



Cleanup Action Plan

Chevron Pipeline Co. Pasco Bulk Terminal

3600 Sacajawea Park Road Pasco, WA 98857

Facility Site ID No 55763995, Cleanup Site ID No 4867

Toxics Cleanup Program

Washington State Department of Ecology
Spokane, Washington

February 2023

Document Information

This document is available in the Department of Ecology's [Chevron Pipe Line Company Pasco Bulk Terminal cleanup site page](#)¹.

Related Information

- Cleanup site ID: 55763995
- Facility site ID: 4867

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¹ <https://apps.ecology.wa.gov/cleanupsearch/site/4867>

² www.ecology.wa.gov/contact

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Department of Ecology's Regional Offices

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Region	Counties served	Mailing Address	Phone
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Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

Executive Summary

This document presents the Cleanup Action Plan (CAP) for the Chevron Pipeline Co. Bulk Fuel Terminal Site (Site), Pasco, Franklin County, WA. The Washington State Department of Ecology (Ecology) prepared this CAP in collaboration with Tesoro Logistics Operations LLC (Tesoro). The CAP is Ecology's decision document for the Site and provides the rationale for selecting the cleanup alternative. This CAP describes the selected cleanup action to remove petroleum hydrocarbon fuel compounds in groundwater, so groundwater meets Site cleanup levels. This CAP has been prepared to meet the requirements of the Model Toxics Control Act. Ecology has determined that actual or threatened releases of petroleum hydrocarbon compounds from this Site, if not addressed by implementing the proposed cleanup action, present a threat to human health and the environment. Table 1 presents pertinent Site information.

The Site is approximately three miles east-southeast from the City of Pasco on the bluffs overlooking the Snake River to the south. The nearest surface water body, Snake River, bounds the Site to the south. Before 1950, the Site was undeveloped land. Between 1950 until present day, the Site has been used as a bulk fuel distribution terminal. Various petroleum hydrocarbon products, primarily fuels, are brought in and stored on-Site until being distributed to customers in the region as needed.

The Site location places its hydrogeology within the southeast portion of the Pasco basin overlying sands and gravels mantled on basalt. Groundwater occurs in the sands and gravels approximately 80 feet below ground surface within most of the Site but gets progressively shallower downslope and toward the Snake River. Groundwater flows to the south toward the Snake River. The nearest groundwater production wells are approximately 1,500 feet to the west and are considered cross-gradient of the Site. Site monitoring demonstrates contaminated groundwater is not reaching the Snake River.

In 2009, Tidewater Terminal Company Inc. (Tidewater) and Chevron Pipeline Company (CPL) entered into Agreed Order (No. 7294) with Ecology. This agreed order directed CPL and Tidewater to conduct a terminal-wide remedial investigation (RI) and feasibility study (FS), which included the Tidewater release area of the site. The combined RI/FS was completed in October 2011. In 2012, Ecology completed a draft CAP (Ecology, 2012) and selected monitored natural attenuation as the preferred cleanup alternative. However, on a request from the new Site owner, Tesoro, in July 2015, Ecology separated the combined Tidewater and CPL sites into two distinct and separate sites.

In 2016, Ecology and Tesoro signed Agreed Order No. DE 12989 to conduct a supplemental RI for this Site and produce a supplemental RI/FS. Tesoro, an indirect subsidiary of Marathon Petroleum Company LP, continues to own and operate the terminal. In September 2021, Tesoro issued the Final Supplemental Remedial Investigation and Feasibility Study (Supplemental RI/FS). This CAP is based upon the results, conclusions, and recommendations from the original RI/FS report and the Supplemental RI/FS report.

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Acronyms

AC	Activated carbon	RI/FS	Remedial Investigation/Feasibility Study
ARAR	Applicable, Relevant, and Appropriate Requirements	SMS	Sediment Management Standards
AST	Above-ground storage tank	SVE	Soil vapor extraction
bgs	Below ground surface	TEE	Terrestrial ecological evaluation
CAP	Cleanup Action Plan	Tesoro	Tesoro Logistics Operations LLC
COEC	Contaminant of ecologic concern	USGS	United States Geological Service
CPL	Chevron Pipeline Company	µg/kg	Micrograms per kilogram
CSID	Cleanup Site Identification Number (Ecology)	µg/L	Micrograms per liter
CUL	Cleanup Level	WAC	Washington Administrative Code
Ecology	Washington Department of Ecology		
EDB	Ethylene Dibromide or 1,2-Dibromoethane		
FS	Feasibility Study		
FSID	Facility Identification Number (Ecology)		
ICs	Institutional Controls		
<i>In-situ</i>	In place within the undisturbed geological formation		
MDC	Maximum detected concentration		
MNA	Monitored Natural Attenuation		
MTCA	Model Toxics Control Act		
NSZD	Natural Source Zone Depletion assessment		
ORC	oxygen-releasing compound		
PID	photo ionization detector		
PLP	potentially liable person		
POC	point of compliance		
RCW	Revised Code of Washington		
RRTF	Reasonable restoration timeframe		

1 Introduction

The *Final Supplemental Remedial Investigation and Feasibility Study* (Supplemental RI/FS) identified petroleum hydrocarbon contaminated groundwater at the eastern and southern portions of the Chevron Pipeline Co. Bulk Fuel Terminal Site (Site) but determined there is no imminent risk to the Snake River from the groundwater contamination. Tesoro Logistics Operations LLC (Tesoro) presented four remedial alternatives in the Supplemental RI/FS. As part of this Cleanup Action Plan (CAP), the Washington Department of Ecology (Ecology) evaluated the alternatives and selected Alternative 2 as Ecology's cleanup option: monitored natural attenuation (MNA) with emplacement of oxygen-releasing compounds (ORC) in key on-Site wells as the preferred alternative. This report presents Ecology's proposed cleanup action for the Site.

This CAP is required as part of the site cleanup process under the Model Toxics Control Act (MTCA), Ch. 70A.305 Revised Code of Washington (RCW), implemented by Ecology. The cleanup action decision given herein is based on the Supplemental RI/FS dated September 30, 2021, and other relevant documents in the administrative record. Ecology originally named Tesoro as the potentially liable person (PLP) for the Site in 2016. Tesoro, an indirect subsidiary of Marathon Petroleum Company LP, continues to own and operate the terminal. Tesoro completed the investigation activities under Agreed No. DE 12989 with Ecology.

This CAP outlines the following:

- The history of operations, ownership, and activities at the Site
- The nature and extent of contamination as presented in the RI
- Cleanup levels (CULs) for the Site that are protective of human health and the environment
- The selected remedial action for the Site
- Any required compliance monitoring and institutional controls

Ecology has made a preliminary determination that a cleanup conducted in conformance with this CAP will comply with the requirements for selection of a remedy under WAC 173-340-360 through 390.

1.1 Declaration

Ecology has selected this remedy because it will be protective of human health and the environment. Furthermore, the selected remedy is consistent with the preference of the State of Washington as stated in RCW 70A.305.030(1)(b) for permanent solutions to the maximum extent practicable.

1.2 Applicability

Cleanup standards specified in this CAP are applicable only to this Site. They were developed by Ecology as a part of an overall remediation process using the authority of MTCA and should not be considered as setting precedents for other sites.

1.3 Administrative Record

The documents used to make the decisions discussed in this CAP are on file in the administrative record for the Site. Major documents are listed in the References section. The entire administrative record for the Site is available for public review by appointment at Ecology's Eastern Regional Office, located at 4601 N. Monroe Street, Spokane, WA 99205-1295. Results from applicable studies and reports are summarized to provide background information pertinent to the CAP. These studies and reports include:

- Report of Geotechnical Services, East Pasco Fuel Terminal, Pasco, Washington, For Chevron U.S.A., Inc., June 1987
- Summary of Remedial Operations, East Pasco Terminal, October 1993
- Remedial Investigation/Feasibility Study Report for the NWTC Pasco Terminal, September 2011
- Supplemental RI/FS Work Plan, March 2016
- Passive Soil Gas Sampling Results, March 2017
- Riverbank Sampling Results, February 2017
- Data Gap Assessment Work Plan, October 2019
- Final Supplemental RI/FS Report, September 2021

1.4 Cleanup Process

Cleanup conducted under the MTCA process requires the PLPs or Ecology to prepare specific documents. These procedural tasks and resulting documents, along with the MTCA section requiring their completion, are listed below with a brief description of each task.

- Public Participation Plan (WAC 173-340-600) — summarizes the methods that will be implemented to encourage coordinated and effective public involvement. Ecology prepares this document.
- RI/FS (WAC 173-340-350) — documents the investigations and evaluations conducted at the Site from the discovery phase to the RI/FS document. The RI collects and presents information on the nature and extent of contamination and the risks posed by the contamination. The FS presents and evaluates Site cleanup alternatives and may propose a preferred cleanup alternative. The documents are usually prepared by the PLPs, accepted by Ecology, and undergo public comment.
- CAP (WAC 173-340-380) — sets cleanup standards for the Site, and selects the cleanup actions intended to achieve the cleanup standards. Ecology issues the document, and it undergoes public comment.
- Engineering Design Report, Construction Plans and Specifications (WAC 173-340-400) — outlines details of the selected cleanup action, including any engineered systems and design components from the CAP. These may include construction plans and specifications with technical drawings. The PLPs usually prepare the document, and Ecology approves it. Public comment is optional.

- Operation and Maintenance Plan(s) (WAC 173-340-400) — summarizes the requirements for inspection and maintenance of remediation operations. They include any actions required to operate and maintain equipment, structures, or other remedial systems. The PLPs usually prepare the document, and Ecology approves it.
- Cleanup Action Report (WAC 173-340-400) — provides details on the cleanup activities along with documentation of adherence to or variance from the CAP following implementation of the cleanup action. The PLPs usually prepare the document, and Ecology approves it.
- Compliance Monitoring Plan (WAC 173-340-410) — details the monitoring activities required to ensure the cleanup action is performing as intended. The PLPs usually prepare the document, and Ecology approves it.

2 Site Background

2.1 Site Description

The Site is used as a bulk fuel distribution terminal. Various petroleum hydrocarbon products, primarily fuels, are brought in and stored on-Site in aboveground storage tanks (ASTs) until being distributed to customers in the region as needed.

2.2 Site History

The Site has operated as a bulk fuel terminal since early 1950. Prior to 1950, this property was largely undeveloped land. Historical U.S. Geological Survey (USGS) topographic maps show that the BNSF railroad, located adjacent to the riverbank (AECOM, 2021) was constructed prior to 1917. The 1917 topographic map shows an unnamed road paralleling the railroad near the northwest Site boundary. USGS topographic maps between 1917 and 1951 indicate no change in features on or adjacent to the Site. A 1953 USGS topographic map labels the Site as “Oil,” indicating it was undeveloped land before the early 1950s.

2.3 Current Site Use

Most of the Site is approximately 33 acres on top of the bluffs overlooking the Snake River to the south. Sacajawea Park Road bisects the Site in a northeast-southwest orientation. Most of the Site operations take place to the south of Sacajawea Park Road within Franklin County tax parcels Nos. 112580011 and 112580020. CPL operated the fuel terminal from September 1950 until Tesoro purchased the Site in June 2013. Tesoro continues to own and operate the terminal. The Site will remain an active fuel terminal for the foreseeable future. The Site is zoned as I-1 (light industrial district) and I-2 (medium industrial district). Eighteen ASTs varying in storage capacity between approximately 588,000- and 2,520,000-gallons and eight fuel-additive ASTs with capacities between 500- and 12,000-gallons are at the Site (Northern and Southern Tank Areas). Additionally, one 23,000-gallon relief AST is present at the Site (CEECOM, 2016). The ASTs are used to store diesel, gasoline, jet fuel, and ethanol (URS and CH2M HILL, 2011).

A truck rack and pump station for loading fuel trucks are in the northwest portion of the Site. A lined evaporation pond is situated in the eastern portion, and a dock for unloading fuel from barges is on the southern boundary on the river. An earlier unlined evaporation pond was reportedly located east of the current lined evaporation pond. The Site layout is in Figure 2. A BNSF railroad line runs through the Site parallel to the Snake River. Tidewater owns and operates the area within the western corner of the terminal; the Tidewater site boundary is labeled on Figure 2. The Tidewater area contains a fuel transfer pipeline that exits the northeast terminal area and turns northeast along Sacajawea Park Road toward the Tidewater terminal east of the Site. A pipeline fuel release occurred in this area in July 2000, as described in the 2011 RI/FS (URS and CH2M HILL, 2011). Tidewater is responsible for managing ongoing environmental activities in this portion of the terminal as a separate Site under a new Consent Decree.

2.4 Physical Site Characteristics, Topography, and Climate

The topography of the area is generally flat with an approximately 80-foot-tall escarpment at the southern portion of the Site down to Snake River. The flat portion of the Site is situated approximately 420 feet above sea level, down to 340 feet above the sea level at the Snake River. The region is semi-arid, receiving around nine inches of precipitation annually. The majority of the precipitation occurs in late fall through early spring; winter precipitation is usually in the form of snow. Summers are warm and dry. The annual mean temperature is about 51°F.⁴

2.5 Surface Water

The nearest surface water body from the Site is the Snake River flowing along the southern Site boundary (see figures 1 and 2). The Snake River flows into Columbia River at Sacajawea State Park approximately 1.25 miles southwest of the Site.

2.6 Geology

The Site is underlain by unconsolidated, sedimentary deposits on top of a thick sequence of Miocene-age basalt known as the Columbia River Basalt Group. These unconsolidated sediment deposits beneath the Site, from the deepest to the shallowest, include the Pliocene Ringold Formation, the Cold Creek sediments, and the Pleistocene Hanford Formation (Martin, 2011). At the Site, Hanford sediments were identified to the maximum depth of exploration of approximately 100 feet below ground surface (bgs), based on information provided in Site boring logs (Supplemental RI/FS, AECOM 2021).

The Hanford Formation is the informal name given to Pleistocene age cataclysmic flood deposits in the Pasco Basin. Sources for the floodwaters included Glacial Lake Missoula, pluvial Lake Bonneville, and ice-margin lakes that formed around the margins of the Columbia Plateau

⁴ <https://www.ncdc.noaa.gov/cag/county/rankings/WA-021/tavg/201910>

(Baker et al., 1991). These floods periodically covered the Pasco area during the Pleistocene, often eroding existing sediments (for example, the Ringold Formation and Cold Creek unit). As the floodwaters encountered restricted flow through the Wallula Gap, located south of the Site, coarse and fine-grained sediments carried in the floodwaters were deposited within the Site vicinity. Deposition and erosion of the sediments occurred several times, leaving behind lenses of sand and silt surrounded by sand and gravel. The Site is within an area where flood currents were stronger and coarse-grained sediments are more common.

Borings advanced at the Site indicate the geology is generally composed of Hanford Formation sand and gravel. In some areas, thin layers of Snake River overbank silt and silty sand deposits are present with thicker layers observed at the bottom of borings along the river. See Figure 3 for a cross-section plan map. Three cross-sections, prepared without and with analytical data, are presented as figures 4 (A-A'), 5 (B-B') and 6 (C-C').

Available monitoring well and vapor extraction well logs from past investigations are found in the Supplemental RI/FS (AECOM, 2021). Lithological descriptions of the Site sand and gravel units are presented below.

The sand is generally described as brown to gray, fine to medium-grained, loose, and well sorted. The average thickness across the Site is approximately 80 feet; however, it is locally thicker in some locations, primarily in the southwestern portion of the Site (for example, AB-7/MW-3 and MW-22) where it is approximately 95 feet thick. Borings along the Snake River were terminated at a depth as shallow as 20 feet; therefore, the full thickness of sand in these locations is not known. As previously discussed, layers of silt and silty sand are locally interbedded within the sand unit, as are thin layers of gravel. At the base of the sand unit and in several locations, a one- to seven-foot-thick layer of sandy gravel overlays the lower gravel deposit.

The lower gravel is described as being gray to brown to red, dense, and fine to coarse-grained. The gravel is commonly made up of basalt and is typically $\frac{3}{4}$ to $1\frac{1}{2}$ inches in diameter, with some pieces ranging up to 2 inches in diameter. At several locations, trace amounts of sand are observed in addition to cobbles and boulders.

Figure 7 presents the projected gravel surface based on depth to gravel from the boring and monitoring well logs. The gravel surface appears to dip to the east, south, and particularly to the southwest where the sand-gravel contact is the steepest. In wells to the southwest, such as MW-3 and MW-22, the gravels were not observed until approximately 95 feet bgs, instead silty sand and silts were observed between 80 and 95 feet bgs. The maximum gravel thickness penetrated on Site was 23 feet at CPL recovery well RW-1.

In a water well installed at Hood Park approximately 3,500 feet southeast of the Site, basalt was encountered at a depth of 57 feet bgs with approximately 34 feet of gravel and 16 feet of broken basalt overlying competent basalt (Ecology, 2021).

2.7 Hydrogeology

Regional groundwater flow within the Pasco Basin is generally to the southwest, towards the major surface water bodies in the area, the Columbia and Snake rivers (Heywood et al., 2016).

The unconsolidated aquifer at the Site is unconfined, and groundwater is typically encountered at a depth of approximately 80 feet bgs within the upland portion of the Site. Groundwater elevations are generally stable throughout the year. Groundwater within the Site flows toward the Snake River to the southeast as shown in figures 8 and 9.

Groundwater is typically encountered at or slightly above the sand/gravel interface approximately 80–85 feet bgs in most parts of the Site above the bluffs, except to the southwest where groundwater is first encountered in sands and silty sands. The magnitude of the hydraulic gradient varies with distance from the Snake River. In the upland portion of the Site, where the ASTs are located, the hydraulic gradient is relatively flat and ranged from approximately 0.00007 to 0.008 foot per foot between June 2019 and June 2020. Closer to the Snake River and in the riverbank sediments, the hydraulic gradient steepens and ranged from approximately 0.006 to 0.01 foot per foot as shown in figures 8 and 9.

The lowest groundwater elevations occur in the wells closest to the Snake River. Table 2 provides a cumulative summary of groundwater elevations. Hydraulic conductivity values for the Site were estimated from data collected from the Hanford Formation at the nearby Hanford Site. These values ranged from 20 feet per day (ft./d) for fine sand to 66,240 ft./d for coarse gravel and cobbles (Martin, 2011). The USGS hydraulic conductivity values for the Hanford Formation in a Pasco Basin regional groundwater model ranged from 12 ft./d to 4,245 ft./d (Heywood et al., 2016). From the observed groundwater gradients and the estimated Site hydraulic conductivities, the groundwater Darcy velocity ranges between 0.5 feet per year (ft./yr.) in the silts to 193,000 ft./yr. in the coarse gravels (AECOM, 2021). Hence, from the estimated porosity data and the Darcy velocity, the actual groundwater seepage velocity ranges between approximately 1.5 ft./yr. (fine deposits) to 773,700 ft./yr. (coarse deposits).

