in mind, the FS proposed three alternatives to address the remaining Site contamination. The FS identified the remedial objectives for the Site and compared alternatives according to the MTCA criteria to meet these objectives. The main objective of cleanup action is to continue to prevent contaminants from migrating off-site to the Snake River. Dissolved contaminants have not been detected in monitoring wells near the river since 2007.

The alternatives as presented below are from the FS. Institutional controls and monitored natural attenuation (MNA) are part of each alternative. The alternatives were developed to comply with other applicable or relevant and appropriate requirements (ARARs), and to provide protection of human health and the environment.

6.1 ALTERNATIVE 1 – INSTITUTIONAL CONTROLS AND MONITORED NATURAL ATTENUATION

This alternative would mean the Site would continue to be managed under current conditions with existing wells for passive bioventing, routine monitoring, and maintenance of a groundwater monitoring network. The alternative includes existing institutional controls, such as physical barriers to Site access, signage, and limitations on land use. The primary mechanism of remedial action would be continued natural attenuation processes demonstrated to exist at the Site, and which have provided significant remedial progress since discontinuation of active remedial activities in December 2002. Progress assessment toward the cleanup standards would be accomplished through a performance monitoring program.

6.2 ALTERNATIVE 2 – ENHANCED BIOLOGICAL REMEDIATION, INSTITUTIONAL CONTROLS, AND MONITORED NATURAL ATTENUATION

This alternative would involve the introduction of oxygen-releasing compounds into existing monitoring wells to provide additional dissolved oxygen (DO) within the impacted groundwater areas of the Site. DO concentrations measured within the groundwater plume are suppressed, indicating biological oxygen demand exceeds the passive bioventing. Providing additional oxygen through an oxygen-releasing compound could further drive the biodegradation process and, potentially, over a greater depth of the saturated zone. However, current conditions show significant DO rebound in downgradient wells. This suggests enhanced biological remediation through oxygen-releasing compounds would have limited beneficial effect under the low hydraulic gradient conditions at the Site and may not necessarily have a significant impact on the Site-wide restoration time frame.

6.3 ALTERNATIVE 3 – ENHANCED BIOVENTING, INSTITUTIONAL CONTROLS, & MONITORED NATURAL ATTENUATION

This alternative would include the operation of a blower system to provide additional bioventing capacity to the existing passive system. For some locations this could require additional wells for reasonable implementation, though without assurance of increased effectiveness over existing passive venting, especially since soil vapor extraction has already been implemented as part of the interim remedial activities. This active remediation would also require installation and regular maintenance of one or more blower systems.

6.4 CLEANUP ACTION EVALUATION CRITERIA

The criteria used to evaluate cleanup actions are presented in WAC 173-340-360. All cleanup actions must meet the following four threshold requirements:

- Protect human health and the environment;
- Comply with cleanup standards set forth in WAC 173-340-700 through 760;
- Comply with applicable state and federal laws; and
- Provide for compliance monitoring.

Other requirements for cleanup actions that meet threshold criteria include the following:

- Use permanent solutions to the maximum extent practicable;
- Provide for reasonable restoration time frame; and
- Consider public concerns raised during the public comment period on the Draft CAP.

WAC 173-340-360(3)(b) describes the specific requirements and procedures for determining whether a cleanup action uses permanent solutions to the maximum extent practicable. A permanent solution is defined as one where cleanup levels can be met without further action being required at a site, other than the disposal of residue from the treatment of hazardous substances. To determine whether a cleanup action uses permanent solutions to the maximum extent practicable, a disproportionate cost analysis is conducted. This analysis compares the costs and benefits of the cleanup action alternatives and involves the consideration of several factors.

The comparison of benefits and costs may be quantitative, but will often be qualitative and require the use of best professional judgment.

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame.

Groundwater Cleanup Action Requirements

At sites with contaminated groundwater, WAC 173-340-360(2)(c) requires the cleanup action meet certain additional requirements. For non-permanent groundwater cleanup actions, the regulation requires the following two requirements be met:

1) Treatment or removal of the source of the release shall be conducted for liquid wastes, areas of high contamination, areas of highly mobile contaminants, or substances that can't be reliably contained; and
2) Groundwater containment (such as barriers) or control (such as pumping) shall be implemented to the maximum extent practicable.

Groundwater treatment in the form of air sparging and soil vapor extraction has been performed at the Site. Additionally, free product recovery and contaminated soil removal at the release locations have been completed.

Cleanup Action Expectations

WAC 173-340-370 sets forth the following expectations for the development of cleanup action alternatives and the selection of cleanup actions. These expectations represent the types of cleanup actions Ecology considers likely as a result of the remedy selection process; however, Ecology recognizes there may be some sites where cleanup actions conforming to these expectations are not appropriate.

6.5 EVALUATION OF PROPOSED REMEDIAL ALTERNATIVES

The remedial alternatives proposed in the Feasibility Study (FS) were evaluated according to the criteria set forth in WAC 173-340-360 and discussed in the prior section of this report. The three alternatives meet the threshold requirements and are protective of human health and the environment.

Since groundwater monitoring has demonstrated contamination is not migrating off-site and is declining in concentration, MNA has been selected as the main groundwater treatment method for each remedial alternative. Each alternative is considered protective of human health and the environment since each continues to provide groundwater cleanup via MNA, and institutional controls remove the potential for a direct contact pathway. Each alternative is compliant with applicable federal and state requirements and provides for compliance monitoring. Therefore, each alternative meets the threshold criteria set forth in WAC 173-340-360(2)(a).

Additional requirements from WAC 173-340-360 used to evaluate remedial alternatives require that remedies use permanent solutions to the maximum extent practicable, reflect the consideration of public concerns, and provide for a reasonable restoration time frame [WAC 173-340-360(2)(b)]. In the absence of a permanent solution, the alternative that displays the greatest degree of permanence becomes the baseline alternative [WAC 173-340-360(3)(e)(ii)(B)]. Groundwater contamination at the Site is present and will remain as concentrations continue to attenuate below cleanup levels. While natural attenuation continues to destroy contaminants without additional intrusive actions, it is not considered a permanent remedy. Permanent remedies do not require any additional action. Monitored natural attenuation requires monitoring to demonstrate the remedy performance. For this reason, the remedial alternatives are not considered permanent solutions. Each alternative utilizes monitored natural attenuation, and therefore, exhibits the same degree of permanence. Based on analysis of the Remedial Investigation (RI) data, the additional components of enhanced biodegradation and bioventing, respectively for Alternatives 2 and 3 do not provide additional benefit to the alternatives. For the purpose of evaluation, Ecology considers the public concern for each alternative to be equivalent and will rely on actual public input to gauge public concern.

6.5.1 Alternative 1

MNA coupled with passive bioventing are the key components of this alternative. Institutional controls make up the remainder of the alternative. This alternative has been given a high degree of permanence since MNA continues to treat and reduce the groundwater contamination. The alternative has a high level of implementability since it does not require additional installation or operation of remedial systems. The alternative provides for a reasonable restoration time frame since a large portion of monitoring wells are below cleanup levels and the remainder have declining contaminant concentrations. Restoration time frames are discussed in Section 8.5.7. The alternative is currently being implemented at the Site, giving it a high level of implementability. The long-term effectiveness of this alternative is high since the concentration of groundwater contamination will continue to decrease through natural processes. The short-term risks are currently being addressed with the Site health and safety plan.

6.5.2 Alternative 2

Similar to Alternative 1, Alternative 2 involves MNA and institutional controls. This alternative includes enhanced bioremediation, which includes the introduction of an oxygen–releasing compound into the groundwater. The concept of providing additional dissolved oxygen to groundwater is discussed in Section 6.2. The alternative is given a high degree of permanence since MNA continues to treat and reduce the groundwater contamination. Since it does not appear additional DO will substantially enhance the bioremediation currently occurring, the restoration time frame is the same as Alternative 1. The alternative has a high level of implementability. The MNA portion of the alternative is occurring and introduction of oxygen-releasing compounds into the existing monitoring wells is readily achievable. The long-term effectiveness of this alternative is high since the concentration of groundwater contamination will continue to decrease through natural processes. The short-term risks are currently being addressed with the Site health and safety plan.