Based on an average hydraulic gradient for the Site of 0.001 foot/foot for the Site above the bluffs, the actual groundwater velocities beneath the Site could range from as low as 0.0015 ft./yr. in well MW-3 with fine sediments to approximately 800 ft./yr. in well MW-5, where all groundwater occurs in the coarse gravels (AECOM, 2021).

Even though the Darcy velocity can be high in portions of the Site, the almost flat gradient throughout the Site above the bluffs will slow down the actual flow in the aquifer. Consequently, contamination found within the Site will move slowly, particularly where contamination is entrapped in fine sediments such as in the vicinity of well MW-3.

2.8 Hydrology

The Site is on the north bank of the impounded Snake River (the Lake Wallula segment), approximately 1.25 miles upstream from its confluence with the Columbia River and approximately 42 miles upstream of McNary Dam on the Columbia River. Surface water flow varies seasonally throughout the year, with peak flows generally in May to June from snowmelt and winter rains, and low stages in August to October. Lake Wallula lies directly behind the McNary Dam. Lake Wallula extends up the Snake River for 42 miles to Ice Harbor Lock and Dam approximately 7.5 miles east of the Site. Lake Wallula also extends 64 miles upstream on the Columbia River upstream of the Snake River and Columbia River confluence. Water elevation is controlled at McNary Dam for navigational and hydroelectric purposes. The normal operating

pool of Lake Wallula ranges between 336 and 343 feet National Geodetic Vertical Datum.⁵ River discharge commonly ranges from 20,000 cubic feet per second (cfs) to 200,000 cfs. Flood discharges can be substantially larger than 200,000 cfs.⁶

3 Site Investigations

Work has been conducted at the Site since the first observed spills in the 1970s until the present. Ecology completed a Site Hazard Assessment in August 2000 and added the Site to the Hazardous Sites List with a ranking of moderate risk, level 3 on a scale from 1 to 5, with 1 being the highest risk and 5 the lowest risk. CPL prepared a RI/FS work plan in 2011 with the initial RI/FS work completed that year. The 2011 RI/FS was followed by two supplemental RI/FS work plans in 2013 and 2016. Early supplemental RI work at the terminal (including the current Site) was performed from 2013 through 2018, including ongoing semi-annual groundwater monitoring starting in 2014. Ecology separated the original terminal site into two separate sites in July 2015: the CPL Site, addressed in this CAP, and an adjacent Tidewater site (Figure 2) with Cleanup Site ID No. 2331.

Tesoro followed up with a supplemental RI between 2019 and 2021 based on results of previous work.

3.1 Contamination Discovery and Subsequent Pre-RI/FS Site Activities

During operations as a bulk fuel terminal, occasional releases of petroleum products from ASTs, pipelines, and other infrastructure have been documented. A timeline of documented historical releases, response actions undertaken, and subsequent investigations and remediation actions, are summarized chronologically in the RI/FS report (URS and CH2M HILL, 2011). The smaller spills were typically addressed immediately, resulting in little to no residual petroleum remaining in the subsurface. For example, a three-barrel diesel spill occurred on May 18, 1984, which was quickly remedied by the excavation and disposal of the diesel-impacted soil. The locations of minor spills previously remediated, and other releases contained within the wastewater system and recovered in an oil/water separator, are not illustrated. Significant documented spills at the Site are shown in figures 10 and 12, and summarized below:

- On March 23, 1976, Tank No. 8 (Northern Tank Area) was overfilled, resulting in a release of 665 barrels of diesel. An emergency response action was undertaken and resulted in recovery of approximately 80 barrels.
- On December 20, 1978, approximately 600 barrels of gasoline were released when Tank No. 13, located in the Southern Tank Area, was overfilled. Approximately 200 barrels were recovered during the subsequent emergency response action.

⁵ https://waterdata.usgs.gov/nwis/inventory/?site_no=12514500&agency_cd=USGS

⁶ <https://www.nwd-wc.usace.army.mil/dd/common/projects/www/mcn.html>

- On February 1, 1984, CPL reported a gasoline release of 610 barrels from Tank No. 17, located in the Southern Tank Area, when an internal roof drain line froze and cracked, which allowed gasoline to escape. An emergency response action was initiated, and approximately 100 barrels of gasoline were recovered.
- In August 1986, a leak in a jet fuel line was found in the Riverbank Area, and an unspecified volume of impacted soil was removed. A cleanup action was completed in 1987, consisting of excavation of approximately 1,900 cubic yards of additional soil from the shoreline area (Figure 11). Subsequently, all buried pipelines at the terminal were replaced with aboveground pipelines wherever physically possible.

3.1.1 Pre-RI/FS Investigations, Soil Excavations, and Other Remediation Activities

Site soil excavations and cleanup actions prior to 2010 are described in detail in the RI/FS and summarized below (URS and CH2M HILL, 2011). On July 14, 1986, a sheen was observed along the riverbank during routine measurement of groundwater levels. An absorbent boom was deployed to contain the suspected hydrocarbon. The sheen was caused by the terminal pipeline that was leaking jet fuel. The area surrounding the leaking pipeline was excavated in 1986 to identify the source of the sheen. A cleanup action consisting of excavation of 1,900 cubic yards of soil from the shoreline was performed in May 1987. Of this, 500 cubic yards were identified as petroleum-affected and replaced with clean fill.

In July 1986, light non-aqueous phase liquid (LNAPL) was noted in MW-2 in the Southern Tank Area. A skimmer system was installed in MW-2 in December 1987. A forensic analysis of the LNAPL in MW-2 determined that the source was unleaded gasoline, and therefore was not the source of the sheen observed on the riverbank in 1986 (as described above). LNAPL thicknesses of 1 foot or less continued to be observed in MW-2 in 1987 and 1988. Remediation in the vicinity of MW-2 varied between 1987 and 2000 and included use of a skimmer, a dual-phase LNAPL recovery system, a soil vapor extraction (SVE) system, and air sparging.

In November 1993, the SVE and air sparge system was expanded to include MW-3. By May 1996, only MW-3 contained measurable LNAPL; forensic analysis of the LNAPL in MW-3 was not performed. The source of this LNAPL is potentially gasoline releases near and upgradient of MW-3 (figures 2 and 12). The SVE and air sparge system was discontinued in July 2000. By this time, LNAPL was occasionally observed in MW-3 and was not observed in other wells. A hydrocarbon-absorbing sock was installed in MW-3 in approximately June 2000. By 2003, LNAPL was no longer detected in monitoring wells in the vicinity of MW-2.

3.1.2 Pre-RI/FS Investigation Groundwater Monitoring

Monitoring well installation dates are summarized in Table 2. Quarterly groundwater monitoring was conducted from June 1998 through September 2001. From 2002 through 2008, groundwater monitoring was performed annually. Samples from each well on Site were analyzed for gasoline-range total petroleum hydrocarbons (TPH-g), diesel-range total petroleum hydrocarbons (TPH-d), motor oil-range total petroleum hydrocarbons (TPH-o), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Methyl tert-butyl ether was added to the

analytical suite in 2005. Recent analytical results are provided in Table 3. Elevated concentrations of BTEX, TPH-g, and TPH-d were reported in monitoring wells located near the Southern Tank Area (MW-2, MW-3, MW-11, and MW-12). Concentrations steadily decreased over time during operation of the SVE and air sparge system. For screening purposes, groundwater analytical results are compared to the MTCA Method A CULs, as established in tables 720-1 and 745-1 of WAC 173-340-900, revised November 2007. By October 2008, concentrations of most analytes were non-detect or less than the CULs. TPH-d concentrations exceeded the proposed CUL in wells MW-2 and MW-12.

3.2 2011 Remedial Investigation/Feasibility Study

A terminal-wide RI, including the current Site and the Tidewater site to the north (Cleanup Site ID No. 2331), was conducted jointly by CPL and Tidewater in 2010. The RI included June and December 2010 groundwater monitoring events (URS and CH2M HILL, 2011). Results confirmed LNAPL was no longer in wells in the vicinity of MW-2 or MW-3 (Southern Tank Area). However, residual concentrations of TPH-d and TPH-o in the Southern Tank Area continued to exceed CULs.

The selected remedial action in the terminal-wide FS was institutional controls and MNA (URS and CH2M HILL, 2011). Specified performance monitoring included measurements of groundwater elevation, general water quality parameters, and hazardous substances concentrations at selected performance monitoring wells (MW-1 through MW-4, MW-6 through MW-8, MW-10 through MW-14, and RW-1). The institutional controls included legal and physical barriers to prevent contact with contaminants, signage, and limitations on land use (URS and CH2M HILL, 2011).

3.3 Supplemental Remedial Investigation/Feasibility Study (2011 through 2020)

Following submittal of the 2011 RI/FS, Tesoro acquired the Site on June 19, 2013 (Ecology, 2016) and conducted a supplemental RI to assess data gaps identified in the 2011 RI/FS, including assessments of upland soil, riverbank surface soil, soil vapor, and groundwater. Results of these investigations are summarized in the Supplemental RI/FS (AECOM, 2021).

Investigations, sampling schedules, and sample locations are provided in the Supplemental RI/FS (AECOM, 2021). The investigations were completed in accordance with the *Compliance Monitoring Plan for the CPL Pasco Terminal* (URS, 2012), *Confirmation Sampling Workplan* (Azure, 2014), *Supplemental RI/FS Workplan* (CEECON, 2016), the *Data Gap Assessment Work Plan* (AECOM, 2019b), and subsequent addenda listed in the Supplemental RI/FS report (AECOM, 2021).

3.3.1 Soil Gas Investigations

The presence of volatile petroleum hydrocarbon compounds in soil gas was investigated through three different methods:

- Soil vapor investigations at dedicated SVE wells

- Passive soil gas surveys
- Active headspace sampling from existing groundwater monitoring wells

3.3.1.1 Soil Vapor Investigations from Dedicated Soil Vapor Extraction Wells

Four vapor extraction wells (VE-1 through VE-4) were installed in September 2018 (AECOM, 2019a) using methods described in the Supplemental RI/FS (AECOM, 2021). Soil vapor samples were collected from these dedicated SVE wells in December 2018 (CEECON, 2019). The well headspaces were purged at an unknown flow rate (under vacuum of up to five inches of water column) for approximately 20 minutes using an internal combustion engine. Soil vapor samples were collected in Tedlar® bags and analyzed for TPH-g, BTEX, and fuel oxygenates. The sample locations are shown on Figure 10. Low levels of petroleum hydrocarbon compound were observed in these wells, with the highest concentrations detected in extraction well VE-4 (6.4 milligrams per cubic meter [mg/m³] TPH-g and 0.19 mg/m³ xylenes). No detectable concentrations of benzene were detected in the four wells. The results from the soil vapor investigations in the dedicated wells are in the Supplemental RI/FS (AECOM, 2021).

3.3.1.2 Passive Soil Gas Survey

A passive soil gas survey was performed at the Site November 21 through December 1, 2016, using methods described in the 2016 workplan (CEECON, 2016). Passive soil gas samplers were placed at 77 locations at 3 feet bgs. Adsorbent cartridges were analyzed for C4–C9 range petroleum hydrocarbons (equivalent to TPH-g), C10–C15 range petroleum hydrocarbons (equivalent to TPH-d), and BTEX (CEECON, 2017a). Elevated benzene, C4–C9 range hydrocarbons, and C10–C15 range hydrocarbons masses were detected in the following places:

- the northern portion of the tank farm (near Tank 8)
- well MW-18
- near the barge unloading dock at the Snake River
- near the northern end of the railroad spur below the bluffs
- south of the southern tank farm area east and west of wells MW-7 and MW-10, respectively near the pier entrance

The highest level of observed volatile petroleum hydrocarbon compounds in a passive soil gas sampling device was in the C10–C15 hydrocarbon range at 245,953 nanograms (ng) in the vicinity of monitoring well MW-18. The highest benzene concentration (1,114 ng) and C4–C9 hydrocarbon range (135,868 ng) was observed at vapor extraction well VE-4. Results of the passive soil gas survey were used to determine the locations for soil borings and monitoring well installations, which were drilled and installed as part of the supplemental RI. The results from the passive soil gas survey are in the Supplemental RI/FS report (AECOM, 2021).

3.3.1.3 Groundwater Monitoring Well Headspace Active Soil Vapor Sampling

Active soil vapor sampling occurred in December 2014 and in September 2018, as described below:

- In December 2014, monitoring well headspace soil vapor samples were collected from 10 monitoring wells in accordance with the 2014 workplan (Azure, 2014). Prior to

collecting a soil vapor sample, a vacuum was applied, and soil vapor was purged for 30 minutes to 1 hour at an unknown flow rate. Soil vapor samples were collected in Tedlar® bags and submitted for laboratory analysis for TPH-g and select volatile organic carbons (VOCs). Atmospheric gases were also analyzed in samples collected from two wells (MW-11 and MW-14) (Azure, 2015a).

- Monitoring well headspace soil vapor samples were collected from 16 monitoring wells in December 2018 (CEECON, 2019). Monitoring well headspace was purged at an unknown flow rate (under vacuum of up to five inches of water column) for approximately 20 minutes using an internal combustion engine. Soil vapor samples were collected in Tedlar® bags and analyzed for TPH-g, BTEX, and fuel oxygenates.

The highest volatile petroleum hydrocarbon compound concentrations were observed in wells MW-18 (70 mg/m³ TPH-g, 0.12 mg/m³ benzene, and 1.53 mg/m³ xylenes) and well MW-19 (250 mg/m³ TPH-g and 4.03 mg/m³ xylenes). The soil vapor samples were useful as a preliminary assessment of VOC distribution in the subsurface. Soil vapor sample results from 2014 were used to determine locations for further monitoring well installation and soil sampling, as described in the Supplemental RI/FS (AECOM, 2021). Soil and groundwater data were then used for developing the Site's conceptual site model as presented in the Supplemental RI/FS (AECOM, 2021). Soil vapor sample results from 2018 were used to assess potentially implementing SVE at the site.

3.3.1.4 Headspace Vapor Field Sampling in Extraction and Groundwater Monitoring Wells

In January 2020, headspace soil vapor samples were collected from 10 monitoring wells and four vapor extraction wells (AECOM, 2020a) following the procedures in the Supplemental RI/FS (AECOM, 2021). The samples were collected following the *Data Gap Assessment Work Plan* (AECOM, 2019b).

3.3.2 Riverbank Soil Investigation

Surface soil samples were collected in 2016 following the 2016 workplan (CEECON, 2016). Six riverbank samples (RB-1 through RB-6) were collected in September 2016 and analyzed for TPH-g, TPH-d, TPH-o, and select VOCs. The riverbank soil sample locations are shown on Figure 11. The riverbank samples were collected along an approximately 650-foot-long length of shoreline. Samples were collected at depths less than 1-foot bgs, approximately 1 foot above the estimated daily/seasonal low water table.

TPH-o was detected in sample RB-6 at 640 milligrams per kilogram (mg/kg), near the northern end of the barge dock. Although this concentration is less than the CUL, three additional riverbank samples (RB-7, RB-8, and RB-9) were collected in the vicinity of RB-6 to delineate the detected TPH-o (CEECON, 2017b). TPH-o concentrations were 180 mg/kg and 240 mg/kg in RB-8 and RB-9, respectively. One detection of TPH-d was measured in RB-9 at a concentration of 23 mg/kg, also less than the CUL. TPH-o and TPH-d were not detected in RB-7, the northernmost sample. No TPH-g was detected in any of the riverbank samples.

Detected TPH-o and TPH-d concentrations were below the freshwater Sediment Management Standards (SMS) set for heavy hydrocarbons as the TPH-residual Sediment Cleanup Objective (3,600 mg/kg) and Sediment Screening Level (4,400 mg/kg). Based on these comparisons, the shoreline TPH concentrations are below sediment standards considered protective of the benthic and freshwater sediment (WAC 173-204-563) and the MTCA Method A CULs for unrestricted land use (2,000 mg/kg heavy oils). Therefore, the TPH detections of riverbank samples are not subject to any further cleanup requirements. Results from the riverbank soil investigation are summarized in the Supplemental RI/FS (AECOM, 2021).

3.3.3 Soil Investigations

This subsection describes the soil boring drilling, well installation, and subsurface soil sampling activities conducted in 2015 through 2019, in accordance with the 2014 workplan (Azure, 2014), the 2016 workplan (CEECON, 2016), the 2019 workplan (AECOM, 2019b), and subsequent addenda listed in the Supplemental RI/FS (AECOM, 2021). Well and boring locations are shown on Figure 12. Soil investigations and well installation procedures prior to 2011 are described in the RI/FS report (URS and CH2M HILL, 2011). Soil sampling procedures are described in the Supplemental RI/FS report (AECOM, 2021).

Two soil borings, CB-1 and CB-2 were drilled in June 2015. Subsurface soil samples were collected from 10 to 79 feet bgs in these two borings. The samples were analyzed for TPH-g, TPH-d, TPH-o, and select VOCs (Azure, 2015b).

In September and October 2018, 14 additional soil borings were advanced at locations AB-1, AB-2, AB-3, AB-4 (converted into monitoring well MW-15), AB-5, AB-6, MW-16 through MW-19, and VE-1 through VE-4. These sample locations were determined based on the 2016 passive vapor screening results (CEECON, 2017a). Subsurface soil samples were collected from 11 of these borings at depths ranging from 5 to 83 feet bgs in AB-1, AB-2, AB-3, AB-5, AB-6, MW-15 through MW-19, VE-3, and VE-4. The samples were analyzed for TPH-g, TPH-d, TPH-o, and select VOCs (AECOM, 2019a). Borings AB-4/MW-15 through MW-19 were completed as monitoring wells, and VE-1 through VE-4 were completed as vapor extraction wells (AECOM, 2021).

In November 2019, six additional soil borings were drilled: AB-7/MW-3, AB-8/MW-19, and MW-20 through MW-23. Soil samples were collected from five borings at 32 to 90 feet bgs in soil borings AB-7/MW-3, AB-8/MW-19, MW-20, MW-22, and MW-23. The samples were analyzed for TPH-g, TPH-d, TPH-o, select VOCs, and general chemistry parameters (AECOM, 2020b). Borings MW-20 through MW-23 were completed as monitoring wells (AECOM, 2021).