6.5.3 Alternative 3

Alternative 3 also provides for MNA and institutional controls similar to Alternative 1 and 2, but adds enhanced bioventing to the alternative. The bioventing would provide additional oxygen into the subsurface for bioremediation. Alternative 3 has a high degree of permanence like Alternatives 1 and 2. For the reasons stated in Alternative 2, the restoration time frame is the same as Alternatives 1 and 2. The implementability is considered medium-high because the enhanced bioventing would require the installation of additional wells along with one or two blower systems. While installation and operation of bioventing systems are usually easily implemented, the installation at an operating fuel terminal presents many challenges. The long-term effectiveness of this alternative is high since the concentration of groundwater contamination will continue to decrease through natural processes. The short-term risks are the risks associated with intrusive work inside an active fuel terminal.

7.0 SELECTED CLEANUP ACTION

Ecology is selecting Alternative 1, which is a cleanup action protective of human health and the environment. The selected cleanup action is designed to meet the MTCA requirements and expectations. Groundwater contamination will be addressed with the chosen remedial alternative.

Groundwater contamination continues to be present in some of the release areas at the Site. While the groundwater is not currently used as such, the highest beneficial use of Site groundwater is as a drinking water source. In addition, the Snake River borders the site to the east, but based on monitoring results the contaminated groundwater does not flow into the river.

As discussed, remedial actions have been performed in response to the historic releases at the Site. Groundwater monitoring events, since the remedial systems were shut down, indicate contamination remains present in select on-site wells. The contamination does not extend beyond the areas of remedial action. These observations demonstrate and support the MNA remedy for the Site.

Passive bioventing currently provides oxygen into the subsurface. The monitoring well system will need to be maintained to continue to function properly. In order to monitor the ongoing natural attenuation effectiveness, groundwater samples shall be collected and analyzed for benzene, toluene, ethylbenzene, total xylenes, gasoline-, diesel-, and heavy oil-range petroleum hydrocarbons. Field parameters need to include dissolved oxygen (DO), oxygen reduction potential (ORP), pH, temperature, and specific conductance. In addition to using the field parameters to determine when representative samples can be collected, DO and ORP can also be used to confirm continued biodegradation of dissolved phase petroleum hydrocarbons. Analysis of alkalinity, ferrous iron, manganese, sulfate, and nitrate in 2010 suggests natural attenuation is occurring at the Site. Having already demonstrated MNA is a suitable cleanup remedy for the Site, a subset of these parameters (ferrous iron, manganese, and sulfate) shall continue to be analyzed to ensure subsurface conditions do not change significantly during compliance monitoring.

7.1 POINT OF COMPLIANCE

The standard groundwater point of compliance is established throughout the site from the uppermost level of the saturated zone extended vertically to the lowest most depth which could be potentially affected by the Site. A standard point of compliance will be used for the Site. Monitoring will be used to confirm compliance.

7.2 INSTITUTIONAL CONTROLS

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the cleanup action or result in the exposure to hazardous substances at a site. Institutional controls are required where cleanup actions result in residual concentrations of hazardous substances exceeding cleanup levels established for a site. These controls may not be used as a substitute for a cleanup that is technically possible. Since contamination at the Site currently exceeds the groundwater cleanup levels, institutional controls will be required.

The institutional control requirements are set forth in WAC 173-340-440. In addition to Ecology's standard conditions for the Uniform Environmental Covenants Acts (UECA - RCW 64.70), the following institutional controls that prohibit and/or limit groundwater use within the groundwater contamination plume will be required, as incorporated into a restrictive covenant to be filed with the office of the Franklin County Auditor:

1) No groundwater may be taken from the parcel, except for purposes related to the Remedial Action, such as groundwater monitoring.
2) The PLP will monitor the groundwater and confirm natural attenuation is reducing contamination. Monitoring will continue until data show that cleanup levels have been met in groundwater for a minimum of four consecutive sampling events within designated monitoring networks, as described in the Compliance Monitoring Plan.

7.3 PERIODIC REVIEW

WAC 173-340-420 states that at sites where a cleanup action requires an institutional control, a periodic review shall be completed no less frequently than every five years after the initiation of a cleanup action. Since contaminated groundwater will remain on-site until natural processes achieve cleanup levels and institutional controls will be required, periodic reviews shall take place at this Site. Monitoring data shall be reviewed to continue to assess the effectiveness of the groundwater contamination treatment. If data do not indicate the selected remedy has the capacity to remediate contaminant concentrations to meet cleanup levels within the anticipated remediation time frame, then additional remedial action may be required.

8.0 EVALUATION OF THE CLEANUP ACTION USING MTCA CRITERIA

The selected remedy is evaluated using the MTCA criteria set forth in WAC 173-340-360 in the following sections:

8.1 PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

Groundwater is the contaminated medium at the Site. The exposure routes identified at the Site are direct contact and accidental ingestion of contaminated groundwater. Natural attenuation and passive bioventing will reduce contaminant concentrations and the associated risk from direct contact and ingestion of the contaminated medium. Institutional controls will limit exposure via ingestion and dermal contact.

8.2 COMPLIANCE WITH CLEANUP STANDARDS

Natural attenuation has been selected to address groundwater contamination at the Site. Passive bioventing provides oxygen into the subsurface and natural attenuation is reducing the contamination. Groundwater contaminant levels will continue to decrease until cleanup levels are met at a point of compliance for groundwater pursuant to WAC 173-340-720(8). Institutional controls will be part of this cleanup action since contamination at the Site currently exceeds the groundwater cleanup levels.

8.3 COMPLIANCE WITH APPLICABLE STATE AND FEDERAL LAWS

The cleanup action for this Site complies with applicable state and federal laws. Local laws, which can be more stringent, will govern actions when they are applicable.

8.4 COMPLIANCE MONITORING

Compliance monitoring is divided into three categories: protection; performance; and confirmational. WAC 173-340-410. Protection monitoring is designed to protect human health and the environment during construction and the operation and maintenance tasks for the cleanup action. Performance monitoring confirms the cleanup action has attained cleanup and/or performance standards.
Confirmational monitoring confirms the long-term effectiveness of the cleanup action once cleanup standards have been achieved or other performance standards have been

attained. Compliance monitoring will be conducted in accordance with a Compliance Monitoring Plan, which has been developed and is included as an exhibit in the consent decree.

8.5 USE PERMANENT SOLUTIONS TO THE MAXIMUM EXTENT PRACTICABLE

A permanent solution is one in which cleanup standards can be met without further action being required. Ecology believes the selected remedial action provides the highest degree of permanence. The selected remedy will eventually provide a permanent solution, but it will not be realized immediately.

8.5.1 Protection of Human Health and the Environment

The groundwater remedy is considered protective of human health and the environment. The remedy is considered protective since it will continue to reduce contaminant concentrations in groundwater through natural attenuation. Cleanup levels will be met at the applicable point of compliance for groundwater.

Institutional controls will prohibit the withdrawal and use of the contaminated groundwater at the Site. Achieving soil and groundwater cleanup standards will be assessed as part of the periodic review required under WAC 173-340-420. If groundwater cleanup levels have not been met at their respective points of compliance within the anticipated restoration time frame, additional cleanup action may be required. Performance monitoring will be completed according to the schedule established pursuant to Section 8.4 above.

8.5.2 Long-Term Effectiveness

The long-term effectiveness of the groundwater remedy will be assessed as natural attenuation reduces groundwater contaminant concentrations. Passive bioventing is expected to continue to provide oxygen to the subsurface and provide for natural attenuation.