3.3.4 Supplemental RI/FS Investigation and Well Installation

Nine monitoring wells (MW-15 through MW-23) and four vapor extraction wells (VE-1 through VE-4) were installed upon completion of the borings (AECOM, 2021).

The well construction details are summarized in Table 2. After monitoring well seals cured for at least 24 hours, new monitoring wells were developed by a combination of surging and pumping using a decontaminated downhole centrifugal pump or equivalent. Development continued until at least three well volumes had been removed, turbidity was less than 50 nephelometric

turbidity units and groundwater parameters (temperature, pH, specific conductivity, and turbidity) had stabilized. Vapor extraction wells were completed above the groundwater table and were not developed.

3.3.5 Ongoing Groundwater Monitoring, 2014 to 2021

Groundwater monitoring has been conducted at the Site from 2014 through 2021 on a semi-annual basis. Groundwater samples have been collected from monitoring wells as summarized in Appendix A and shown in Figure 12, using standard low-flow methods. Prior to purging and sampling, depth to groundwater and the presence of LNAPL was determined in select Site wells and in two adjacent Tidewater wells (AR-11 and MW-5). If LNAPL was present the thickness was measured using an electronic product level meter. Site groundwater CUL exceedances are discussed in Section 4.

Grab groundwater samples were collected from borings during soil investigation events in June 2015 (CB-1 and CB-2) and in September and October 2018 (AB-1, AB-2, AB-3, AB-5, and AB-6) shown in Figure 12.

Groundwater elevations are generally stable throughout the year, and groundwater flow is to the southeast, towards Lake Wallula. LNAPL has not been detected in Site wells since 2010 (Appendix A).

4 Cleanup Standards

MTCA requires the establishment of cleanup standards for individual sites. The two primary components of cleanup standards are CULs and points of compliance. CULs determine the concentration at which a substance does not threaten human health or the environment. All media exceeding a CUL is addressed through a cleanup remedy that addresses the contamination or prevents exposure to the contaminated material. Points of compliance represent the locations on the site where CULs must be met.

The process for establishing CULs involves the following:

- Determining which analytical methods to use
- Developing CULs for individual contaminants in each media
- Determining which contaminants contribute the majority of the overall risk in each media (indicators)
- If applicable, adjusting the CULs downward based on total site risk

MTCA provides three options for establishing CULs: methods A, B, and C.

- Method A may be used to establish CULs at sites with routine cleanup actions or those that involve relatively few hazardous substances.
- Method B is the standard method for establishing CULs and may be used to establish CULs at any site.

- Method C is a conditional method used when a CUL under Method A or B is technically impossible to achieve or may cause significantly greater environmental harm. Method C also may be applied to qualifying industrial properties.

MTCA defines the factors used to determine whether a substance should be retained as an indicator for the Site. When defining CULs at a site contaminated with several hazardous substances, Ecology may eliminate contaminants contributing a small percentage of the overall threat to human health and the environment. WAC 173-340-703(2) provides a substance may be eliminated from further consideration based on:

- The toxicological characteristics of the substance which govern its ability to adversely affect human health or the environment relative to the concentration of the substance
- The chemical and physical characteristics of the substance which govern its tendency to persist in the environment
- The chemical and physical characteristics of the substance which govern its tendency to move into and through the environment
- The natural background concentration of the substance
- The thoroughness of testing for the substance
- The frequency of detection
- The degradation by-products of the substance

4.1 Site Use

The evaluation of CULs and ecological exposures depends on the nature of the Site use. Options under MTCA are either an unrestricted property or an industrial property. Industrial properties are defined in WAC 173-340-200; the definition includes properties characterized by transportation areas and facilities zoned for industrial use. Industrial properties are further described in WAC 173-340-745(1) and the following factors include (but are not limited to):

- People do not normally live on industrial property
- Access by the general public is generally not allowed
- Food is not grown/raised
- Operations are characterized by chemical use/storage, noise, odors, and truck traffic
- Ground surface is mostly covered by buildings, paved lots and roads, and storage areas
- Presence of support facilities serving the industrial facility employees and not the general public

Parts of the Site are zoned as I-1 (light industrial district) north of Sacajawea Park Road and all of the Site south of Sacajawea Park Road I-2 (medium industrial district) where most of the Site operations take place, which does not allow for daycare centers and residential use. Therefore, the Site does qualify as an industrial property. Current Site use is industrial as a distribution center for bulk fuel distribution, and therefore, the Method A CUL for industrial sites applies for risk from direct soil contact. Because aquifers beneath the Site are used for human consumption, and due to and the proximity to the Snake River, Method A CULs for groundwater

protection will also apply. Method A CULs are selected because all Site indicator hazardous substances (IHSs) are petroleum fuel compounds with CULs that are included in WAC 173-340-900 Table 720-1. Hazardous substances in soil were compared with MTCA Method A action levels for industrial properties shown in MTCA Table 745-1. Potential ecological exposure to Site contamination is discussed further in Section 4.2.

4.2 Terrestrial Ecological Evaluation

WAC 173-340-7490 requires that site managers perform a terrestrial ecological evaluation (TEE) to determine the potential effects of soil contamination on ecological receptors. A site may be excluded from a TEE if any of the following are met:

- All contaminated soil is or will be located below the point of compliance
- All contaminated soil is or will be covered by physical barriers such as buildings or pavement
- The site meets certain requirements related to the nature of on-site and surrounding undeveloped land
- Concentrations of hazardous substances in soil do not exceed natural background levels

However, the Site did not meet the above exclusion criteria for the following reasons:

- Surface soil contamination is present above natural background along the riverbank that is not covered by physical barriers. Therefore, the Site does not qualify under Point of Compliance, WAC 173-340-7491(1)(a), Barriers to Exposure, WAC 173-340-7491(1)(b), or Natural Background Concentrations, WAC 173-340-7491(1)(d).
- More than 1.5 acres of contiguous, undeveloped land is on or within 500 feet of the Site (Figure 2). Therefore, the Site does not qualify under Undeveloped Land: WAC 173-340-7491(1)(c).

4.2.1 Simplified TEE

Since the Site could not be exempted from a TEE, the next step performed was a simplified TEE. A simplified TEE consists of three analyses: pathway analysis, exposure analysis, and containment analysis.

Exposure Analysis: WAC 173-340-7492(2)(a) – The Site does qualify for further evaluation under an Exposure Analysis. The approximate Site-related area of contamination is greater than 350 square feet. Although current and anticipated future land use of the Site makes wildlife exposure at the developed portion of the Site unlikely, the simplified TEE cannot be ended under WAC 173-340-7492 (2)(a)(ii) based on MTCA Table 749-1. The Site-related contaminated area is within 500 feet of ≥ 4 acres of contiguous undeveloped land that is likely to attract wildlife.

Pathway Analysis: WAC 173-340-7492(2)(b) – However, the Site qualifies for no further evaluation under Pathway Analysis for terrestrial ecological receptors. The Site is within an industrially zoned, active fuel terminal; therefore, the only potential exposure pathways to wildlife (for example, small mammals and birds) needs to be considered. Only exposure pathways for priority contaminants of ecological concern (COEC) listed in Table 749-2 at or

above the concentrations provided must be considered in the Pathways Analysis. Of the COEC detected in soil, TPH-g and TPH-d are listed as priority contaminants in MTCA Table 749-2. A total of 22 upland soil samples from 14 locations and nine riverbank soil samples from nine locations were collected within the upper 15 feet of soil. Since the Site is zoned light-to-medium industrial, the maximum detected concentrations of TPH-d and TPH-g in upland and riverbank soil within the upper 15 feet of soil were compared to the soil concentrations in MTCA Table 749-2 as shown in Table 4.

Neither TPH-g nor TPH-d concentrations at the Site have maximum detected concentrations (MDCs) that exceed the screening values listed in Table 749-2. In fact, the MDCs of TPH-g and TPH-d in soil down to 15 ft. bgs are below the Table 749-2 residential screening values (200 mg/kg and 460 mg/kg, respectively) as shown in Table 4.

Contaminant Analysis: WAC 173-340-7492(2)(c) – The Site qualifies for no further evaluation under Contaminant Analysis for terrestrial ecological receptors. As presented under Pathway Analysis above, none of the detected COEC listed in Table 4 are present in soil at concentrations that exceed the values listed in MTCA Table 749-2.

4.2.2 Riverbank Freshwater Sediment Sample Evaluation

In addition to the simplified TEE analyses, the riverbank surface soil samples (RB-6 through RB-9) were compared to the freshwater SMS (WAC 173-204-563). All riverbank TPH-d sample results (with one detection at 23 mg/kg and the non-detect reporting limits ranging from 20 mg/kg to 23 mg/kg) were less than the TPH-d Sediment Cleanup Objective (340 mg/kg) and Sediment Screening Level (510 mg/kg). All riverbank TPH-o sample results (detections ranging from 180 to 640 mg/kg with a non-detect reporting limit of 48 mg/kg) were less than the TPH-residual Cleanup Objective (3,600 mg/kg) and Screening Level (4,400 mg/kg). Based on this comparison, the shoreline TPH concentrations are below sediment standards protective of the benthic and freshwater sediment.

4.2.3 TEE Conclusions

Based on the simplified evaluation, under WAC 173-340-749(2)(b) and WAC 173-340-7492(2)(c), no further terrestrial ecological receptor evaluation is warranted at the Site. In addition, the riverbank soil samples (RB-6 through RB-9) are below the freshwater SMS under WAC 173-204-563.

4.3 Site Cleanup Levels

The selected CULs for Site soil are the MTCA Method A CUL for Industrial Properties (Table 745-1 of WAC 173-340-900) shown in Table 5 for the selected IHSs for this Site. The selected CULs for groundwater IHSs are the MTCA Method A CULs for Groundwater (Table 720-1 of WAC 173-340-900) shown in Table 5. Rationale for these selections include:

- On sites where the cleanup action is routine or involves relatively few hazardous substances, MTCA allows for use of Method A CULs, as listed in tables 720-1 and 745-1 of WAC 173-340-900. Because impacts at the Site are limited to deep soil (80

feet bgs) and groundwater in upland portions of the Site, this Site qualifies for assessment under Method A.

- The TEE conducted for this Site under WAC 173-340-749(2)(b) and WAC 173-340-7492(2)(c), confirmed that no further terrestrial ecological receptor evaluation is warranted at the Site (as described in Section 4.2). None of the detected COEC listed in Table 749-2 are present in soil at concentrations exceeding the values listed in Table 749-2 for industrial/commercial properties. Furthermore, the MTCA Method A values are lower than the applicable ecological screening values listed in Table 749-2; therefore, the MTCA Method A values are ecologically protective for the Site.
- Vadose zone soils have detected hazardous substances below Method A soil CULs, and therefore, Site soil CULs have not been set in this CAP.
- Although groundwater is hydraulically connected to the Snake River, soil and groundwater analytical data support the determination that dissolved-phase groundwater transport to the river is not occurring and is unlikely to occur in the future. IHSs are not detected in monitoring wells downgradient of the source areas. Therefore, the surface water exposure pathway is not currently complete and is unlikely to be complete in the future.
- The Site is anticipated to have sufficient biodegradation potential to attenuate IHS concentrations in groundwater to below laboratory detection limits before groundwater discharges to the Snake River (as described in Section 5). Sources of hazardous substances in soil are not present outside of the upland area.

4.3.1 Exceedances above Site Soil CULs in Soil at or below the Groundwater Table

From a total of 97 soil samples that were collected from depths ranging from 5 to 90 feet bgs, five soil samples that were collected from four borings contained hazardous substances at concentrations exceeding their respective MTCA Method A action levels and are summarized below. Note that all the detected TPH soil exceedances were found at or below the groundwater table at depths exceeding 75 feet bgs, most likely in a relict smear zone on top of the groundwater. The soil contamination at or slightly above the groundwater table is interpreted to have been caused by relict free-phase petroleum product on top of fluctuating groundwater. This free product has weathered and degraded with time and is no longer visible in groundwater samples. This deep soil contamination is considered to be part of the impacted groundwater and will be addressed as part of the groundwater remediation. Consequently, soil cleanup at the Site is not required based on current data.

- **Southern Tank Area (AB-7/MW-3)** – TPH-g and TPH-d concentrations exceeded the MTCA Method A CULs at depths ranging from 80 to 84 feet bgs, at the groundwater table. A Scarlet Red dye test also indicated the presence of petroleum at this depth.

- **North Area** (AB-8/MW-19 and MW-20) – At AB-8/MW-19, located slightly west of the lined pond, TPH-g, BTEX, and naphthalene concentrations exceeded their respective CULs at 83 to 85 feet bgs, at the approximate groundwater table. A Scarlet Red dye test confirmed the presence of petroleum at 85 feet bgs, and to a lesser extent at 80 feet bgs and 95 feet bgs. At MW-20, located further to the northwest of the lined pond, the TPH-g concentration slightly exceeded the CUL at 86–90 feet bgs.
- **Riverbank Area** (MW-15) – 1,2-Dibromoethane (EDB) was present in soil collected at 23.5 to 24.8 feet bgs at MW-15 at an estimated concentration of 5.3 micrograms per kilogram ($\mu\text{g}/\text{kg}$), which slightly exceeds the MTCA Method A action level of 5.0 $\mu\text{g}/\text{kg}$ but is less than the laboratory reporting limit. This EDB detection is only an estimate because the concentration is below the laboratory detection limit (Supplemental RI/FS [AECOM, 2021]). No other EDB detections were observed in the soil samples.

4.3.1 Exceedances above Site Groundwater CULs

Since 2014, the following IHSs have been measured at concentrations exceeding their respective groundwater CULs:

- **Southern Tank Area** – In MW-3, TPH-d concentrations consistently exceed the CUL of 500 micrograms per liter ($\mu\text{g}/\text{L}$) at concentrations ranging from 1,100 to 18,000 $\mu\text{g}/\text{L}$. TPH-o concentrations range from non-detect to 2,000 $\mu\text{g}/\text{L}$, which intermittently exceed the CUL of 500 $\mu\text{g}/\text{L}$. Slightly to the north, TPH-d and TPH-o concentrations intermittently exceed their respective CULs in MW-2 (concentrations ranging from non-detect to 1,600 $\mu\text{g}/\text{L}$ and non-detect to 1,800 $\mu\text{g}/\text{L}$, respectively), and in MW-11 (concentrations ranging from non-detect to 3,900 $\mu\text{g}/\text{L}$ and non-detect to 2,300 $\mu\text{g}/\text{L}$, respectively).
- **Northern Tank Area** – In MW-17, located near a 1976 diesel spill, TPH-d and TPH-o concentrations have been stable at values approximately 1.5 to 2 times their respective CULs.
- **North Area** – In MW-19, located slightly west of the lined pond, TPH-g and VOC concentrations periodically exceed their respective CULs. Benzene concentrations have exceeded the CUL but show a persistently decreasing trend.

4.4 Point of Compliance

MTCA defines the point of compliance as the point or points where CULs must be attained. Once CULs are met at the point of compliance, the Site is no longer considered a threat to human health or the environment.

4.3.1 Soil

WAC 173-340-740(6) gives the point of compliance requirements for soil. For soil CULs based on protection of groundwater, the point of compliance shall be established in the soils throughout the Site under WAC 173-340-740(6). For soil CULs based on human exposure via direct contact,

the point of compliance is within in the soils throughout the Site from the ground surface to 15 feet bgs. If groundwater is contaminated, the soil point of compliance is all of the soil from the ground surface down to the groundwater table.

Due to the presence of groundwater contamination, the Site soil point of compliance would be from the ground surface down to the top of groundwater. An empirical demonstration will be made using Site groundwater data to show soil contaminant concentrations are protective of groundwater, following procedures described in WAC 173-340-747(9). Compliance will be demonstrated by directly comparing groundwater concentrations at the Site to the proposed groundwater CULs. If groundwater at the Site meets the CULs, this pathway will then have been demonstrated to have met soil CULs and will be in compliance.

4.3.2 Groundwater

WAC 173-340-720(6) gives the point of compliance requirements for groundwater. The standard groundwater point of compliance is established throughout the site from the uppermost level of the saturated zone extending vertically to the lowest-most depth that could potentially be affected by the site.

At this Site, a standard groundwater point of compliance will apply throughout the Site. Groundwater CULs shall be attained in all groundwater at the site.

5 Cleanup Action Selection

5.1 Remedial Action Objectives

The remedial action objectives are statements describing the actions necessary to protect human health and the environment by eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route. They are developed considering the characteristics of the contaminated media and hazardous substances present, migration and exposure pathways, and potential receptor points.

Groundwater has been contaminated by past activities at the Site. Given the status of the Site, people may be exposed to contaminated groundwater via dermal contact or ingestion. While a water well is not currently installed in contaminated groundwater, future groundwater use and surface water must be protected. As described in the Supplemental RI/FS exposure pathway model, the potential human receptors include groundwater users, and recreational users and ecological receptors on the adjacent Snake River. As described in subsection 4.2 above, exposure to terrestrial ecological receptors is not likely under the current and future Site use.

Given these potential exposure pathways, the remedial action objective for the Site is to prevent direct contact or ingestion of contaminated groundwater by humans.

5.2 Cleanup Action Alternatives

Cleanup alternatives to meet this remedial action objective were evaluated as part of the RI/FS process. The supplemental FS evaluated multiple alternatives for addressing all contaminated media at the Site. The following four alternatives are based on the proposals the PLP made in

the supplemental FS. Technology options for groundwater generically included MNA with different methods to improve oxygenation of groundwater to enhance the biological breakdown of the contamination. The PLP excluded several technologies or treatments due to several factors; these can be reviewed in the Supplemental RI/FS (AECOM, 2021). The retained technologies were combined into the four alternatives to address contaminated soil and groundwater.

5.2.1 No Action at the Site

Keeping the Site in its current state with no cleanup action would not meet MTCA requirements, which prohibit reliance on natural processes alone to clean up contaminated sites where more active remedial measures are available. In particular, no action would not include a provision for monitoring as required by MTCA (WAC 173-340-360(2)(a)(iv)). Additionally, the no action alternative would not fulfill the MTCA requirement to remove hazardous substances to the maximum extent practicable. Therefore, the no action alternative is not considered further.

5.2.2 Alternative 1 – Institutional Controls, Monitored Natural Attenuation, and Natural Source Zone Depletion Monitoring

Alternative 1 is composed of Site management under current conditions where the industrial activities will continue at the Site, groundwater sampling and analysis for MNA using the existing well network, and addition of monitoring points for soil gas and temperature measurements associated with a natural source zone depletion (NSZD) assessment. A NSZD assessment determines the breakdown rate of contaminants trapped in soil and groundwater at the source area for the dissolved groundwater contamination. From the results of the NSZD assessment, the restoration timeframe for each cleanup alternative can be determined more accurately. Alternative 1 includes existing ICs, 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 that have provided significant remedial progress since active remediation stopped in December 2002.

5.2.3 Alternative 2 – ICs, MNA, NSZD Monitoring, and Oxygen-Releasing Compounds

Alternative 2 is composed of Site management under current conditions, use of existing wells for placement of oxygen-releasing compounds (ORCs), groundwater monitoring using the existing well network, and addition of monitoring points for soil gas and temperature measurements that are part of the NSZD monitoring. Alternative 2 includes existing ICs, 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 that have provided significant remedial progress since active remediation stopped in December 2002, enhanced by the addition of oxygen as described below.

Additional oxygen would be provided by deploying ORC sleeves in select existing monitoring wells on a periodic schedule to enhance natural degradation of the contaminants. The schedule

will ensure enough time elapses between ORC sleeve removal from monitoring wells and groundwater sample collection so that samples are representative of aquifer conditions. For preliminary design purposes, the sleeve deployment schedule in the selected monitoring wells is assumed to be:

- Six months of continuous deployment followed by sleeve removal
- Six months of no deployment

The ORC sleeves are planned to be deployed in the wells between the spring and fall during the warm season to take advantage of increased biological activity and contaminant breakdown with higher groundwater temperatures.

Assessing progress toward the cleanup standards would be accomplished through a performance monitoring program. Alternative 2 technologies would be applied to the source areas as follows:

- Southern Tank Area: ICs, NSZD monitoring, and ORCs
- Northern Tank Area: ICs, NSZD monitoring, and ORCs
- North Area: ICs and MNA
- Site downgradient wells: ICs, MNA, and compliance monitoring

5.2.4 Alternative 3 – ICs, MNA, NSZD Monitoring, ORCs, and Bio-sparging:

Alternative 3 includes all the same technologies as Alternative 2, but with bio-sparging as an additional active remedial component, to enhance natural degradation of the contaminants. Compared to the Alternative 2, bio-sparging would introduce more oxygen into the aquifer to enhance natural attenuation, thereby shortening the restoration timeframe. As with Alternative 2, assessing progress toward the cleanup standards would be accomplished through a performance monitoring program. Alternative 3 technologies would be applied to the source areas as follows:

- Southern Tank Area: ICs, NSZD monitoring, and bio-sparging
- Northern Tank Area: ICs, NSZD monitoring, and ORCs
- North Area: ICs and MNA
- Site downgradient wells: ICs, MNA, and compliance monitoring

5.2.5 Alternative 4 – ICs, MNA, NSZD Monitoring, ORCs, Bio-sparging, and AC-based In-Situ Treatment

Alternative 4 includes all the same technologies as Alternative 3, but with activated carbon-(AC) based *in-situ* treatment as an additional active remedial component. Placing activated carbon into the subsurface formation would accelerate the restoration timeframe via adsorption and degradation of IHSs, and therefore, enhance the natural degradation of the contaminants. As with alternatives 2 and 3, assessing progress toward the cleanup standards would be accomplished through a performance monitoring program. Alternative 4 technologies would be applied to the source areas as follows:

- Southern Tank Area: ICs, NSZD monitoring, bio-sparging, and AC-based *in-situ* treatment
- Northern Tank Area: ICs, NSZD monitoring, and ORCs
- North Area: ICs and MNA
- Site downgradient wells: ICs, MNA, and compliance monitoring

5.3 Regulatory Requirements

MTCA sets forth the minimum requirements and procedures for selecting a cleanup action. A cleanup action must meet each of the minimum requirements specified in WAC 173-340-360(2), including certain threshold and other requirements.

5.3.1 Threshold Requirements

WAC 173-340-360(2)(a) requires that the cleanup action shall:

- Protect human health and the environment
- Comply with cleanup standards (see Section 4.0)
- Comply with applicable state and federal laws (see Section 5.3.4)
- Provide for compliance monitoring

5.3.2 Other Requirements

In addition, WAC 173-340-360(2)(b) states the cleanup action shall:

- Use permanent solutions to the maximum extent practicable
- Provide for a reasonable restoration time frame
- Consider public concerns

WAC 173-340-360(3) describes the 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 CULs can be met without further action being required at the 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, including:

- Protectiveness
- Permanent reduction of toxicity, mobility, and volume
- Cost
- Long-term effectiveness
- Short-term risk
- Implementability
- Consideration of public concerns

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 requirements

and procedures for determining whether a cleanup action provides for a reasonable restoration timeframe.

5.3.2.1 Reasonable Restoration Time Frame (RRTF) for the Site

To drive continuous improvement and adaptive management of the active cleanup technologies, Ecology has established an overall RRTF for the Site of 15 years based on the longevity of petroleum hydrocarbon compounds in groundwater. This period is consistent with the RTF for successful cleanup using Alternative 2 as presented in the Supplemental FS (AECOM, 2021). Ecology finds that a 15-year RRTF is reasonable for the Site.

A 15-year RTF allows adequate time to determine whether the selected cleanup action alternative is proving effective, while allowing time to evaluate an alternate cleanup action if the primary alternative is not effective. A 15-year RRTF is the measure by which the performance of alternatives will be evaluated. Ecology's goal is to attain cleanup standards at the Site as quickly as is practicable. The RRTF starts when compliance monitoring begins.

5.3.3 Cleanup Action Expectations

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

- Treatment technologies will be emphasized at sites with liquid wastes, areas with high concentrations of hazardous substances, with highly mobile contaminants, or with highly treatable contaminants
- To minimize the need for long-term management of contaminated materials, hazardous substances will be destroyed, detoxified, and/or removed to concentrations below CULs throughout sites with small volumes of hazardous substances
- Engineering controls, such as containment, may need to be used at sites with large volumes of materials with relatively low levels of hazardous substances where treatment is impracticable
- To minimize the potential for migration of hazardous substances, active measures will be taken to prevent precipitation and runoff from coming into contact with contaminated soil or waste materials
- When hazardous substances remain on-site at concentrations which exceed CULs, they will be consolidated to the maximum extent practicable where needed to minimize the potential for direct contact and migration of hazardous substances
- For sites adjacent to surface water, active measures will be taken to prevent/minimize releases to that water; dilution will not be the sole method for demonstrating compliance

- Natural attenuation of hazardous substances may be appropriate at sites under certain specified conditions (see WAC 173-340-370(7))
- Selected cleanup actions will not result in a significantly greater overall threat to human health and the environment compared with other alternatives

5.3.4 Applicable, Relevant, and Appropriate State and Federal Laws, and Local Requirements

WAC 173-340-710(1) requires that all cleanup actions comply with all applicable state and federal law. It further states the term “applicable state and federal laws” shall include legally applicable requirements and those requirements that the department determines “... are relevant and appropriate requirements.” This section discusses applicable state and federal laws, relevant and appropriate, and local permitting requirements that were of primary importance in selecting cleanup requirements. If other requirements are identified later, they will be applied to the cleanup actions at that time.

MTCA provides an exemption from the procedural requirements of several state laws and from any laws authorizing local government permits or approvals for remedial actions conducted under a consent decree, order, or agreed order (RCW 70A.305.090). However, the substantive requirements of a required permit will be identified by Ecology, incorporated into a CAP, and must be met. The procedural requirements of the following state laws may be exempted:

- Ch. 70A.15 RCW, Washington Clean Air Act
- Ch. 70A.205 RCW, Solid Waste Management, Reduction, and Recycling
- Ch. 70A.300 RCW, Hazardous Waste Management
- Ch. 75.20 RCW, Construction Projects in State Waters
- Ch. 90.48 RCW, Water Pollution Control
- Ch. 90.58 RCW, Shoreline Management Act of 1971

WAC 173-340-710(4) sets forth the criteria Ecology evaluates when determining whether certain requirements are relevant and appropriate for a cleanup action. Table 6 lists the state and federal laws containing the applicable or relevant and appropriate requirements (ARARs) that apply to the cleanup action at the Site. No permit exemptions were identified.

5.4 Evaluation of Cleanup Action Alternatives

The requirements and criteria outlined in Section 5.3 are used to conduct a comparative evaluation of the cleanup action alternatives and to select a cleanup action from those alternatives. Table 7 provides a summary of the ranking of the cleanup alternatives against the various criteria. Note that as stated in Section 5.2.1, no action at the Site is not a viable alternative under MTCA and is not considered further. The comparative evaluation of the cleanup action alternatives against the requirements and criteria are summarized below.

5.4.1 Threshold Requirements

5.4.1.1 Protection of Human Health and the Environment

- All alternatives are protective of human health and the environment because the contamination above the CULs is found at depth within the Site and is not anticipated to reach the Snake River. However, the RRTF to achieve the CULs for Alternative 1 within the Site is longer than the other alternatives as discussed in subsection 5.4.2.3 below.

5.4.1.2 Compliance with Cleanup Standards

- All alternatives are anticipated to achieve cleanup standards in groundwater through complete removal of the contaminant source area in the aquifer.

5.4.1.3 Compliance with Local, State, and Federal Laws

- All alternatives are anticipated to comply with applicable state and federal laws, due to the treatment of all petroleum fuel hydrocarbon compounds below the Site CUL. Local laws that may impact the final implementation of the chosen cleanup action will be considered when preparing the cleanup action engineering design document.

5.4.1.4 Provision for Compliance Monitoring

- There are three types of compliance monitoring: protection, performance, and confirmation. Protection monitoring is designed to protect human health and the environment during the construction and operation and maintenance phases of the cleanup action. Performance monitoring confirms that the cleanup action has met cleanup and/or performance standards. Confirmation monitoring confirms the long-term effectiveness of the cleanup action once cleanup standards have been met initially or other performance standards have been attained.

All four alternatives would meet this provision as all require varying levels of all three types of compliance monitoring.

5.4.2 Other Requirements

5.4.2.1 Use of Permanent Solutions to the Maximum Extent Practicable

To determine whether a cleanup action uses permanent solutions to the maximum extent practicable, a disproportionate cost analysis is used. The comparison of costs and benefits may be quantitative but will often be qualitative and require the use of best professional judgment. The analysis compares the costs and benefits of the cleanup action alternatives and involves considering the following factors.

- **Protectiveness**
Protectiveness measures the degree to which existing risks are reduced and the time required to reduce risk and attain cleanup standards. On- and off-site risks resulting from implementing the alternative are measured to determine the improvement of overall environmental quality.
- **Permanence**
Permanence measures the adequacy of the alternative in destroying the hazardous

substance(s), the reduction or elimination of releases or sources of releases, the degree of irreversibility of any treatment process, and the characteristics and quantity of any treatment residuals.

All alternatives are anticipated to achieve permanent cleanup of the Site.

- **Cost**

Cleanup costs are estimated based on specific design assumptions for each alternative. Although the costs are estimates based on design assumptions that might change, the relative costs are used for this evaluation. A detailed description of the costs involved with each alternative can be found in the Supplemental RI/FS (AECOM, 2021).

- Alternative 1, MNA assuming a 15-year minimum monitoring period is estimated to cost \$689,600. However, with Alternative 1 the monitoring period is anticipated to be longer, and therefore, the true cost is likely to be higher.
- Alternative 2, MNA with an ORC sleeve assuming a 15-year monitoring period is estimated to cost \$786,400.
- Alternative 3, MNA with an ORC sleeve and air sparging is estimated to cost \$1,350,400, based on a 10-year compliance monitoring period with semi-annual monitoring events.
- The estimated cost for Alternative 4, MNA with an ORC sleeve, air sparging, and activated carbon treatment is \$1,425,300, assuming a 5-year compliance monitoring period with semi-annual monitoring events.
- Alternatives 2, 3, and 4 will be followed by a minimum two-year performance monitoring period (four semi-annual groundwater monitoring events) to ensure that the cleanup actions under these three alternatives are successful. The cost for the two-year groundwater performance monitoring following the Alternative 2, 3, or 4 cleanup action is \$92,000.

- **Long-term Effectiveness**

Long-term effectiveness measures the degree of success, the reliability of the alternative during the period that hazardous substances will remain above CULs, the magnitude of residual risk after implementation, and the effectiveness of measures required to manage institutional controls.

Alternatives 2, 3, and 4 would be more effective for the long-term than Alternative 1, as groundwater CULs would be met within the RRTF set for the Site.

- **Short-term Risk**

Short-term risk measures the risks related to an alternative during construction and implementation, and the effectiveness of measures taken to manage such risks.

Alternatives 1 and 2 would have the lowest risk since remediation would rely on natural processes, and in the case of Alternative 2, using a passive delivery method to add oxygen to the aquifer using a low-risk technology. Alternatives 1 and 2 would have a

lower short-term risk than Alternative 3 because this alternative would entail injection of air through air sparging and installation and operation of air blowers and air-injection wells that could interfere with Site operations. Similarly, alternatives 1 and 2 would entail a lower risk than Alternative 4 where there might be challenges to deliver the activated carbon to the portion of the aquifer that needs it the most, especially in areas covered with storage tanks and pipe racks.

Additionally, alternatives 1 and 2 are also more attractive than Alternative 4 because of the lower use of fossil fuels for groundwater treatment. Alternative 3 is dependent on a power source for the blowers to conduct the air sparging. Alternative 4 would also require additional energy to inject the activated carbon into the aquifer.

- **Implementability**

Implementability considers whether the alternative is technically possible, the availability of necessary off-site facilities, services, and materials, administrative and regulatory requirements, scheduling, size, complexity, monitoring requirements, access for operations and monitoring, and integrations with existing facility operations.

Alternatives 1 and 2 are fully implementable at this Site. Alternatives 3 and 4 rank slightly lower because on-Site structures, such as ASTs, pipelines, and utilities, may prevent air sparging (Alternative 3) or activated carbon injection (Alternative 4) where the aquifer may need it the most.

- **Consideration of Public Concerns**

No comments from the public were received regarding proposed remedial alternatives presented in the Supplemental RI/FS to clean up the Site. This CAP will undergo public review and comment, and Ecology will respond to the public comments. Ecology will consider the comments before finalizing this CAP.

5.4.2.2 Disproportionate Cost Analysis

Costs are disproportionate to the benefits if the incremental costs of an alternative are disproportionate to the incremental benefits of that alternative. In this case, all alternatives are considered permanent since they achieve contaminant removal to meet CULs. Alternative 1 is not considered viable because it is anticipated the Site will not be cleaned up within the RRTF set for the Site. Of the remaining alternatives, Alternative 2 has the lowest cost. Because Alternative 2 is permanent and has the lowest cost, a disproportionate cost analysis is not needed.

5.4.2.3 Provide a Reasonable Restoration Time Frame

It is anticipated that alternatives 2, 3, and 4 would be able to achieve the groundwater CULs within a 15-year time frame as discussed in subsection 5.2 above, whereas Alternative 1 will not.

5.4.3 Cleanup Action Expectations

Cleanup action expectations are outlined in WAC 173-340-370 and are described in Section 5.3.3. Alternatives would address applicable expectations in the following manner:

Alternative 1:

- Groundwater - Destroys contamination
- Groundwater - Natural attenuation gets benefit of source control with monitoring and lesser risks until CULs achieved

Alternative 2:

- Groundwater - Emphasizes a treatment technology
- Groundwater - Destroys contamination
- Groundwater - Natural attenuation gets benefit of source control with monitoring and lesser risks until CULs achieved

Alternative 3:

- Groundwater - Emphasizes a treatment technology
- Groundwater - Destroys contamination
- Groundwater - Natural attenuation gets benefit of source control with monitoring and lesser risks until CULs achieved

Alternative 4:

- Groundwater - Emphasizes a treatment technology
- Groundwater - Destroys contamination
- Groundwater - Natural attenuation gets benefit of source control with monitoring and lesser risks until CULs achieved

5.4.3.1 Groundwater Contamination:

All four alternatives will rely on natural attenuation of petroleum hydrocarbon contamination in shallow groundwater.

- **Alternative 1** would rely solely on natural attenuation of contaminants, while the three remaining alternatives would enhance the natural attenuation process with additives.
- **Alternative 2** would oxygenate the groundwater through addition of ORC sleeves placed in select on-Site wells.
- **Alternative 3** is the same as Alternative 2 but with additional oxygen into groundwater through injecting air into the groundwater (air sparging).
- **Alternative 4** is the same as Alternative 3 but adds injection of activated carbon into the most contaminated parts of the groundwater to enhance the natural breakdown of the petroleum hydrocarbon compounds.

Compliance monitoring would follow to ensure that natural attenuation is taking place for all the alternatives in accordance with WAC 173-340-370(7). Ecology anticipates compliance

groundwater monitoring will be required for the remainder of the RRTF of 15 years. During this time, Ecology will complete periodic reviews about every five years evaluating the success of the cleanup action.

5.4.3.2 Institutional controls:

All four alternatives would rely on institutional controls to prevent residential use and any groundwater withdrawal within the Site. The institutional controls regarding groundwater withdrawal will remain in place as long as groundwater CULs have not been met.

5.5 Decision

After evaluation of the four alternatives that meet the cleanup threshold criteria, Alternative 2 is the selected cleanup action at the Site because it is permanent, will achieve cleanup within the Site RRTF (15 years) unlike Alternative 1, and is less costly than alternatives 3 and 4.

6 Selected Cleanup Action

The selected cleanup action will be described in detail in the Engineering Design Report that will follow the Cleanup Action Plan.

6.1 Cleanup Action Implementation

Additional oxygen will be provided via deployment of ORC sleeves in four existing monitoring wells (MW-2, MW-3, MW-11, and MW-17) as shown in Figure 13.

During initial monitoring events, before deployment of the sleeves into these four wells, all groundwater monitoring wells will be sampled and analyzed following the procedures in subsection 6.2. After six months, the sleeves will be removed, and groundwater samples will be collected in the wells that did not have ORC sleeves.

After another six months, the wells will be sampled before the ORC sleeves are placed in the four treatment wells again. This schedule will ensure enough time elapses between ORC sleeve removal and groundwater sample collection so that samples are representative of aquifer conditions. The deployment schedule in the selected monitoring wells will be:

- Six months of continuous ORC sleeve deployment between the spring and fall with sleeve removal in the fall
- Six months of no ORC sleeve deployment during the winter months

The ORC sleeves will be deployed during the summer months when higher groundwater temperatures will enhance natural contaminant breakdown. Progress assessment toward the cleanup standards would be accomplished through a compliance monitoring program as part of the compliance monitoring described in subsection 6.2. A schematic of the ORC sleeve installation in the four wells is in Figure 14.