8.5.3 Short-Term Effectiveness

Risks associated with the cleanup action in the short term are the potential exposure of workers to the contaminated groundwater during groundwater sampling. Risks are very limited since trained workers will be collecting samples. Worker health and safety will be addressed as part of the Health and Safety Plan to comply with the appropriate regulations and to satisfy the protection monitoring requirements. Institutional controls to prevent contact with contaminated groundwater will also minimize the short-term risks.

8.5.4 Permanent Reduction of Toxicity, Mobility, and Volume

Natural attenuation continues to reduce groundwater contamination and, most importantly, the contamination does not affect wells downgradient of the contaminated wells. Groundwater treatment will reduce the contaminants in groundwater to meet cleanup levels at the point of compliance for groundwater cleanup levels pursuant to WAC 173-340-720(4).

8.5.5 Implementability

The selected cleanup action can be readily implemented since it is currently happening at the Site.

8.5.6 Cost

The FS did not provide cost data. The selected remedial action is considered the least expensive since it does not require the installation of additional equipment or wells. Because there is no apparent reduction of the restoration time frame with either Alternative 2 or Alternative 3, there is no additional benefit gained for the additional costs of these alternatives.

8.5.7 Provide Reasonable Restoration Time Frame

The proposed cleanup action will provide for the continued biodegradation of contaminated groundwater. Based on the contamination attenuation observed to date, a ten-year restoration time frame is estimated. Groundwater monitoring and periodic review will provide an assessment tool for the cleanup action. Monitoring wells will serve as the points of compliance and the number and location of the wells will be discussed in the Compliance Monitoring Plan.

8.5.8 Public Participation and Community Acceptance

A public comment period will be held to allow the public and parties affected by the cleanup action an opportunity to provide comment on this document. Public comments and concerns will be addressed in a responsiveness summary and incorporated as appropriate in the final cleanup action plan.

9.0 REFERENCES CITED

Drost, B.W., Whiteman, K.J., and Gonthier, J.B., 1990, Geologic Framework of the Columbia Plateau Aquifer System, Washington, Oregon, and Idaho: U.S. Geological Survey Water-Resources Investigations Report 87-4238, 172 p.

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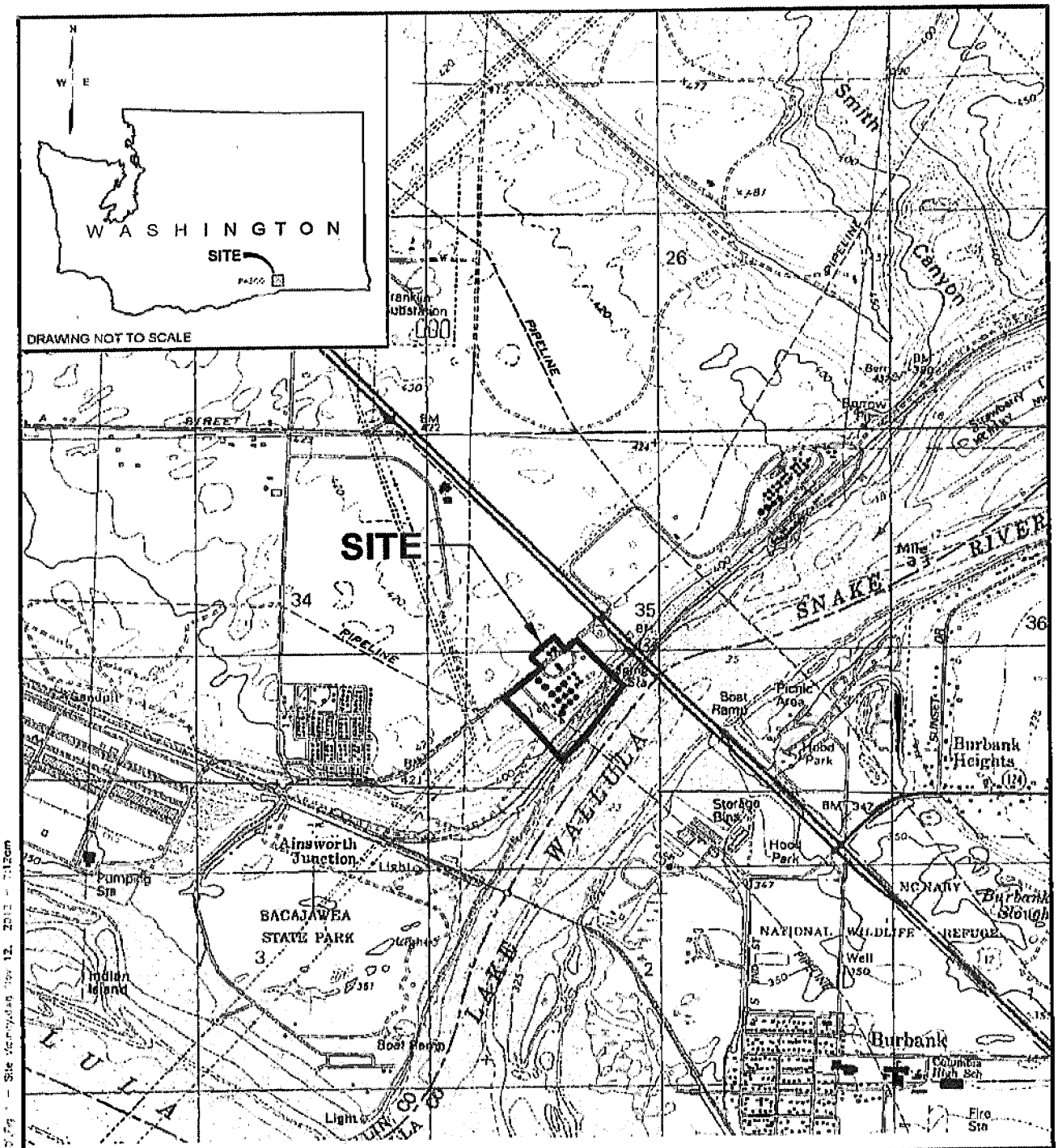
Kahle, S.C., Morgan, D.S., Welch, W.B., Ely, D.M., Hinkle, S.R., Vaccaro, J.J., and Orzol, L.L., 2011, Hydrogeologic framework and hydrologic budget components of the Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho: U.S. Geological Survey Scientific Investigations Report 20115124, 66 p.

Whitehead, R.L., 1994, Groundwater Atlas of the United States Segment 7 – Idaho, Oregon, and Washington: U.S. Geological Survey – Hydrologic Investigations Atlas 730-H, p. H21.



SOURCE: U.S.G.S. 7.5-MINUTE SERIES TOPOGRAPHIC MAP. PASCO, WASHINGTON (1992) QUADRANGLE.

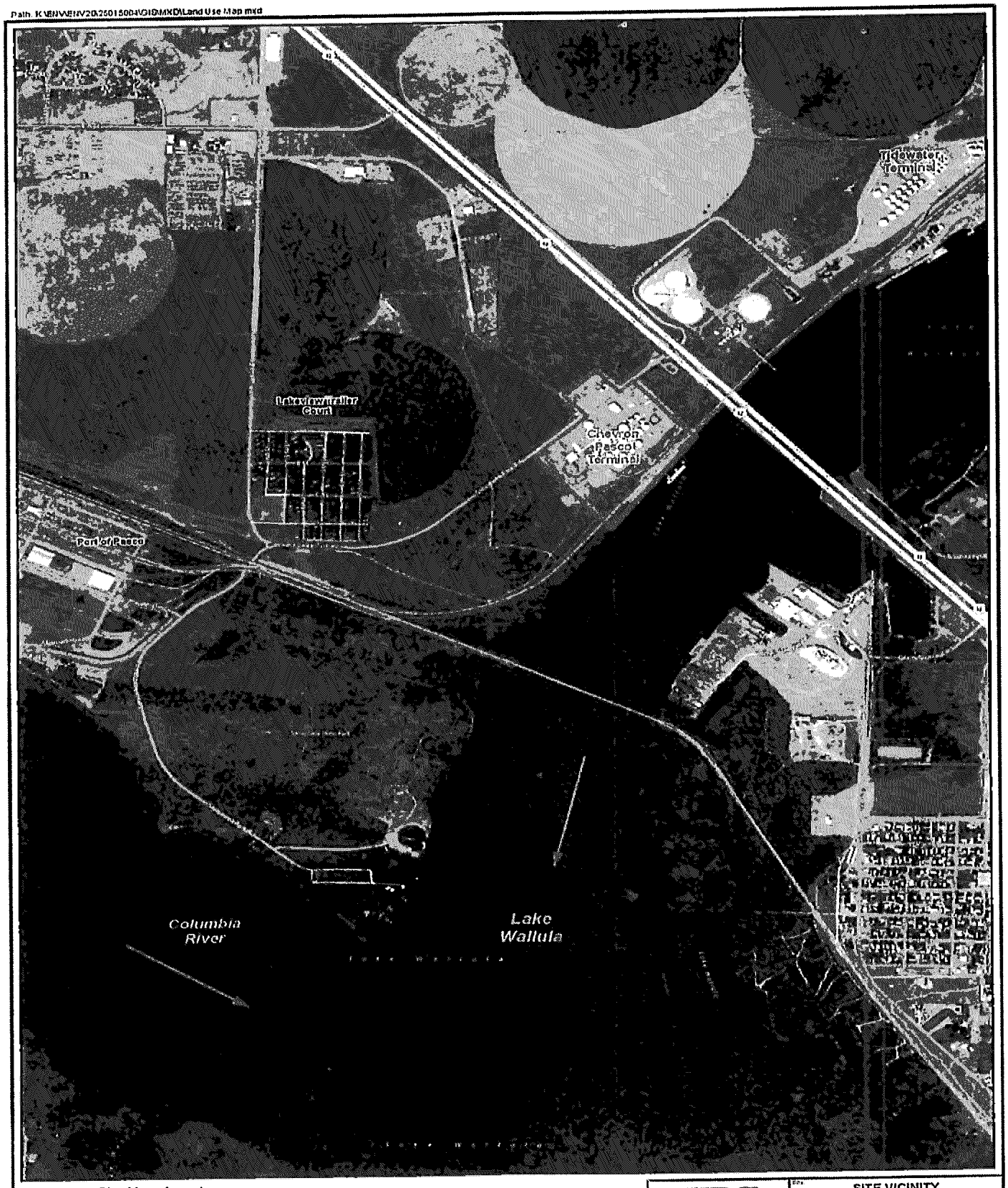
URS
10550 RICHMOND AVENUE, SUITE 155
HOUSTON, TEXAS 77042
PH: (713) 914-5699
FAX: (713) 789-8404

Title: SITE VICINITY MAP

Project: CPL PASCO TERMINAL
PASCO, WASHINGTON

Client: CHEVRON PIPE LINE COMPANY

Scale:	Drawn by:	Date:	Project No.:	File Name:	Figure:
AS SHOWN	CLK	11/12/12	25015004	Fig 1 - Site Vicinity dwg	1
	Chkd by: EO	Date: 11/12/12			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Tidewater Terminal
Chevron Pasco Terminal
Port of Pasco
Columbia River
Lake Wallula
Imagery: Bing Maps August through October 2010
Legend
SITE
Railroad
River Flow Direction
0 500 1,000 2,000
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SITE VICINITY AND LAND USE MAP
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PASCO, WASHINGTON
CHEVRON PIPE LINE COMPANY
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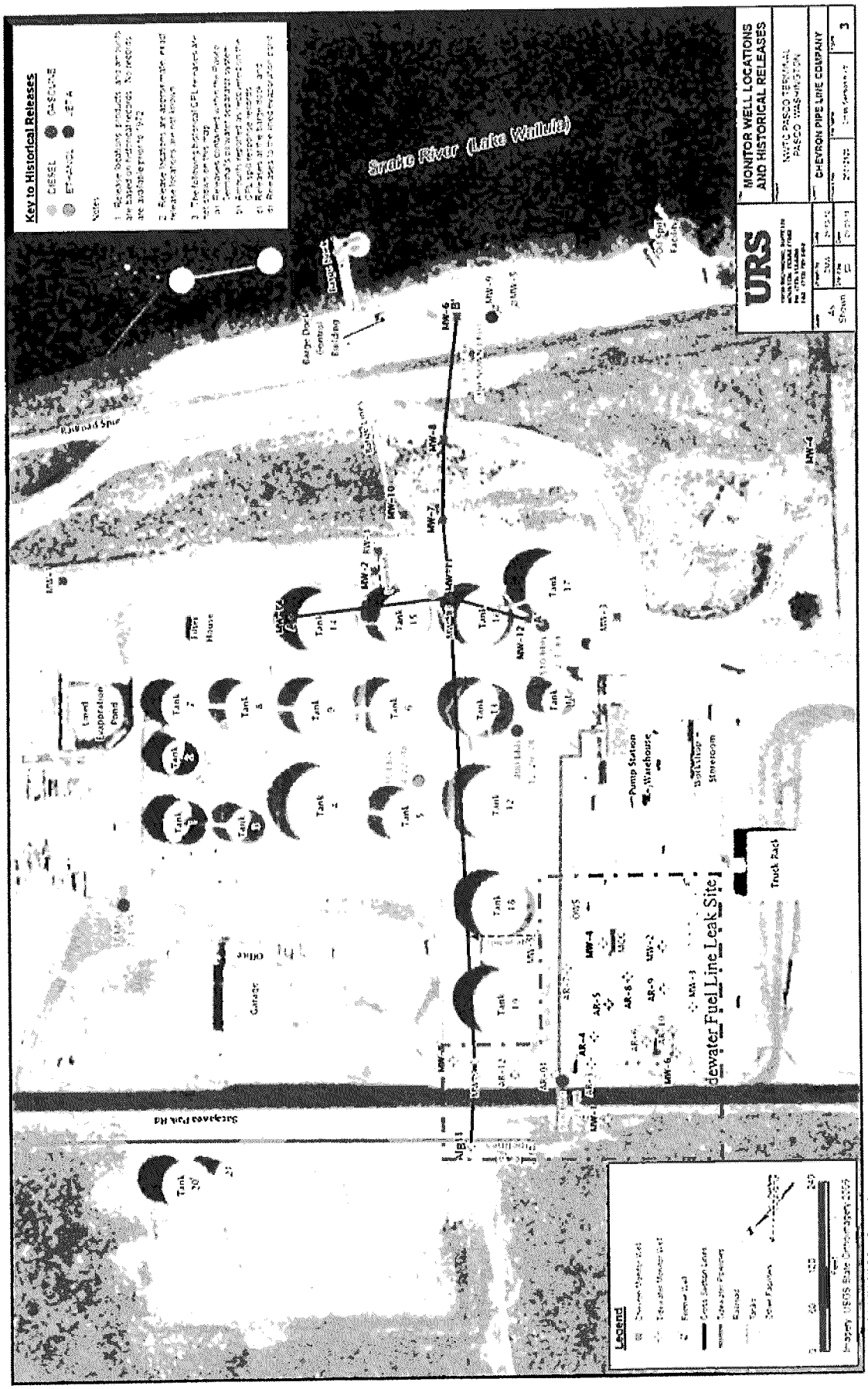
Key to Historical Releases
Snake River (Lake Wallula)
MONITOR WELL LOCATIONS AND HISTORICAL RELEASES
CHEVRON PIPE LINE COMPANY
URS
Legend
Pump Station
Truck Rack
Garage
Office
Filter House
Lined Evaporation Pond
Barge Dock Control Building
Rawood Spur
Sacajawea Park Rd
dewater Fuel Line Leak Site