During implementation of the CAP, if there is a need to deviate from the CAP, any minor changes to the CAP must be approved by Ecology in writing before the changes are

implemented [WAC 173-340-400(6)(d)], while any substantial changes to the CAP will require amendment of the agreed order and a public comment period.

6.2 Groundwater Monitoring

Groundwater samples will be collected from the monitoring well network semi-annually. Sampling will take place in the spring and fall to coincide with ORC sleeve deployment and removal. Monitoring will continue until CULs in groundwater in four consecutive monitoring events have been achieved.

Compliance monitoring well locations are in Figure 13. Nineteen wells (MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-10, MW-11, MW-12, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, and MW-23) will be monitored as part of the groundwater monitoring program. Water levels will be measured in Tidewater wells MW-5 and AR-11 to the north for a more complete picture of the gradient and direction of groundwater flow beneath the Site.

A Compliance Monitoring Plan will be prepared during the development of the engineering design documents. The Compliance Monitoring Plan will provide a list of the point of compliance wells; describe the sampling, testing, and data gathering methods; describe the sampling locations and frequency; and other field study procedures that will be used for obtaining and interpreting groundwater sampling data.

Protection monitoring procedures for the cleanup action implementation will be described in a separate Health and Safety Plan, which will be prepared in accordance with Federal and State occupational health and safety regulations, including those that regulate work on sites where hazardous materials are present.

6.3 Institutional Controls

Institutional controls are measures taken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances at the Site. These measures are required to assure the continued protection of human health and the environment and the integrity of the cleanup action when hazardous substances remain at the Site at concentrations exceeding applicable CULs. Institutional controls can include physical measures and legal and administrative mechanisms. WAC 173-340-440 provides information on institutional controls and the conditions under which they may be removed.

Institutional controls will include an environmental covenant limiting property use to industrial activities and prohibiting the extraction of groundwater. The environmental covenant shall be consistent with the State of Washington Uniform Environmental Covenant Act (UECA; Chapter 64.70 RCW). The environmental covenant restrictions regarding use of groundwater can be removed once groundwater has met CULs.

6.4 Financial Assurance

WAC 173-340-440(11) states that financial assurance mechanisms may be required at sites where the selected cleanup action includes engineered and/or institutional controls. Financial

assurances are not required at this Site at this time, because long-term institutional controls are not expected to be costly enough to require demonstration of financial resource.

6.5 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. After groundwater CULs have been achieved, periodic reviews will not be required because institutional controls will be removed.

The first periodic review will take place no more than five years after the cleanup action construction has been completed. For this Site, this is when the ORC sleeves are deployed into the designated wells for the first time.

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Appendix A. Tables

A.1. Pertinent Site Information

Site Name	Chevron Pipeline Co. Pasco Bulk Terminal
Ecology Facility/sites ID	55763995
Ecology Cleanup Site ID	4867
Agreed Order	TBD
Address	3600 Sacajawea Park Road Pasco, WA 98857
Location:	GPS: 46° 12' 55" North and 119° 1' 45" West UTM: Zone 11N; 343,500, 5,120,000 Legal: T9N R30E SW ¼ S35 County Assessor's Parcel Number: 112580011 County: Franklin
Ecology Site Manager	Christer Loftenius, LG, LHG State of Washington Department of Ecology Toxics Cleanup Program, Eastern Region 4601 N Monroe Street Spokane, Washington 99205-1295 christer.loftenius@ecywa.gov 509.329.3400
Potentially Liable Person (PLP)	Tesoro Logistics Operations LLC 200 East Hardin Street Findlay, Ohio 45840
PLP Contact	Kyle Waldron Marathon Petroleum Company LP 3450 S. 344th Way, Suite 135 Auburn, WA 98001-5931 253.896.8731
Site Owner	Same as PLP
RI/FS Preparer	Nicky Moody AECOM 888 SW 5th Avenue, Suite 600 Portland, OR 97204 503.969.6310

A.2. Groundwater Monitoring and Sampling Program Summary

Well Type	Well ID	Well Location (relative to plume)	Install Date	Total Well Depth	TOC Elevation	Well Diameter	Well Screen Interval	Screen Length	Depth to Pump Inlet	Monitoring and Sampling Program												
										Measure Depth to GW	Collect Samples (During 1st SA)	Collect Samples (During 2nd SA)	TPH-g, TPH-d, & TPH-o (NWTPH-Gx / NWTPH-Dx)	VOCs: BTEX+N, EDB, & EDC (EPA 8260C / EPA 8011)	Fuel Oxygenates		Natural Attenuation					
															DIPE, ETBE, MTBE, TBA, & TAME (EPA 8260C)	Ethanol & Methanol (EPA 8015C)	Field Parameters (pH, Cond., DO, Temp, & ORP)	Ferrous Iron & Nitrate (Field Test Kits)	Dissolved Manganese (field filtered) (200.7 Rev 4.4 - Metals)	Sulfate (EPA Method 300)	Alkalinity (SM 2320B)	Methane (RSK 175)
Units:	ft btoc	ft NAVD29 ⁽⁶⁾	inches	ft bgs	ft	ft btoc	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Monitoring Wells	MW-1	Downgradient	11/83	--	419.40	4	--	20		Well Abandoned in October 2018												
	MW-2	Cross-gradient	11/83	79.45	417.23	4	65.7 - 85.7	20	73.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-3	Source	11/83	95.3	423.40	4	77.3 - 97.3	20	85.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-4	Downgradient	11/83	76.87	412.05	4	59.2 - 79.2	20	72.0	1st/2nd SA	X	--	1st SA	1st SA	1st SA	1st SA	--	--	--	--	--	--
	MW-5	Downgradient	1986	--	--	--	--	--	--	Well Destroyed in May 1989												
	MW-6	Downgradient	11/17/86	24.92	358.52	2	10.8 - 25.8	15	21.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-7	Downgradient	11/18/86	78.05	411.32	2	59.4 - 79.4	20	72.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	--	--	--	--	--
	MW-8	Downgradient	11/25/86	55.5	383.76	2	31.5 - 56.5	25	44.0	1st/2nd SA	X	--	1st SA	1st SA	1st SA	1st SA	1st SA	1st SA	1st SA	1st SA	1st SA	1st SA
	MW-9	Downgradient	11/20/86	--	--	2	--	15		Well Destroyed in May 1987												
	MW-10	Downgradient	1/6/89	78.94	407.83	4	57.6 - 80.6	23	68.0	1st/2nd SA	X	--	1st SA	1st SA	1st SA	1st SA	1st SA	--	--	--	--	--
	MW-11	Downgradient	1/16/89	84.58	423.44	2	76.6 - 86.6	10	83.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	--	--	--	--	--
	MW-12	Cross-gradient	1/17/89	85.11	423.62	2	35.2 - 62.2 / 77.2 - 87.2	37	83.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-13	Downgradient	1/17/89	48	424.05	2	--	29		Well Screened Above the Water Table												
	MW-14	Cross-gradient	1/17/89	85.2	421.84	2	28.4 - 53.9 / 73.4 - 83.4	36	84.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	--	--	--	--	--
	MW-15	Downgradient	9/5/18	25.67	358.50	2	10.8 - 25.8	15	21.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	--	--	--	--	--
	MW-16	Downgradient	9/6/18	32.8	370.92	2	23 - 33	10	31.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-17	Cross-gradient	9/8/18	85.4	424.28	2	75.9 - 85.9	10	84.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	--	--	--	--	--
	MW-18	Upgradient	10/11/18	87.7	423.69	2	71.7 - 86.7	15	86.5	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-19	Source	10/12/18	89.8	424.20	2	74.5 - 89.5	15	85.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-20	Upgradient	11/25/19	98.3	426.52	2	82.2 - 97.2	15	95.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-21	Cross-gradient	11/19/19	95.89	426.16	2	29.7 - 94.7	15	93.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-22	Downgradient	11/22/19	97.62	420.45	2	81.9 - 96.9	15	94.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
	MW-23	Upgradient	11/24/19	94.99	421.74	2	79.7 - 94.7	15	92.0	1st/2nd SA	X	X	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA	1st/2nd SA
Recovery Wells	RW-1	Downgradient	1/4/89	--	417.29	8	--	34		Well Abandoned in October 2018												
Vapor Extraction Wells	VE-1	Cross-gradient	9/6/18	28.06	424.15	2	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	
	VE-2	Cross-gradient	9/6/18	42.12	423.25	2	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	
	VE-3	Source	9/8/18	42.70	423.64	2	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	
	VE-4	Source	9/9/18	27.56	423.70	2	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tidewater Monitoring Wells	AR-11	Upgradient	--		2	--	15	--	1st/2nd SA	--	--	--	--	--	--	--	--	--	--	--		
	MW-5	Upgradient	--		2	--	15	--	1st/2nd SA	--	--	--	--	--	--	--	--	--	--	--		

Notes:
 (1) Total Depths were measured on 6/5/2019 and 12/9/2019
 (2) On February 7 and December 10, 2019, all wells except the Tidewater monitoring wells were resurveyed by Stratton Surveying and Mapping, P.C. using horizontal datum Washington State Plane South Zone North American Datum 1983 (1991) and vertical datum North American Vertical Datum 29.

Acronyms:
 -- = Not applicable, not available, or not sampled
 BTEX = benzene, toluene, ethylbenzene, and total xylenes
 bgs = below ground surface
 btoc = below top of casing
 Cond = conductivity
 DG = down-gradient
 DIPE = di-isopropyl ether
 DO = dissolved oxygen
 EDB = ethylene dibromide (1,2 dibromoethane)
 EDC = ethylene dichloride (1,2 dichloroethane)
 EPA = US Environmental Protection Agency
 ETBE = ethyl tertiary-butyl ether
 ft = feet
 GW = groundwater
 MTBE = methyl tertiary-butyl ether
 ORP = oxidation reduction potential
 QA = quality assurance
 QC = quality control
 SA = semiannual
 SM = Standard Methods
 SVE = soil vapor extraction
 TAME = tertiary-amyl methyl ether
 TBA = tertiary-butanol
 Temp = temperature
 TOC = top of casing
 TPH = total petroleum hydrocarbons
 TPH-g = gasoline range hydrocarbons (as analyzed by Northwest Method NWTPH-Gx)
 TPH-d = diesel range hydrocarbons (as analyzed by Northwest Method NWTPH-Dx)
 TPH-o = motor oil range hydrocarbons (as analyzed by Northwest Method TPH-Rx without silica gel cleanup)
 UG = up-gradient
 VOC = volatile organic compounds

A.3. Recent Groundwater Analytical Data and Groundwater Elevation Data

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels ^{(1) (2)}							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Site Wells																									
MW-2	5/25/21	417.23	73.69	0.00	343.54	-0.02	31.6 U	1,250	901	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-3	5/27/21	423.40	79.86	0.00	343.54	-0.06	632 U	12,100 J	3,500 J	0.0941 U	1.39 U	0.685 U	0.870 U	5.00 UJ	0.00536 U	0.409 U	0.525 U	0.505 U	0.505 U	20.3 U	0.975 U	4.76 U	4.95 U		
MW-4	5/25/21	412.05	68.84	0.00	343.21	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-6	5/24/21	358.52	16.44	0.00	342.08	-0.17	31.6 U	66.7 U	120 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-7	5/25/21	411.32	67.82	0.00	343.50	-0.05	31.6 U	66.7 U	103 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-8	5/26/21	383.76	40.38	0.00	343.38	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	14.2		
MW-10	5/25/21	407.83	64.30	0.00	343.53	0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-11	5/25/21	423.44	79.95	0.00	343.49	0.00	31.6 U	765 J	428 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-12	5/27/21	423.62	80.06	0.00	343.56	-0.08	31.6 U	601	448	1.00 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-14	5/25/21	421.84	78.43	0.00	343.41	-0.03	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-15	5/25/21	358.50	16.34	0.00	342.16	-0.09	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-16	5/25/21	370.92	27.68	0.00	343.24	-0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	10.2	4.95 U		
MW-17	5/25/21	424.28	80.78	0.00	343.50	0.02	31.6 U	486	358	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-18	5/26/21	423.69	80.11	0.00	343.58	0.00	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-19	5/26/21	424.20	80.61	0.00	343.59	-0.04	31.6 U	147 J	83.3 U	1.00 U	0.278 U	0.137 U	3.00 U	1.56 J	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-20	5/26/21	426.52	82.94	0.00	343.58	0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-21	5/26/21	426.16	82.66	0.00	343.50	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-22	5/26/21	420.45	77.00	0.00	343.45	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		
MW-23	5/26/21	421.74	78.30	0.00	343.44	0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	20.6	4.95 U		
Tidewater Wells																									
AR-11	5/24/21	422.62	78.98	0.00	343.64	-0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	5/24/21	425.02	81.41	0.00	343.61	-0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Notes:

Values in bold were reported as detected

Yellow shaded detections exceed the Ecology MTCA Cleanup Level

Grey shaded values are limits that exceed the Ecology MTCA Cleanup Level

-- = not analyzed or sample not collected

(1) MTCA Method A Cleanup Levels for Groundwater (Washington Administrative Code 173-340-900 Table 720-1)

(2) TPH-g MTCA Method A Cleanup Levels for Groundwater has two levels. If benzene is present in groundwater, the level is 900 ug/L; if no detectable benzene in groundwater, the level is 1,000 ug/L.

(3) On February 7, 2019, the wells were resurveyed by Stratton Surveying and Mapping, P.C. MW-20 through MW-23 were surveyed on December 10, 2019. Horizontal datum = Washington State Plane South Zone North American Datum 1983(1991). Vertical datum = North American Vertical Datum 29.

Acronyms:

ug/L = microgram per liter

btoc - below top of casing

DIPE = di-isopropyl ether

Ecology = Washington State Department of Ecology

EDB = 1,2-dibromoethane

EDC = 1,2-dichloroethane

ETBE = ethyl tertiary-butyl ether

ft = feet

GW = groundwater

J = estimated concentration

mg/L = milligram per liter

MTBE = methyl tertiary-butyl ether

MTCA = Model Toxics Control Act

NC = not calculated as the depth to groundwater was not accurate

NE = not established

TAME = tertiary-amyl methyl ether

TBA = tertiary-butanol

TOC = top of casing

TPH-d = total petroleum hydrocarbons, diesel range

TPH-g = total petroleum hydrocarbons, gasoline range

TPH-o = total petroleum hydrocarbons, oil range

U = Analyte not detected above limit shown. Starting with data collected since September 2018, the limit shown is the method detection limit.

UJ = Analyte not detected above laboratory report limit; reporting limit estimated.

VOC = Volatile organic compounds

A.4. Simplified TEE, MTCA Table 749-2 Compared to Site MDC in Soil

COEC	Table 749-2 Values Industrial or Commercial Site (mg/kg)	MDC in Soil 0 to 15 ft. bgs (mg/kg)	MDC > Table 749-2 Value
TPH-g	12,000	78*	No
TPH-d	15,000	23**	No

Table Notes:

> = greater than

bgs = below ground surface

COPEC = contaminants of potential ecological concern

ft. = feet

MDC = maximum detected concentrations within the upper 15 feet of the soil column

mg/kg = milligrams per kilogram

TPH-d = total petroleum hydrocarbon of diesel

TPH-g = total petroleum hydrocarbon of gasoline

*Sample collected at MW-17 @ 10-11.5 ft. bgs.

** Sample collected from riverbank sample RB-9.

A.5. Proposed Cleanup Standards

Analyte	Proposed CULs for Site IHSs in Soil ¹ (mg/kg)	Proposed CUL for Site IHSs in Groundwater ² (µg/L)
TPH-g, Benzene Present	30	800
TPH-g, No Benzene Present	100	1,000
TPH-d	2,000	500
TPH-o	2,000	500
Benzene	0.03	5.0
Toluene	7	1,000
Ethylbenzene	6	700
Total Xylenes	9	1,000
Naphthalene	5	160

Table Notes:

(1) MTCA Method A CULs for Soil, Table 745-1 of WAC 173-340-900.

(2) MTCA Method A CULs for Groundwater, Table 720-1 of WAC 173-340-900.

Table Acronyms:

CUL = cleanup level

µg/L = microgram per liter

TPH-d =diesel-range total petroleum hydrocarbons

TPH-g = gasoline-range total petroleum hydrocarbons

TPH-o = motor oil-range total petroleum hydrocarbons

mg/kg = milligram per kilogram

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code

A.6. Cleanup Action, Applicable, Relevant and Appropriate Requirements

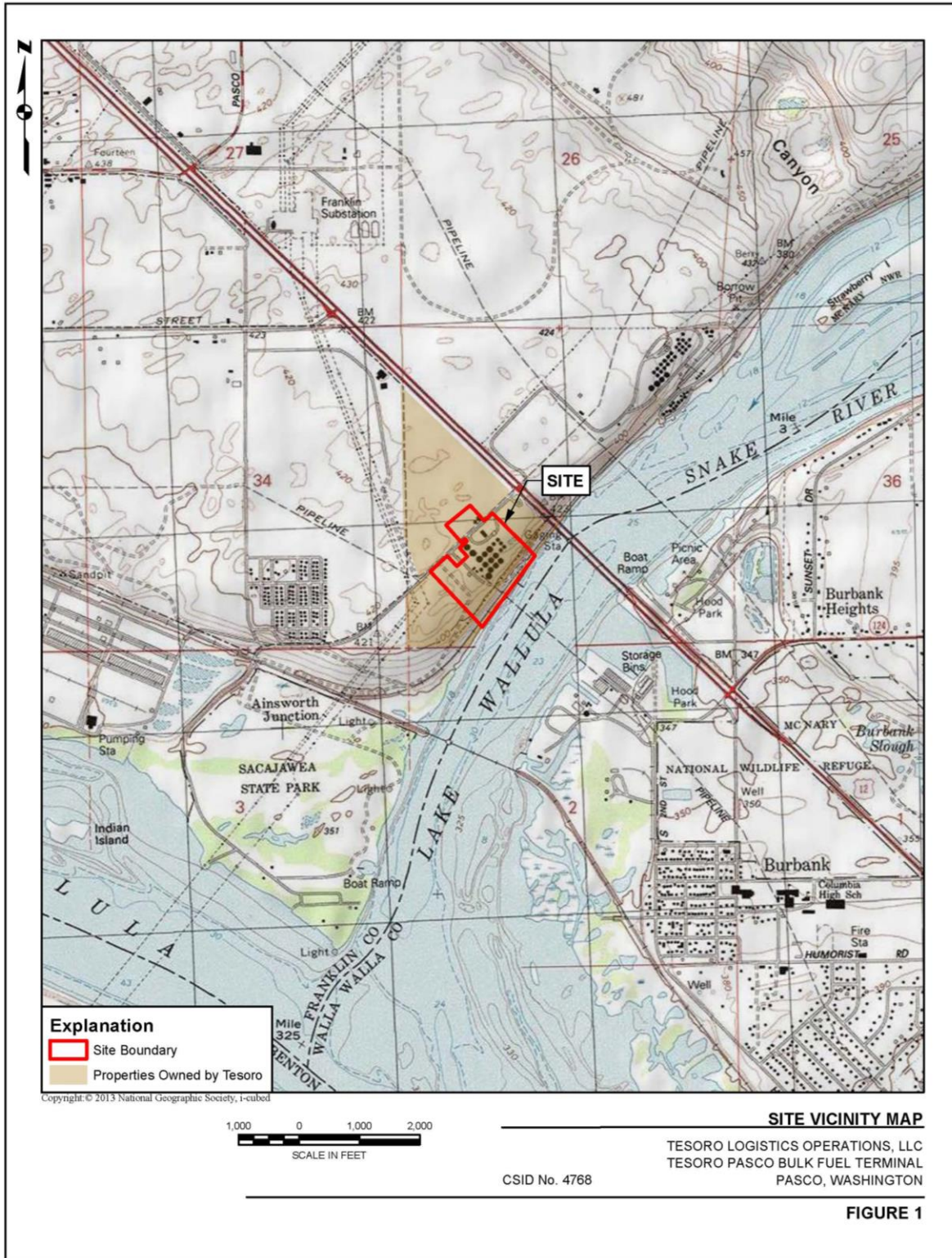
	Cleanup Action Implementation
Ch. 18.104 RCW; Ch. 173-160 WAC	Water Well Construction. Minimum Standards for Construction and Maintenance of Water Wells
Ch. 173-162 WAC	Rules & Regulations Governing the Licensing of Well Contractors & Operators
Ch. 43.21C RCW; Ch. 197-11 WAC	State Environmental Policy Act; SEPA Rules
29 CFR 1910	Occupational Safety and Health Act
Ch. 49.17 RCW	Washington Industrial Safety and Health Act
	Groundwater and Surface Water
42 USC 300	Safe Drinking Water Act
33 USC 1251;	Clean Water Act of 1972;
40 CFR 131; Ch. 173-201A WAC	General Regulations Clean Water Act of 1972; Water Quality Standards
40 CFR 141; 40 CFR 143	National Primary Drinking Water Standards; National Secondary Drinking Water Standards
Ch. 246-290 WAC	Department of Health Standards for Public Water Supplies
Ch. 173-154 WAC	Protection of Upper Aquifer Zones
	Air
42 USC 7401;	Clean Air Act of 1977;
40 CFR 50	National Ambient Air Quality Standards
Ch. 70A.15 RCW	Washington Clean Air Act
Ch. 173-400 WAC	General Regulations for Air Pollution
Ch. 173-460 WAC Ch. 173-476 WAC	Controls for New Sources of Air Pollution Ambient Air Quality Standards

A.7. Evaluation of Cleanup Alternatives

Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	ICs, MNA, NSZD	ICs, MNA, NSZD, ORC sleeves	ICs, MNA, NSZD, ORC sleeves, Bio Sparging	ICs, MNA, NSZD, ORC sleeves, Bio Sparging, AC injection
Threshold Requirements				
Protection of human health & environment	no	yes	yes	yes
Compliance with cleanup standards	no	yes	yes	yes
Compliance with state & federal laws	no	yes	yes	yes
Provision for compliance monitoring	yes	yes	yes	yes
Other Requirements				
Protectiveness	?	high	high	high
Permanent Reduction	?	yes	yes	yes
Cleanup Cost (estimated)	\$689,600	\$786,400	\$1,350,400	\$1,425,300
Long-term Effectiveness	?	yes	yes	yes
Short-term Risk	low	low	medium*	medium*
Implementability	yes	yes	maybe no**	maybe no**
Consider Public Concerns	low	yes	yes	yes
Provide Reasonable Time Frame	no	yes	yes	yes
Consider Public Comments	yes	yes	yes	yes
* Heavy equipment, electrical and possibly hot work is required in sensitive areas.				
** Bio-sparging or AC injection may be impossible at locations that are essential for successful cleanup due to on-site structures				

Appendix B. Figures

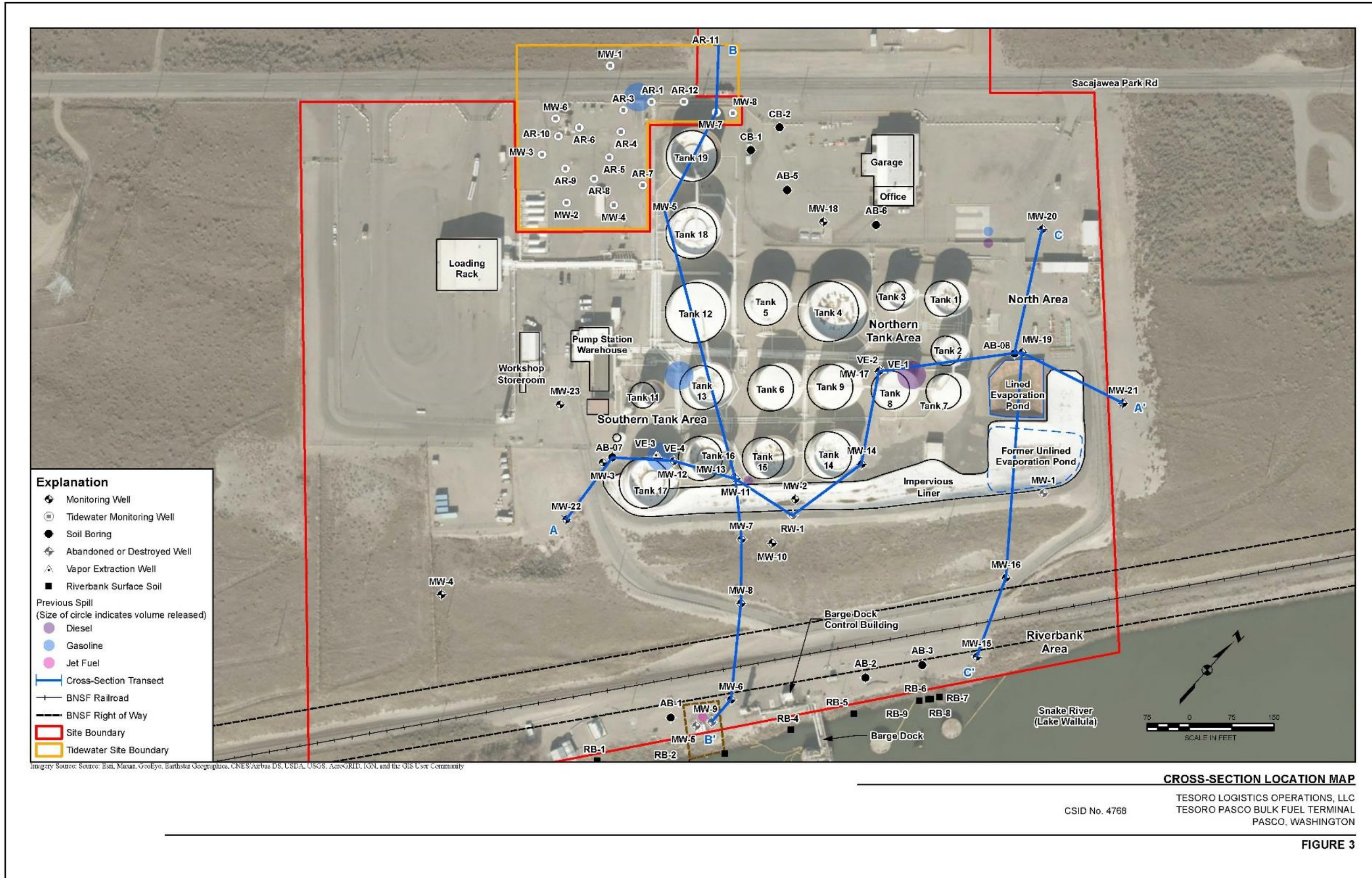
B.1. Site Vicinity Map



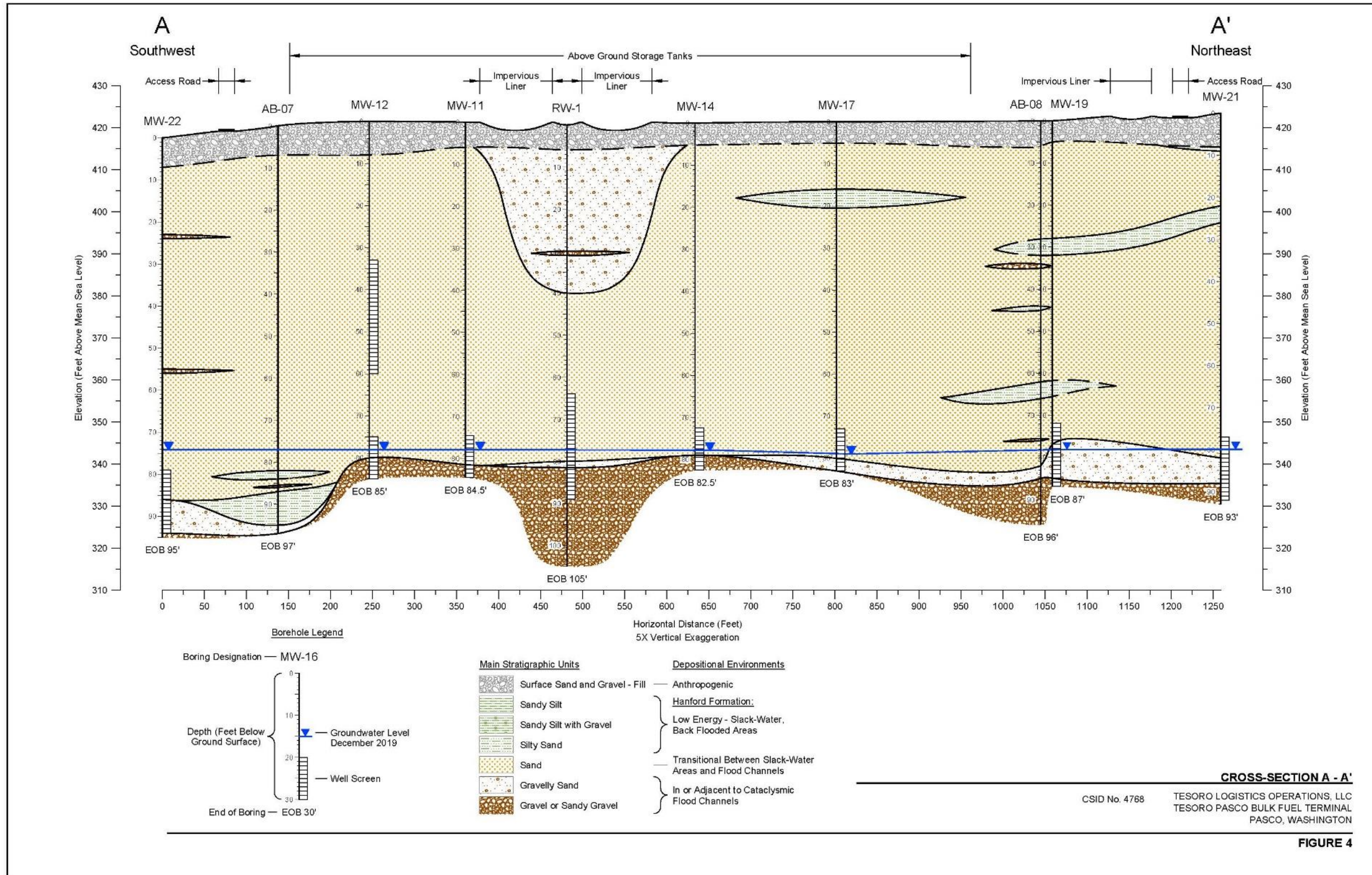
B.2. Site Plan



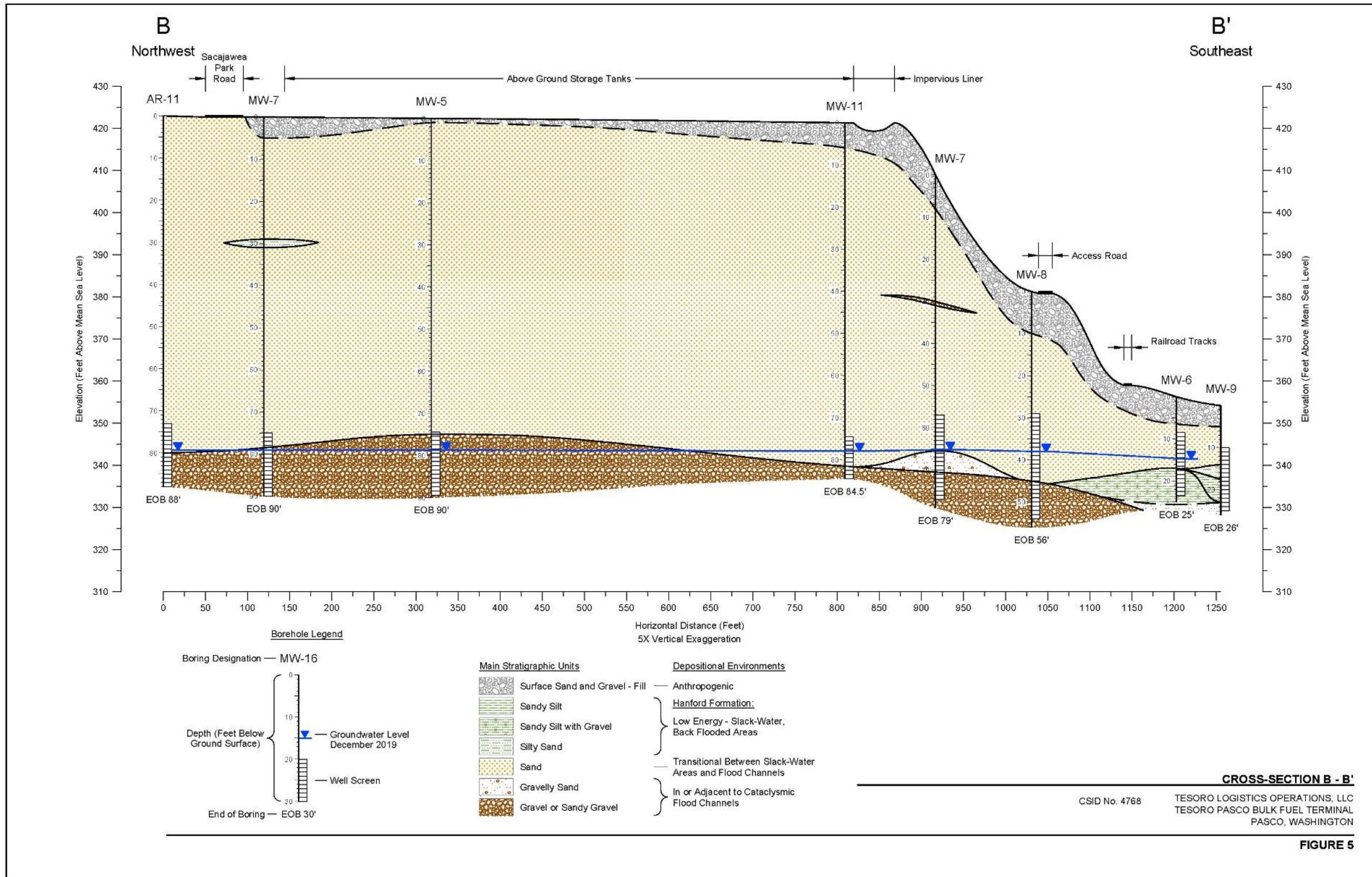
B.3. Cross-section Location Map



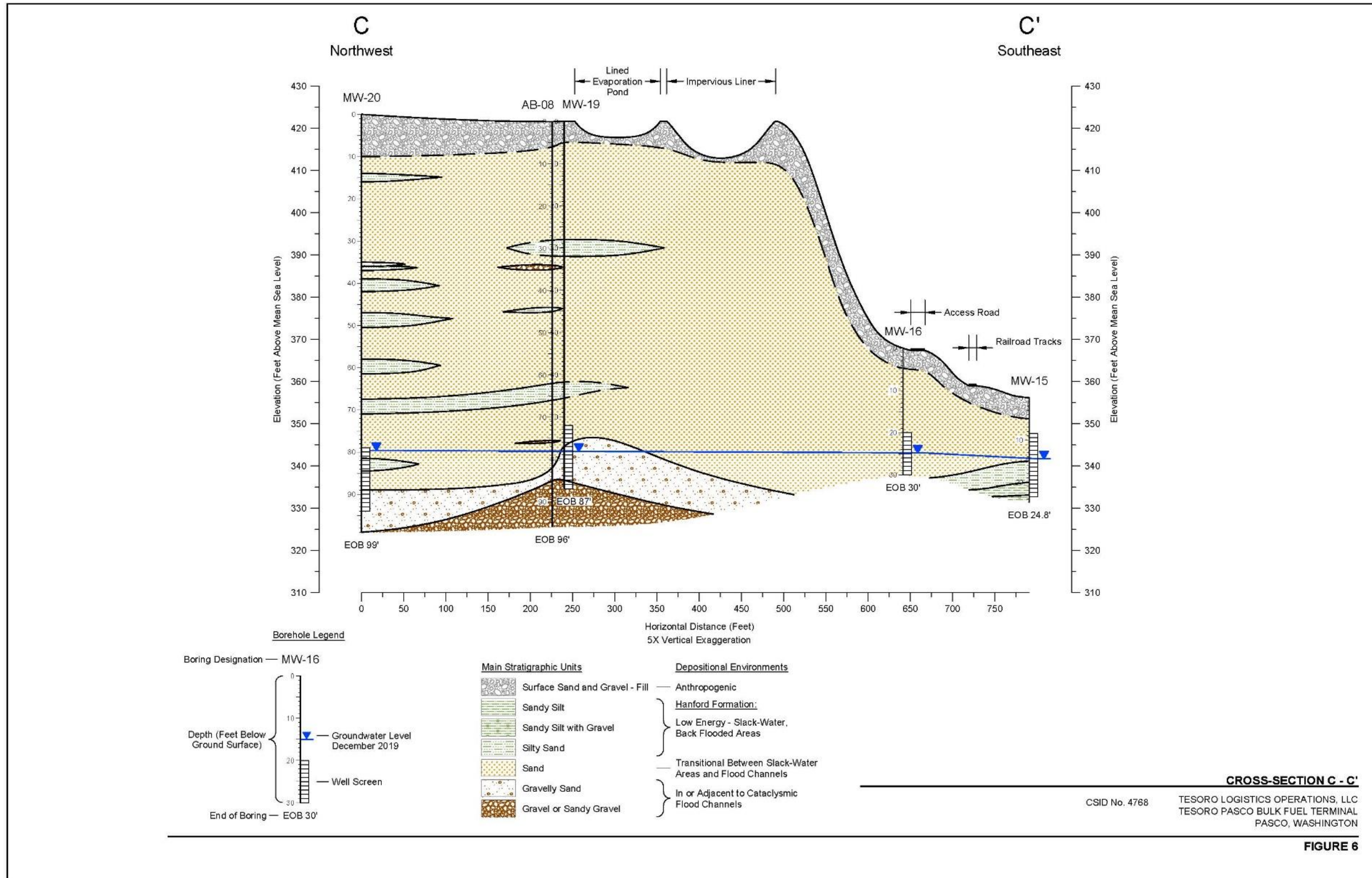
B.4. Cross-section A-A'