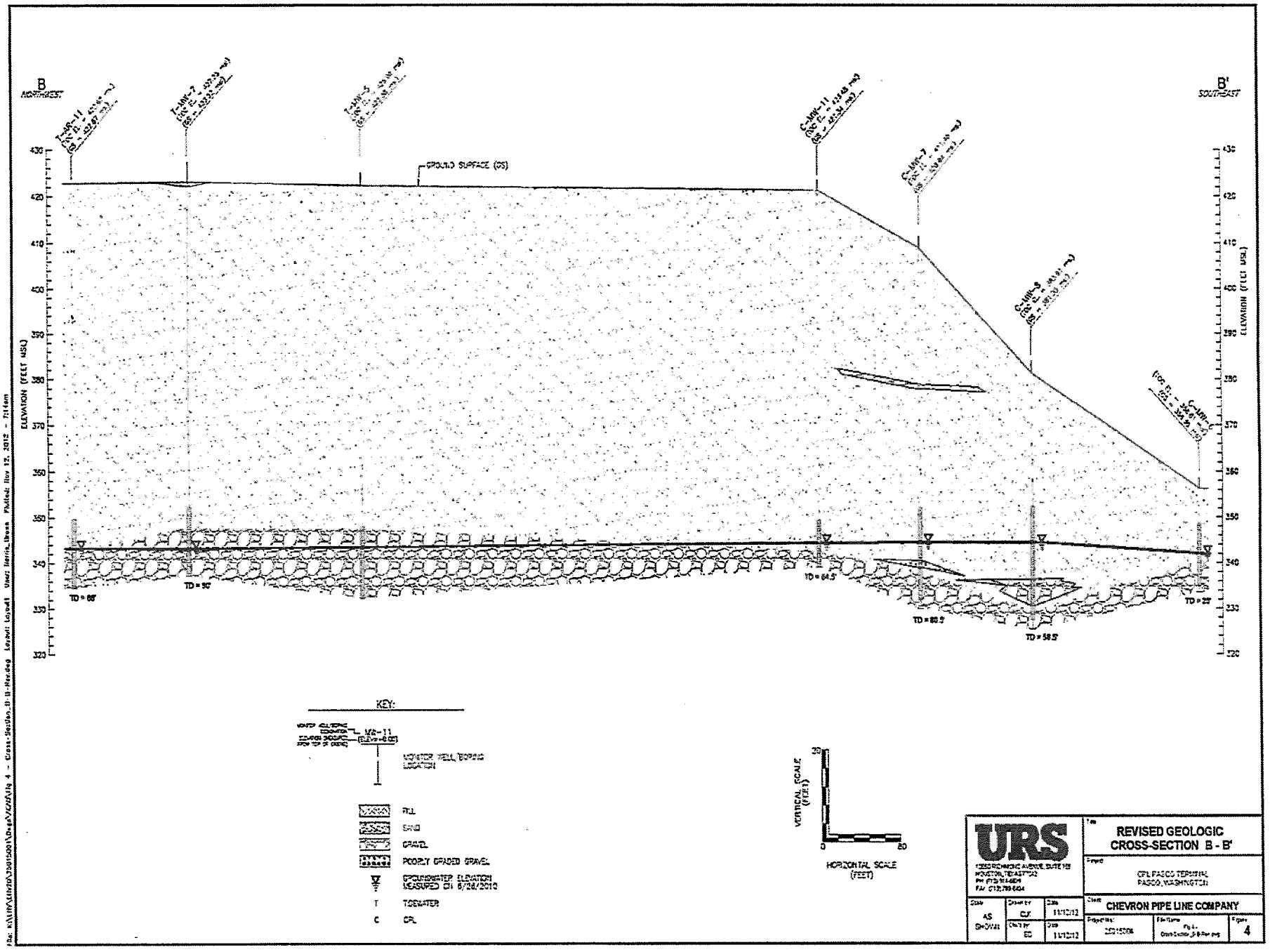
B
NORTHWEST
B'
SOUTHEAST
GROUND SURFACE (GS)
ELEVATION (FEET MSL)
TD = 68'
TD = 90'
TD = 64.5'
TD = 80.5'
TD = 58.5'
TD = 23'
KEY:
MONITOR WELL/BORING LOCATION
FILL
SAND
GRAVEL
POORLY GRADED GRAVEL
GROUNDWATER ELEVATION MEASURED ON 6/28/2010
T TIDEWATER
C CPL
VERTICAL SCALE (FEET)
HORIZONTAL SCALE (FEET)
URS
REVISED GEOLOGIC CROSS-SECTION B - B'
CPL PASCO TERMINAL
PASCO, WASHINGTON
CHEVRON PIPE LINE COMPANY
AS SHOWN
11/12/12
4

TABLE 1. INDICATOR SUBSTANCE SCREENING - GROUNDWATER

Contaminant	Frequency of Detection	Maximum Concentration, ug/L	MTCA Cleanup Level, ug/L	Basis	Screening Results
Benzene	**40%**	**6,750**	**5**	**Method A**	**Indicator**
Diesel	**30%**	**1,165,000**	**500**	**Method A**	**Indicator**
Ethylbenzene	**43%**	**1,500**	**700**	**Method A**	**Indicator**
Gasoline	**54%**	**77,000,000**	**800**	**Method A**	**Indicator**
Heavy Oil	**18%**	**5,900**	**500**	**Method A**	**Indicator**
Toluene	**46%**	**17,000**	**1000**	**Method A**	**Indicator**
Xylene	**48%**	**12,590**	**1000**	**Method A**	**Indicator**
MTBE	0	0	20	Method A	<5% detection
Ethanol	NA	NA	NA	NA	NA

Exhibit C

EXHIBIT C

TIDEWATER FUEL LINE LEAK SITE
SCOPE OF WORK
COMPLIANCE MONITORING PLAN

This Scope of Work implements the Cleanup Action Plan (Exhibit B) to monitor contamination at the Tidewater Fuel Line Leak Site (Site), located at 2900 Sacajawea Park Road, Pasco, Washington. This scope of work prepared by the Washington Department of Ecology (Ecology) is to be used by the potentially liable person (PLP) to develop a Compliance Monitoring Plan (CMP) in order to complete the monitoring required by the Cleanup Action Plan developed for the Site.

The PLP will furnish all personnel, materials, and services necessary for, or incidental to, performing compliance monitoring at the Site.

The CMP shall contain the following tasks:

Task I: Compliance Monitoring Plan

A. Compliance Monitoring Plan

A plan describing monitoring locations, methods, frequency, and analytical parameters required to ensure that cleanup objectives set forth in the Cleanup Action Plan are met must be prepared which includes the following information:

1. Background Summary

Any pertinent Site information including, but not limited to:

a. Maps – topographical, property lines, underground and aboveground tank locations, sumps, piping, pumping stations, well locations, surface water bodies near the vicinity of the Site, previous Site investigations; all maps will be consistent with the requirement set forth in WAC 173-340-840(4) and be of sufficient detail and accuracy to locate and report all current and future work performed at the Site.

b. A discussion of Site history, including the location of current and former operations and activities at the Site.

c. A discussion of compliance monitoring requirements established in the Cleanup Action Plan.

2. Summary of Cleanup Action

A discussion of cleanup action objectives for the Site, including, but not limited to a discussion of MTCA cleanup standards, cleanup levels developed for the Site, and points of compliance established at the site.

3. Compliance Monitoring Programs

A discussion of monitoring that will be performed at the site to meet the requirements established in the Cleanup Action Plan including, but not limited to:

a. The monitoring objectives.

b. Description of the monitoring well network at the Site.

c. A discussion of monitoring frequency at the Site.

d. Specific data collected during sampling events, including, but not limited to groundwater flow direction and gradient, sample collection procedures, analytical parameters, and waste management.

4. Data Reporting Requirements

A discussion of reporting requirements for data acquired during Site sampling activities, including, but not limited to data summary reports, and data submittal compatible with Ecology's Environmental Management System.

5. Work Plans and Schedules

B. Sampling and Analysis Plan

The PLPs must prepare a Sampling and Analysis Plan for use during all Site monitoring activities. The Sampling and Analysis Plan must contain:

1. Field Sampling and Testing Plans – The plan will describe in detail the sampling, testing, and data gathering methods, locations, frequency and other field study procedures that will be used for obtaining data required to implement the Cleanup Action Plan. The Sampling and Testing Plan will include the following:

a. Specific sampling methods, including number and type of QA/QC samples.

b. Sampling locations and designations, including access considerations.

c. Types of media to be sampled and the number of samples of each.

d. Schedule and task assignments.

e. Supplies and equipment.

f. Monitoring well construction requirements.

g. Analytical procedures, methods, and detection limits.

h. Sample custody procedures, including holding times, containers, and preservation.

i. Shipping and handling arrangements.

2. Quality Assurance Project Plan (QAPP)

a. Field quality assurance/quality control (QA/QC) methods.

b. Chain of custody procedures.

c. Decontamination procedures.

d. Laboratory QA/QC methods.

e. Electronic data management, archival, and transmittal protocols.

3. Health and Safety Plan

a. Level of protection.

b. Hazard evaluation.

c. Waste characteristics.

d. Special considerations and emergency information.

Schedule of Deliverables

Deliverables	Date Due
Effective date of Order	Start
PLPs to Submit Agency Review Draft Compliance Monitoring Plan, Sampling and Analysis Plan, Health and Safety Plan, and Schedule of Work to be Performed	30 days after start
PLPs to Submit Revised Compliance Monitoring Plan, Sampling and Analysis Plan, Health and Safety Plan, and Schedule of Work to be Performed	30 days after PLPs receive Ecology's comments on Draft Documents
PLPs to Submit Final Compliance Monitoring Plan, Sampling and Analysis Plan, Health and Safety Plan, and Schedule of Work to be Performed	14 days after PLPs receive Ecology's written approval of Compliance Monitoring Plan
PLPs to begin implementation of Compliance Monitoring Plan	30 days after PLPs receive Ecology's written approval of Compliance Monitoring Plan
PLPs to Submit Compliance Monitoring Report	Annually as approved in the Compliance Monitoring Plan

Exhibit D

EXHIBIT D

TIDEWATER FUEL LINE LEAK

Public Participation Plan

Consent Decree
for a
Cleanup Action Plan

Prepared by:
Washington State Department of Ecology

Para asistencia en Español: (509) 454-4174, preguntas@ecy.wa.gov

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Liên hệ bằng tiếng Việt, xin liên lạc: (360) 407-6948

한국어에서 지원에 대 한: (425) 649-7166

November 2016

Getting Involved in Cleanup at the Tidewater Fuel Line Leak Site

The Washington State Department of Ecology (Ecology) encourages the public to learn and get involved in decision-making opportunities about the Tidewater Fuel Line Leak Site (Site) at the former Chevron Pipe Line Company Pasco Bulk Terminal (Pasco Bulk Fuel Terminal). Tesoro Logistics LLC now owns and operates the terminal at 2900 Sacajawea Park Road in Pasco, Franklin County, Washington (see Site map in Appendix A). Opportunities are available during specific stages of investigating and cleaning up petroleum contamination at the Site.

The Public Participation Plan (plan) explains the Model Toxics Control Act (MTCA) that guides cleanup in Washington State. The plan outlines when public notice will occur, the amount of time the public has to comment, information about the Site, which areas are affected, and ways the public may provide feedback. It also contains a community profile, and concerns expressed by community members.

Purpose of the Plan

- Promoting public understanding of Ecology's responsibility to guide Site cleanup activities.
- Gathering information from the public that assists Ecology and the Tidewater Terminal Company, Inc. (Tidewater) while investigating and planning cleanup actions to protect human health and the environment.
- Informing the community living near the Site and the general public about cleanup activities and how to participate in the decision-making process.

Public Participation Plan and Model Toxics Control Act (MTCA) Overview

The plan is required by MTCA (Chapter 173-340-600 Washington Administrative Code [WAC]), a citizen-mandated law that became effective in 1989 to provide guidelines for cleaning up contaminated sites in Washington State. This law sets standards to ensure the cleanup protects human health and the environment and includes opportunities for public input. Please see Appendix B for a glossary of MTCA terms.

Ecology's Toxics Cleanup Program investigates reports of contamination that may threaten human health and the environment. If contaminants are confirmed during an investigation, the risk is ranked in comparison to all the other known contaminated sites in Washington, and the site is added to our Hazardous Sites List:
http://www.ecy.wa.gov/programs/tcp/mtca_gen/hazSites.html.

Public participation is an important part of cleanup under the MTCA process. Participation needs are assessed at each site according to the level of public interest and degree of risk posed by contaminants there. Individuals who live on or near a contaminated site, community groups, businesses, government, and any other organizations and interested parties are provided an opportunity to comment on the cleanup process.

MTCA requires Ecology to notify the public about reports and legal agreements, locations where these documents can be read, public comment periods, and public meetings or hearings related to

contaminated sites. Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops.

The Community Background and Public Participation Activities and Timelines sections of this plan provide information about outreach to the community.

Public Participation Grants and Technical Assistance

Citizen groups living near contaminated sites may apply for public participation grants during open application periods when funding is available: http://www.ecy.wa.gov/programs/swfa/grants/ppg.html. These grants help citizens receive technical assistance in understanding the cleanup process and create additional public participation avenues.

NOTE: Ecology currently does not have a citizen technical advisor office, as described in Chapter 173-340-600(18) WAC, for providing technical assistance to the public on issues related to the investigation and cleanup of the site. Technical questions can be addressed to the site manager Patrick Cabbage at patrick.cabbage@ecy.wa.gov or (509) 329-3543.

Amendments

This plan is reviewed and amended as cleanup progresses. Please submit suggestions for amendments to Erika Bronson at erika.bronson@ecy.wa.gov or (509) 329-3546.

Project Contacts

Washington Department of Ecology	**Tidewater Terminal Company**
Eastern Regional Office Toxics Cleanup Program 4601 N. Monroe St. Spokane, WA 99205 Patrick Cabbage, Site Manager (509) 329-3543 patrick.cabbage@ecy.wa.gov Erika Bronson, Public Involvement (509) 329-3546 erika.bronson@ecy.wa.gov Para asistencia Espanol: (360) 407-6097, preguntas@ecy.wa.gov 若需中文翻譯: (360) 407-6956 Liên hệ bằng tiếng Việt, xin liên lạc: (360) 407-6948 한국어에서 지원에 대 한: (425) 649-7166	William H. Collins, Director Environmental, Health, Safety, and Security Tidewater Terminal Company P.O. Box 1210 Vancouver, WA 98666-1210 (360) 759-0306 bill.collins@tidewater.com

SITE BACKGROUND

Ecology is proposing to enter into a legally binding Consent Decree with Tidewater Tidewater to carry out a Cleanup Action Plan at the Site. The Cleanup Action Plan identifies a final cleanup solution for the Site and detailed steps for completing the remedial action. The Consent Decree and Cleanup Action Plan are drafts until the 30-day public comment period ends. If significant changes are made due to public comments, Ecology will hold another review period.

The Site is located on the bank of the Snake River just upstream from where it merges with the Columbia River. The approximate physical address is 2900 Sacajawea Park Road in Pasco, Franklin County, Washington (see Site map in Appendix A). Tidewater owns and operates pipelines located on a three-acre easement that crosses the Pasco Bulk Fuel Terminal site.

In 1976, Chevron reported a release of 665 barrels, or about 28,000 gallons of petroleum, at the Pasco Bulk Fuel Terminal. Since the 1976 release, Chevron documented at least 10 additional releases at the Pasco Bulk Fuel Terminal.

In July 2000, gasoline leaked from a hole in one of Tidewater's fuel transfer pipelines. Ecology investigated the site and added it to the Hazardous Sites List in late 2000. The Franklin County Health District ranked the Site a three after their Site Hazard Assessment in August 2001. A rank of one represents the highest level of concern and five the lowest.