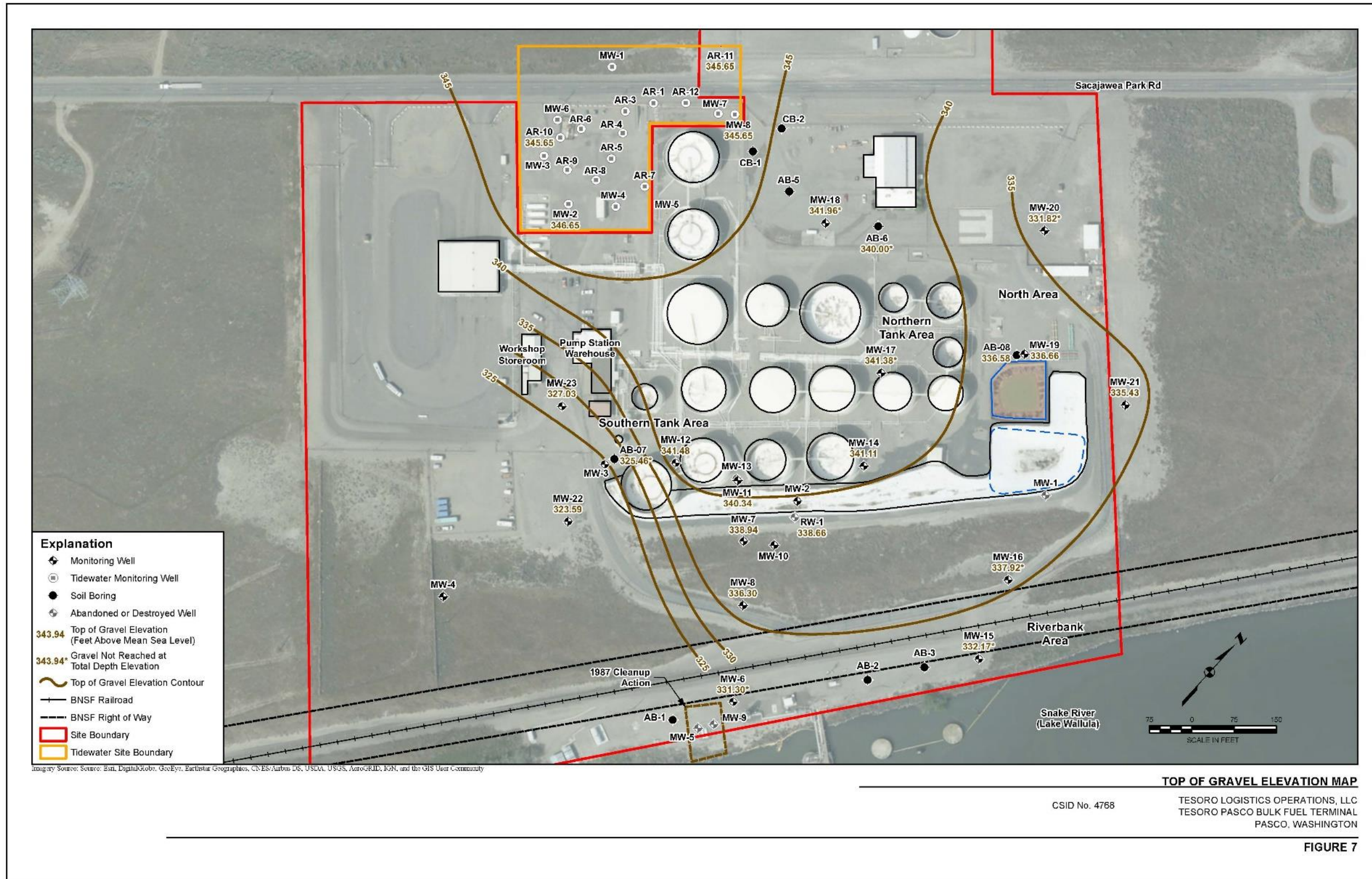
B.5. Cross-section B-B'



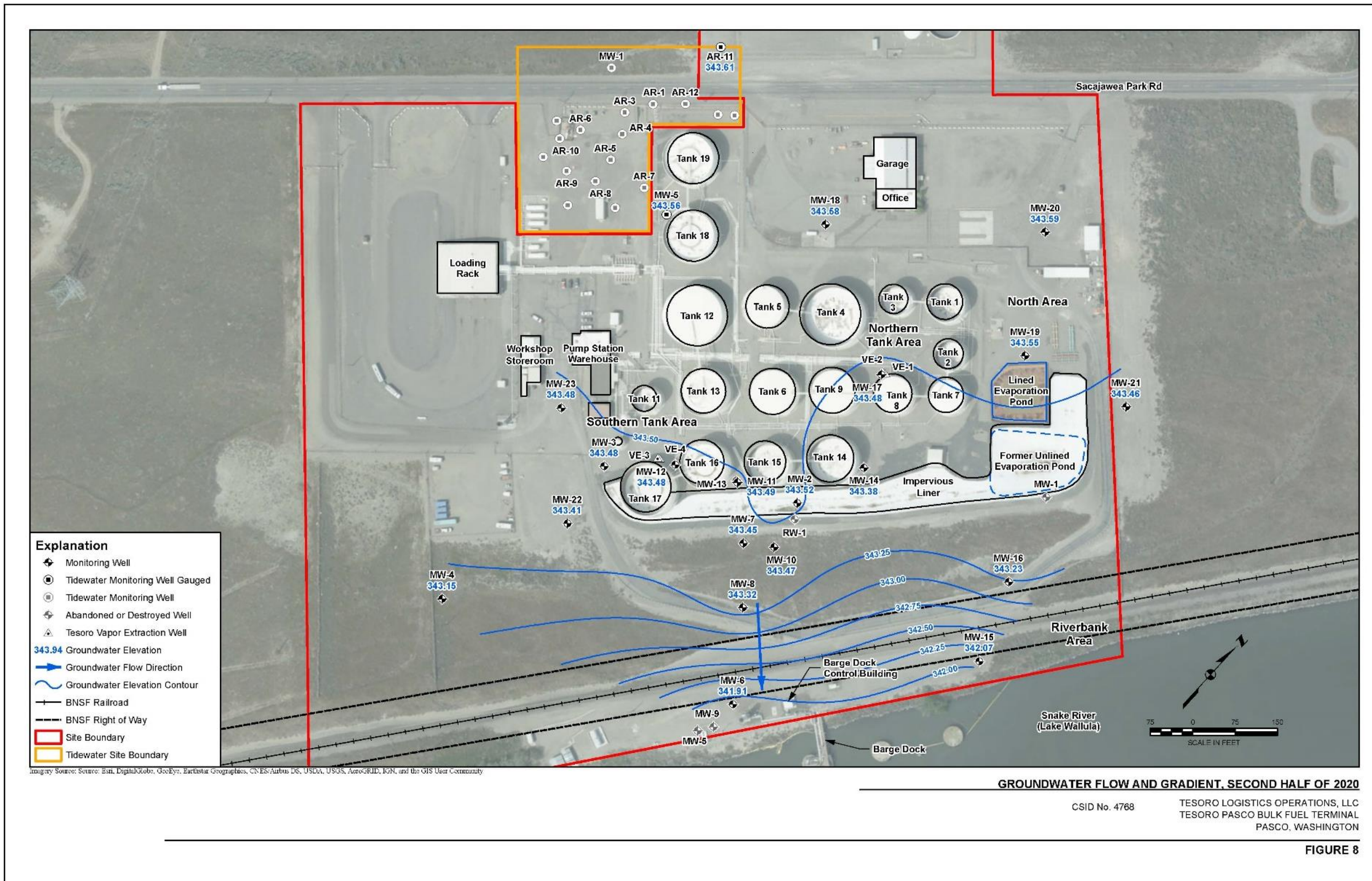
B.6. Cross-section C-C'



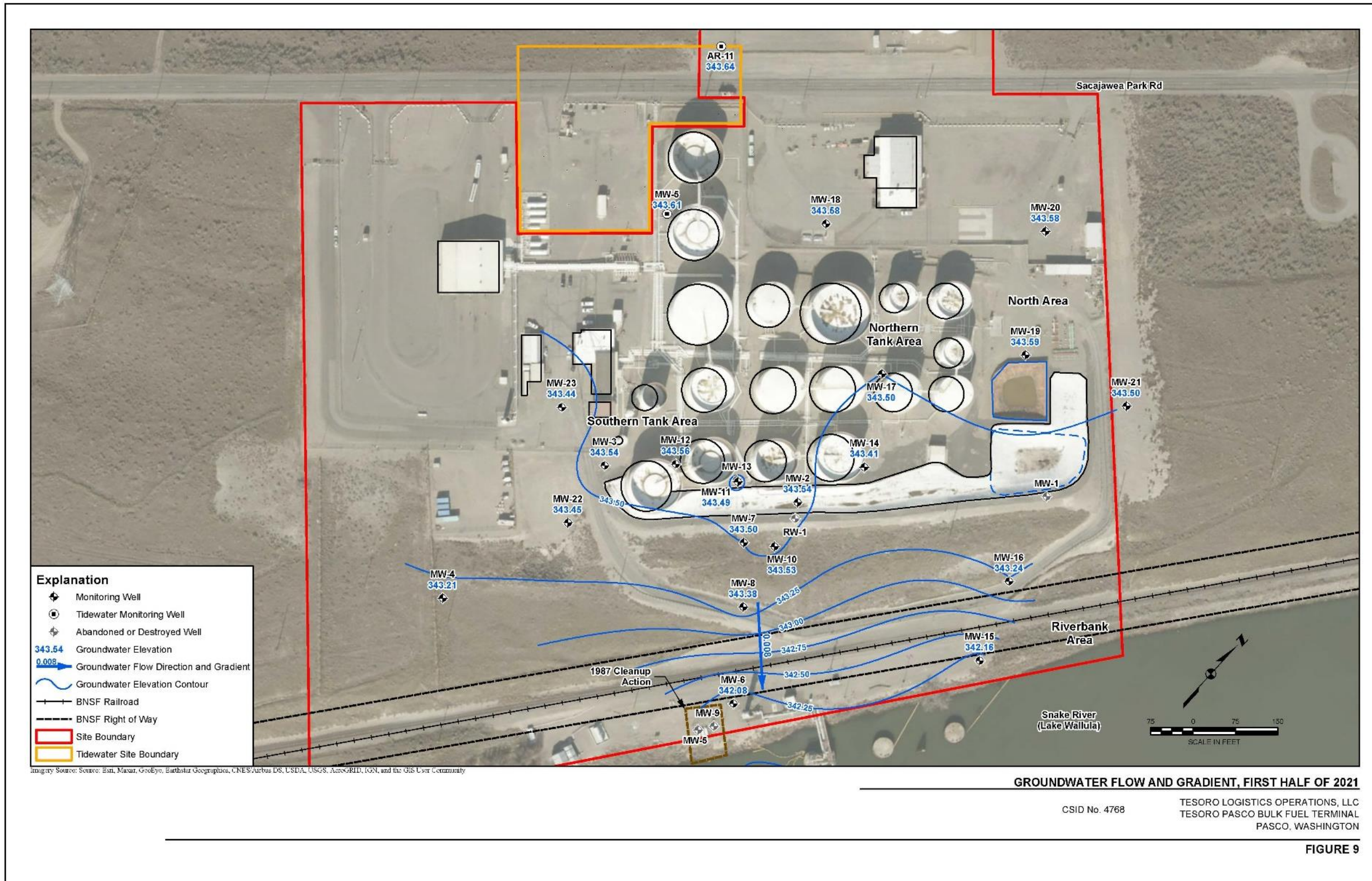
B.7. Top of Gravel Elevation Map



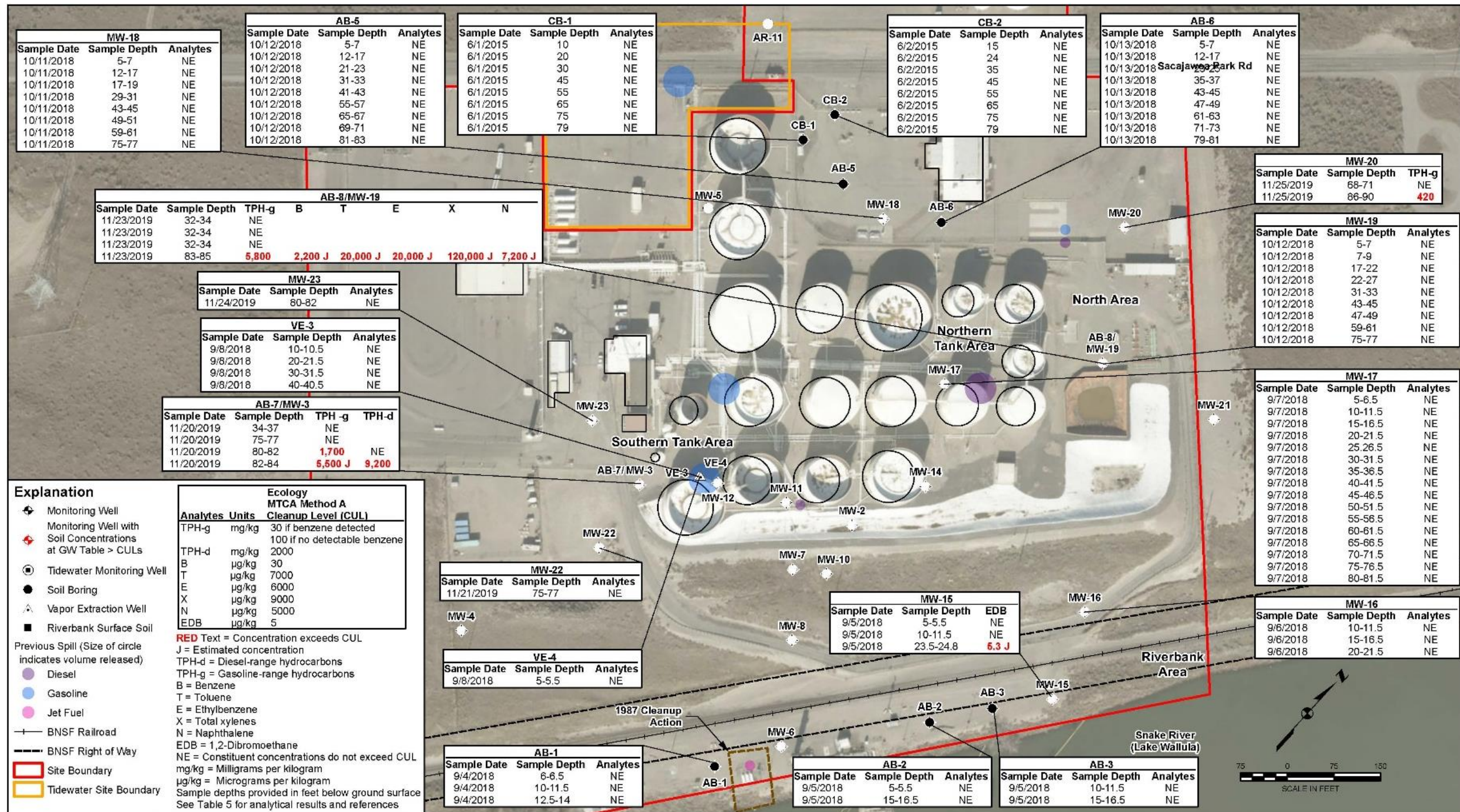
B.8. Groundwater Flow and Gradient, Second Half of 2020