Current and former owners or operators, as well as any other parties potentially liable for Site contamination, may be held responsible for cleanup based on MTCA. Ecology identified Tidewater as being responsible for contamination related to pipelines they operate under an easement at this Site.

Tidewater conducted soil and groundwater investigations and started cleanup activities to address the contaminants from 2000 to 2003 under Ecology's Voluntary Cleanup Program. Tidewater also began monitoring groundwater in 2000, and submitted reports quarterly through 2003. They completed additional monitoring in 2006 and 2010. Results showed that petroleum in groundwater has reduced.

In 2009, Ecology entered into an Agreed Order with Chevron and Tidewater requiring the companies to complete a remedial investigation and feasibility study to determine the extent and locations of contamination at the Site and present alternatives for cleaning it up. The companies completed the investigation and study in 2012, finding that while past cleanup efforts had reduced petroleum contamination in groundwater, some still remained in localized areas.

Chevron sold the Pasco Bulk Fuel Terminal to Tesoro in 2013. Groundwater monitoring showed that contamination from past releases due to Chevron and Tidewater's operations had not mixed. The Site was then split into two: the Chevron Pipe Line Company Pasco Bulk Terminal (Cleanup Site ID 4867) and the Tidewater Fuel Line Leak (Cleanup Site ID 2331).

Contaminants of Concern

The primary contaminants of concern are petroleum products in soil and groundwater.

COMMUNITY BACKGROUND

Pasco is located where the Columbia, Snake, and Yakima rivers merge. Pasco is one of Washington's fastest growing cities with a population around 68,000. In 2012, the population was approximately 64,112, with 59 percent being minority populations. In 2012, roughly 57 percent of people were white, 54 percent were of Hispanic or Latino origin, 2 percent were Black, 2 percent were Asian, and 1 percent American Indian. Forty-nine percent, or 27,876 people, reported not speaking English at home. The largest percentage of non-English speakers indicated Spanish is their first language.

The Site is located near Sacajawea State Park on the southeastern edge of Pasco, and is surrounded mainly by industrial property with the exception of a low-income mobile home park about one mile southwest. Industries in the area are agriculture and transportation, including a rail line that travels along the Snake River next to the site. The federal government's Hanford Nuclear Reservation is located upstream from the site along the Columbia River.

Community Concerns

Interviews were conducted on June 27, 2009, with people living in the Lakeview Manufactured Home Community at 1505 S. Road 40 E, Pasco, Washington. A local Spanish interpreter assisted in conducting the interviews. Ecology conducted 15 interviews and knocked on 12 other doors with no answers. All of the residents were Spanish-speaking, with three being bilingual.

The following are some of the concerns expressed by residents:

- Several individuals indicated their tap water smelled or tasted bad, and they were using tap water for cooking only, were using water filters, or were on bottled water. One homeowner indicated yellow water was coming out of the tap.
- A couple of women stated that their children were not allowed to play in the sprinkler water used in the yards at the trailer court. They said the water smelled bad and left a white residue on cars. They had been told by the trailer court manager not to let the children play in the sprinkler water. They wanted to know if there was something from the Site or from pesticides in the water.
    - Ecology staff explained to residents that current information about groundwater indicates that Site contaminants are not moving toward the trailer park area. Residents were encouraged to contact their local health district about drinking water and sprinkler/irrigation water to determine what might be the source of the problem. Ecology provided information about these concerns to the Washington State Department of Health and the Pasco Regional Health District.
- Several residents asked if they could be harmed by an explosion from the white tanks at the Site. They were worried about the tanks exploding or pipes leaking.

- Ecology staff explained that the companies were following regulatory standards to ensure safety of the tanks and the local residents.

- A man asked about the fish in the river near the Site. He wanted to know if the fish had been tested for contamination and if they were safe to eat. He also asked about swimming and recreating on the shore near the Site. He indicated a lot of people eat the fish and swim, boat, and use the shoreline near Hood Park and Wallula Lake across from the Site as well as the river and shoreline by the Site.

- A few individuals asked if security on Sacajawea Road could be improved. They said the road is used for street racing at night and a car wrecked and exploded last year killing a person. They were concerned that a car street racing could impact one of the petroleum tanks and create an explosion that would hurt them and their families.

  - Ecology staff explained that these types of issues are not under Ecology's authority and are not part of this environmental project. Residents were encouraged to contact local law enforcement for help reducing street car racing.

Public Participation Activities and Timeline

The following public participation efforts will occur until the cleanup is complete:

- **Mailing lists** are developed to notify people living or working in close proximity to the Site. People in these areas will receive fact sheets about the cleanup process via first-class mail. Additionally, individuals, organizations, and local, state, and federal governments will be added to the mailing list. Please contact Erika Bronson at erika.bronson@ecy.wa.gov or (509) 329-3546 to be added to the mailing list.

- **Document Repositories** are locations where documents related to cleanup sites may be reviewed. The following locations will have copies of any documents that go through the public review process related to this Site:

  Washington State Department of Ecology
  4601 N. Monroe St.
  Spokane, WA 99205-1295
  (509) 329-3445

  Mid-Columbia Library
  1320 W. Hopkins St.
  Pasco, WA 99301-5097
  (509) 545-1019

  Ecology's Website: https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=2331

- **Fact sheets** explaining the stage of cleanup, the Site background, and what happens next in the cleanup process are distributed by Ecology during each public comment period. Fact sheets are mailed to individuals on the mailing list and to the penitentiary for distribution to staff and offenders. Fact sheets will have information in English and Spanish and will also contain phone numbers for assistance in Chinese, Korean, and Vietnamese.

  Summarized information from these fact sheets is also published in a statewide Site Register (http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html). To receive the Site Register

via email, please contact Erika Bronson at 509-329-3546 or erika.bronson@ecy.wa.gov, or sign up at http://listserv.wa.gov/cgi-bin/wa?SUBED1=Siteregister&A=1.

The fact sheets are also posted on Ecology's website: https://fortress.wa.gov/ecy/gsp/CleanupSiteDocuments.aspx?csid=2331.

- **30-day public comment periods** allow interested parties time to review and comment on proposed cleanup actions. The fact sheet contains contact information about where to submit comments and where and when public meetings or hearings will be held if requested.

- **Display ads or legal notices** will be published in the *Tri-City Herald*, ethnic newspapers when available, and on Ecology's Public Events Calendar (https://fortress.wa.gov/ecy/publiccalendar/) to inform the general public. Display ads or legal notices are published at the beginning of the 30-day comment period.

- **Public meetings, workshops, open houses, and hearings** are held based on the level of community interest. In cases when Ecology has not already planned public events during a comment period, we will schedule them if 10 or more people request it. These meetings, workshops, or hearings will be held at a location that meets Americans with Disabilities Act standards for accessibility and is close to the Site. They may be held away from the Site if it is necessary to accommodate large numbers of people. These events are announced with display ads or legal notices in the *Tri-City Herald*, ethnic newspapers when available, and on Ecology's Public Events Calendar (https://fortress.wa.gov/ecy/publiccalendar/).

- **Informational flyers** may also be made available in various locations throughout the community (for example, postings at local businesses, schools, libraries, etc.) to announce public comment periods, meetings, workshops, etc.

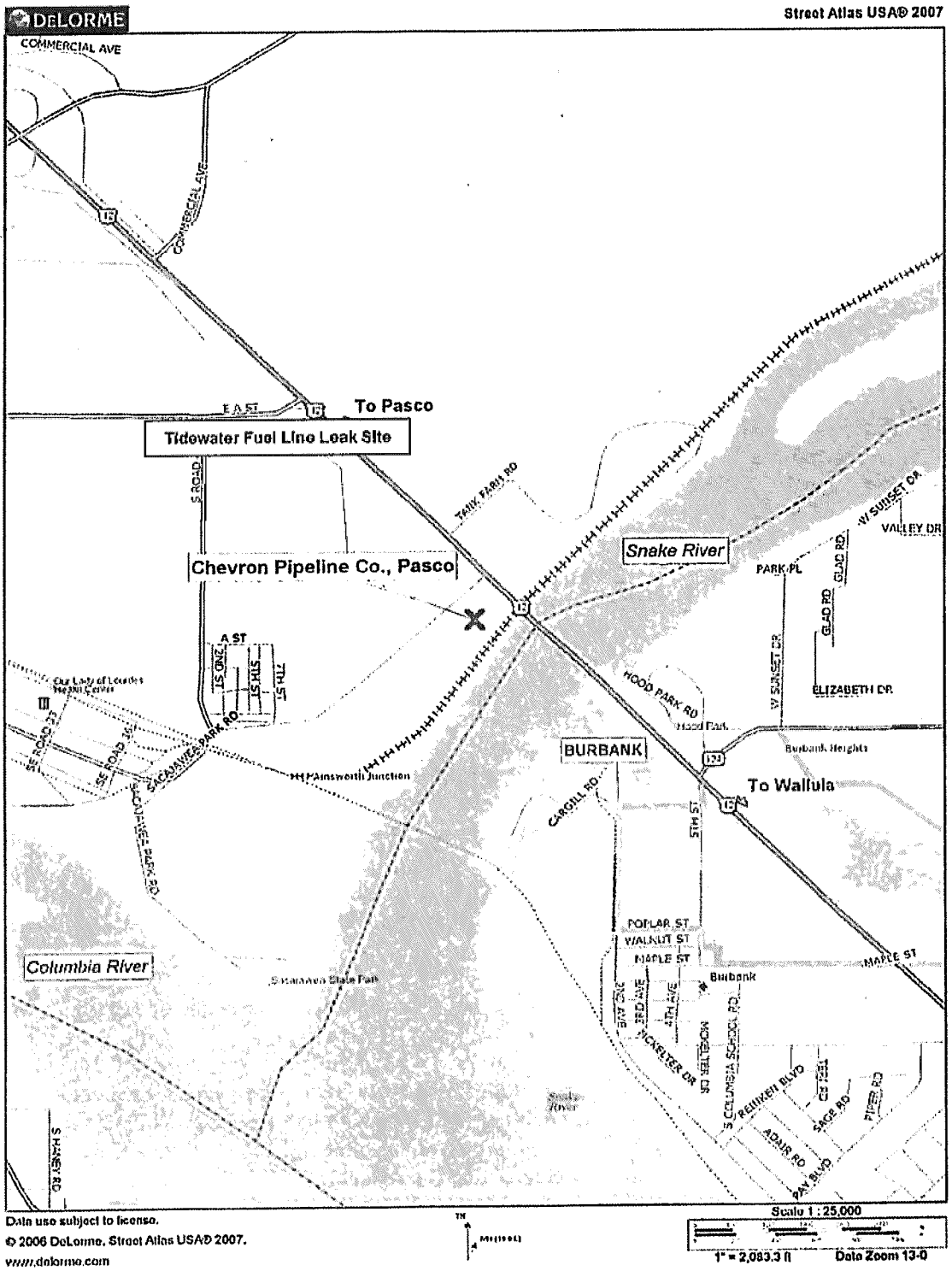
Answering Questions from the Public

If you have questions about fact sheets, documents available for public comment, public events, or the general cleanup process, please contact one of the individuals listed in the Project Contacts section of this plan.

Public Notice and Comment Periods Timeline

DATE	ACTION TAKEN
May 12 – June 10, 2016	Notice published in Site Register about negotiations for a Consent Decree for a draft Cleanup Action Plan
September 12, 2016	Beginning of 30-day Public Comment Period for a Consent Decree for a draft Cleanup Action Plan
October 12, 2016	End of 30-day Public Comment Period for a Consent Decree for a draft Cleanup Action Plan

APPENDIX A: TIDEWATER FUEL LINE LEAK SITE MAP



APPENDIX B: GLOSSARY

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed to assess contamination and possible cleanup options at a Site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

Applicable State and Federal Law: All legally applicable requirements and other requirements that Ecology determines are relevant and appropriate.

Area Background: The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a Site as a result of human activities unrelated to releases from that Site.

Carcinogen: Any substance or agent that produces or tends to produce cancer in humans.

Chronic Toxicity: The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action, except interim actions, taken at a Site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document that identifies the cleanup action and specifies cleanup standards and other requirements for a Site. After completion of a comment period on a draft Cleanup Action Plan, Ecology issues a final Cleanup Action Plan.

Cleanup Level: The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste Sites.

Consent Decree: A legal document approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the actions needed at a Site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.

Containment: A container, vessel, barrier, or structure, whether natural or constructed, that confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Enforcement Order: A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

Environment: Any plant, animal, natural resource, surface water (including underlying sediments), groundwater, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the State of Washington.

Exposure: Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

Exposure Pathways: The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the Site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

Facility: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any Site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

Feasibility Study (FS): A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Free Product: A hazardous substance that is present as a liquid that is not dissolved in water, also known as a non-aqueous phase liquid. Petroleum products floating on the top of a body of water are one example.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Sites List: A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action, with 1 being considered the greatest potential threat to human health and the environment. The Hazardous Sites List can be downloaded from Ecology's website: http://www.ecy.wa.gov/programs/tcp/mtca_gen/hazSites.html

Hazardous Substance: Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW: any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

Hazardous Waste Site: Any facility where there has been a confirmed or threatened release of a hazardous substance that requires remedial action.

Independent Cleanup Action: Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

Initial Investigation: An investigation to determine that a release or threatened release may have occurred that warrants further action.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Mixed Funding: Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

Model Toxics Control Act (MTCA): Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known is as Initiative 97. The implementing regulation is WAC 173-340.

Monitoring Wells: Wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

Natural Background: The concentration of a hazardous substance consistently present in the environment that has not been influenced by localized human activities.

National Priorities List (NPL): The U.S. Environmental Protection Agency's (EPA) list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

Owner or Operator: Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned, operated or exercised control over the facility any time before its abandonment.

Polycyclic Aromatic Hydrocarbon (PAH): A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and combusting fossil fuels.

Potentially Liable Person (PLP): Any person or company whom Ecology finds, based on credible evidence, to be liable for contamination at a site under authority of RCW 70.105D.040.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Recovery By-Products: Any hazardous substance, water, sludge, or other materials collected in the free-product removal process in response to a release from an underground storage tank.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and

monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

Remedial Investigation (RI): A study to define the extent and locations of contamination at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a remedial investigation/feasibility study (RI/FS). In both cases, a public comment period on the draft report is required.

Responsiveness Summary: A document compiling all questions and comments to a document open for public comment and their respective answers/replies by Ecology. A responsiveness summary is mailed, at a minimum, to those who provided comments, posted on Ecology's website, and announced in the Site Register.

Risk Assessment: Determining the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

Sensitive Environment: An area of particular environmental value, where a release could pose a greater threat than in other areas, including wetlands; critical habitat for endangered or threatened species; national or state wildlife refuges; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic rivers; rookeries; riparian area; and big game winter ranges.

Site: See facility.

Site Characterization Report: A written report describing a site and the nature of a release from an underground storage tank, as described in WAC 173-340-450(4)(b).

Site Hazard Assessment (SHA): Gathering information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (509) 329-3546 or email erika.bronson@ecy.wa.gov .

Surface Water: Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within or under the jurisdiction of the State of Washington.

TCP: Toxics Cleanup Program at the Washington State Department of Ecology.

Total Petroleum Hydrocarbons (TPH): A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The "petroleum hydrocarbons" include compounds of carbon and hydrogen that are derived

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from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants, and animals.

Underground Storage Tank (UST): An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

Washington Ranking Method (WARM): Method used to rank sites placed on the Hazardous Sites List. A fact sheet describing this method is available from Ecology: https://fortress.wa.gov/ecy/publications/publications/ftc91107.pdf

EXHIBIT D

ILLUSTRATION OF GROUNDWATER-IMPACT AREA