B.9. Groundwater Flow and Gradient, First Half of 2021



B.10. Constituents of Concern Detected in Soils

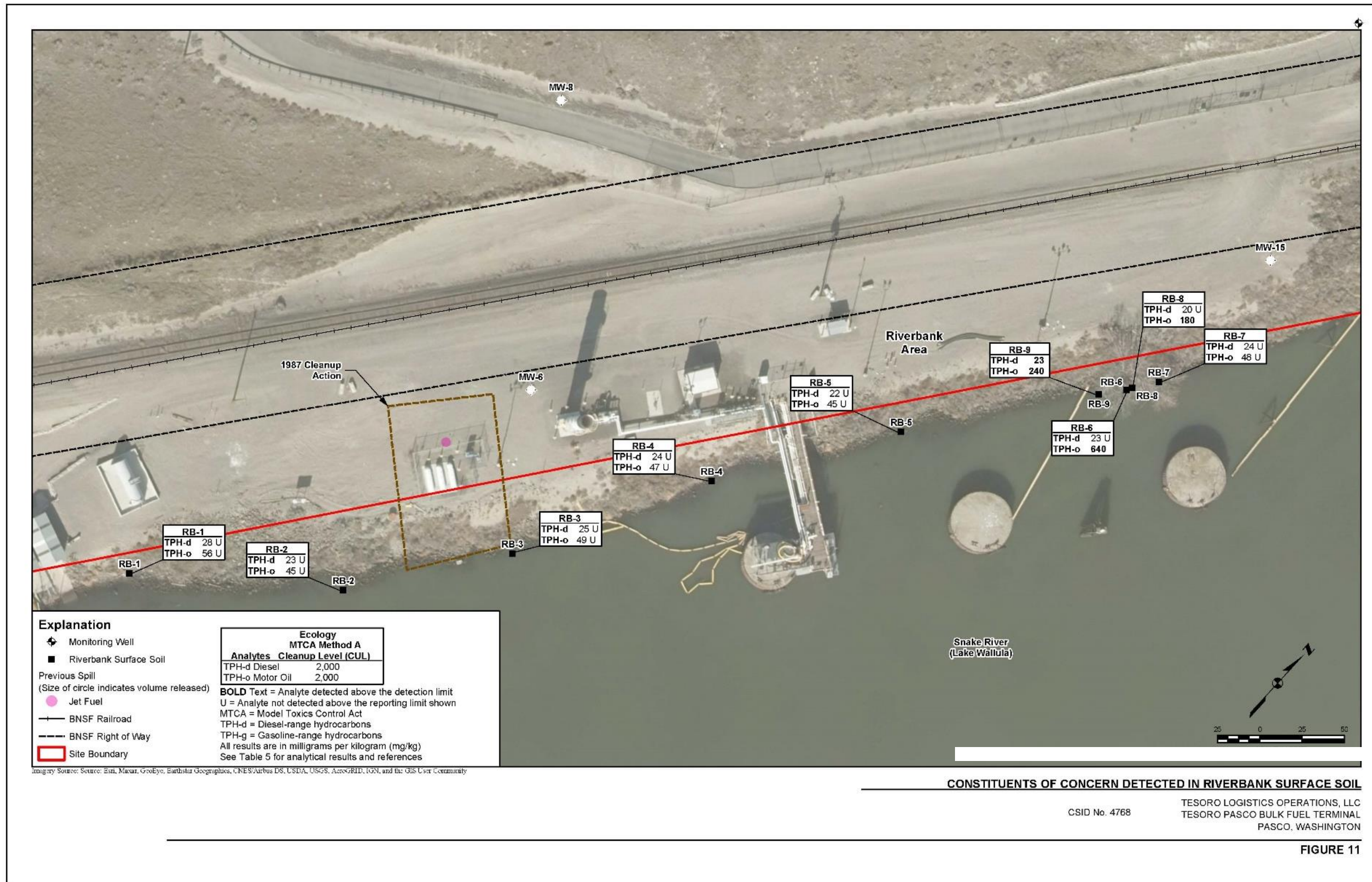


CONSTITUENTS OF CONCERN DETECTED IN SOILS

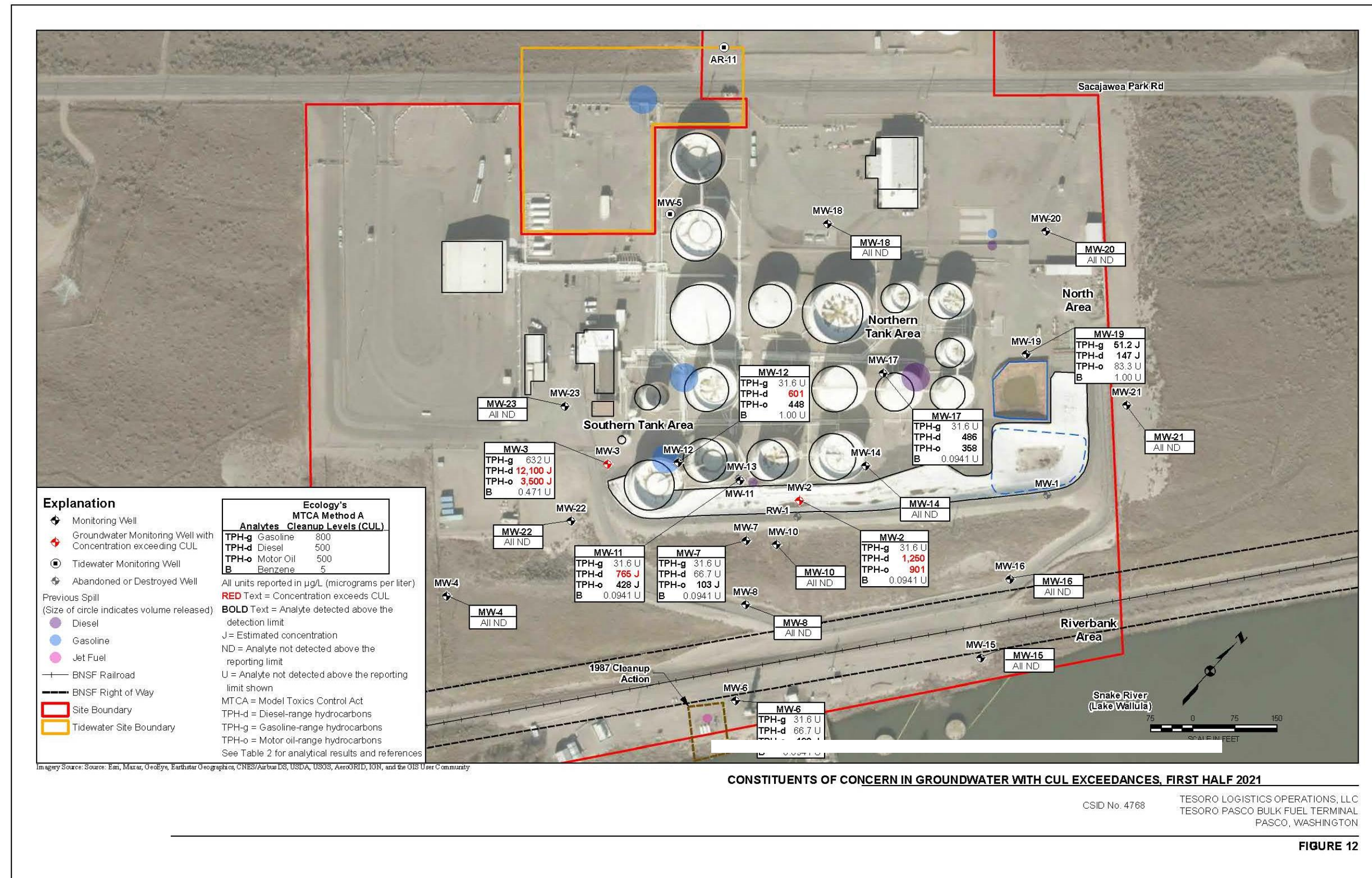
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TESORO PASCO BULK FUEL TERMINAL
PASCO, WASHINGTON

FIGURE 10

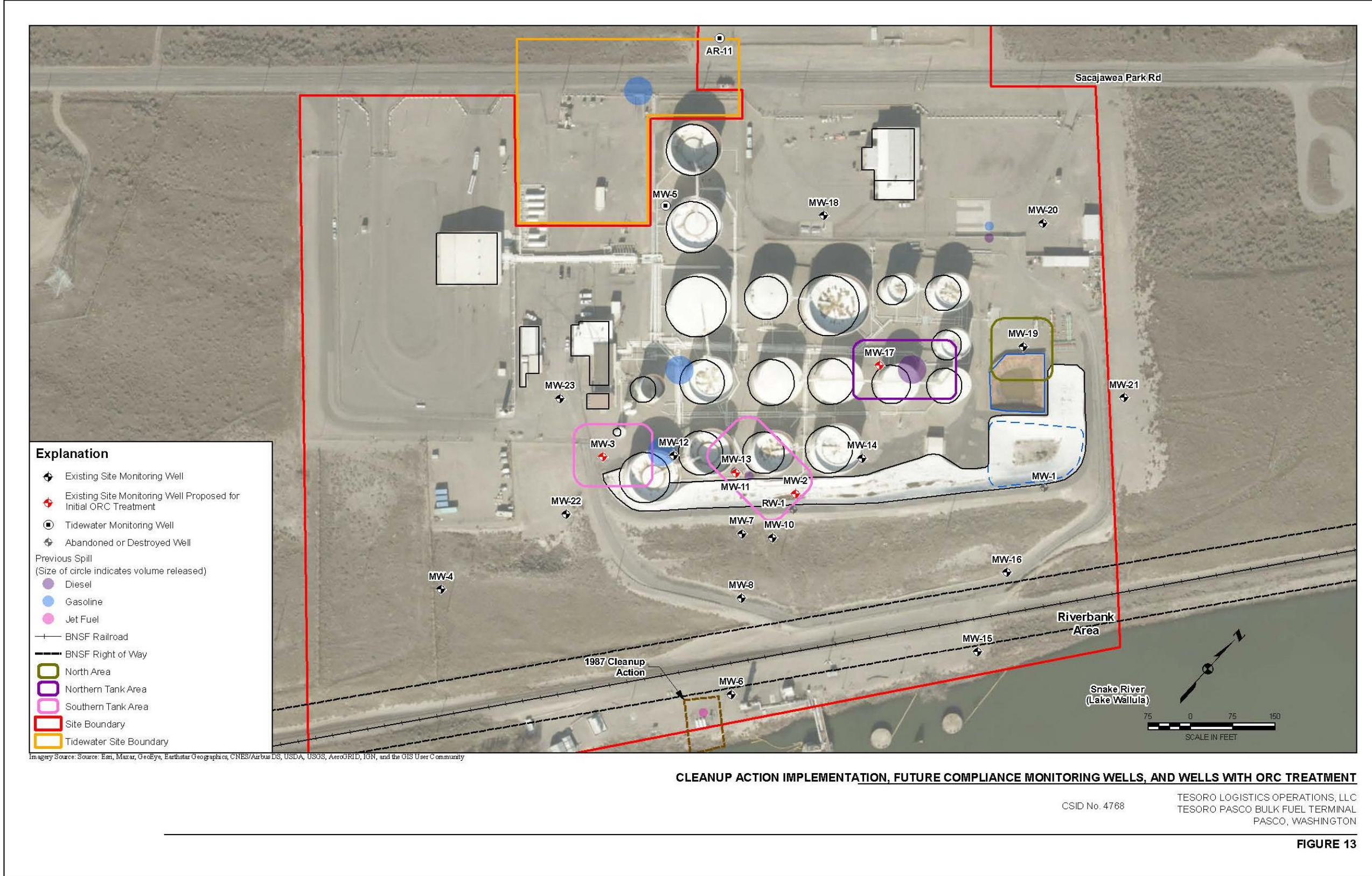
B.11. Constituents of Concern Detected in Riverbank Surface Soil



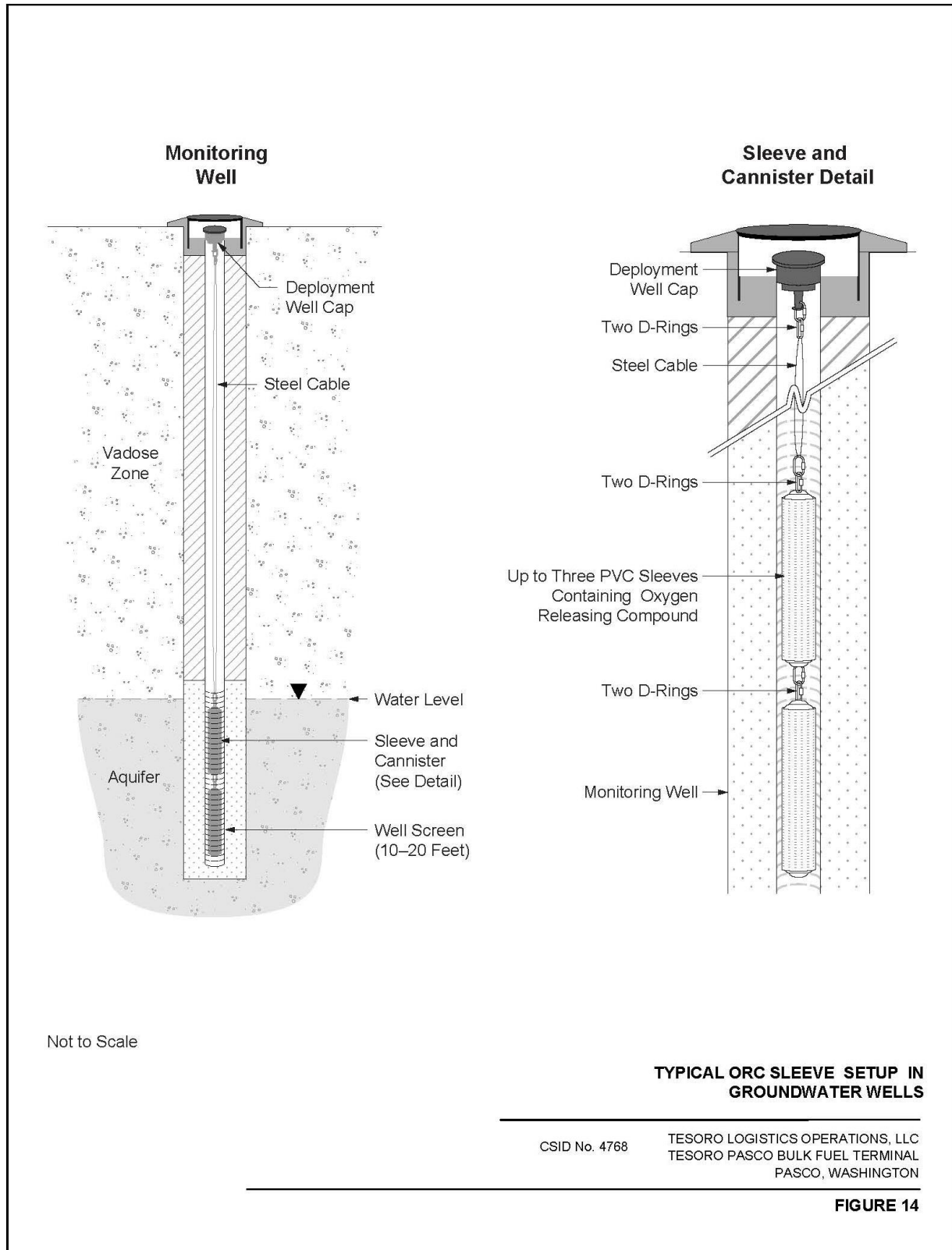
B.12. Constituents of Concern in Groundwater with CUL Exceedances, First Half 2021



B.13. Cleanup Action Implementation, Future Compliance Monitoring Wells, and Wells with ORC Treatment



B.14. Typical ORC Sleeve Setup in Groundwater Wells



Appendix C: Historic and Current Groundwater Elevations and Analytical Data

C.1. Historic and Current Groundwater Elevations and Analytical Results

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers						Fuel Oxygenates										
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
							<i>MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																			
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
							<i>Units: ft NAVD29⁽³⁾ ft btoc ft ft NAVD29 ft ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L mg/L mg/L</i>																			
MW-1	1983	419.45	82.00	0	337.45	--	--	--	5.7	1.0 U	--	24	--	--	--	--	--	--	--	--	--	--				
	8/26/87	419.45	76.77	0	342.68	-5.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	12/11/87	419.45	76.03	0	343.42	-0.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/5/88	419.45	75.96	0	343.49	-0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/3/88	419.45	76.01	0	343.44	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/1/88	419.45	75.93	0	343.52	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/5/88	419.45	75.83	0	343.62	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/3/88	419.45	75.92	0	343.53	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/7/88	419.45	76.61	0	342.84	0.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/5/88	419.45	77.03	0	342.42	0.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/12/90	419.45	76.64	0	342.81	-0.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/6/90	419.45	77.26	0	342.19	0.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/19/90	419.45	76.82	0	342.63	-0.44	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--				
	2/14/91	419.45	76.35	0	343.10	-0.47	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--				
	5/15/91	419.45	76.57	0	342.88	0.22	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--				
	8/8/91	419.45	77.56	0	341.89	0.99	--	--	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--				
	4/1/92	419.45	76.38	0	343.07	-1.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/1/92	419.45	77.21	0	342.24	0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	12/1/92	419.45	76.75	0	342.70	-0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/1/93	419.45	77.25	0	342.20	0.50	--	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--				
	2/1/94	419.45	76.40	0	343.05	-0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/31/95	419.45	76.50	0	342.95	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/27/95	419.45	77.70	0	341.75	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/31/95	419.45	77.60	0	341.85	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/28/95	419.45	76.30	0	343.15	-1.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/31/95	419.45	76.60	0	342.85	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/30/95	419.45	76.75	0	342.70	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/24/95	419.45	77.30	0	342.15	0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/29/95	419.45	77.20	0	342.25	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/27/95	419.45	77.32	0	342.13	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/31/96	419.45	77.00	0	342.45	-0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/29/96	419.45	76.90	0	342.55	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/29/96	419.45	76.70	0	342.75	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/29/96	419.45	76.90	0	342.55	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/22/96	419.45	76.50	0	342.95	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/28/96	419.45	76.20	0	343.25	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/31/96	419.45	76.00	0	343.45	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/30/96	419.45	75.90	0	343.55	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/30/96	419.45	75.70	0	343.75	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	10/31/96	419.45	77.40	0	342.05	1.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/19/96	419.45	76.60	0	342.85	-0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/30/97	419.45	76.68	0	342.77	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/28/97	419.45	76.00	0	343.45	-0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
							<i>MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																		
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
<i>Units:</i>							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-1 continued	4/19/97	419.45	76.00	0	343.45	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/20/97	419.45	75.92	0	343.53	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/2/97	419.45	76.00	0	343.45	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/26/98	419.45	78.04	0	341.41	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/25/98	419.45	76.21	0	343.24	-1.83	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	9/17/98	419.45	75.62	0	343.83	-0.59	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	12/18/98	419.45	75.23	0	344.22	-0.39	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	3/29/99	419.45	75.46	0	343.99	0.23	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	6/24/99	419.45	76.33	0	343.12	0.87	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	10/8/99	419.45	77.14	0	342.31	0.81	1,740	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	12/20/99	419.45	76.52	0	342.93	-0.62	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	3/14/00	419.45	76.02	0	343.43	-0.50	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	6/8/00	419.45	74.72	0	344.73	-1.30	52.1	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	9/13/00	419.45	DRY	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/6/00	419.45	DRY	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/26/01	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/5/01	419.45	76.71	0	342.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/25/01	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/5/02	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/11/03	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/17/04	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/11/05	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/7/06	419.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11/15/07	419.24	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/8/08	419.24	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
6/30/10	419.40	74.99	0	344.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
12/14/10	419.40	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Well abandoned September 2018																									

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
							<i>MTCA Method A Cleanup Levels (1)(2)</i>																		
<i>Units:</i>							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-2	1983	416.57	78.00	0	338.57	--	--	--	--	1.4	1 U	--	1 U	--	--	--	--	--	--	--	--	--	--		
	11/17/86	416.57	--	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/15/86	416.57	--	0.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/8/87	416.57	--	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/16/87	416.57	--	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/26/87	416.57	73.90	1.70	342.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/2/87	416.57	73.94	1.67	342.63	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/11/87	416.57	72.17	0.34	344.40	-1.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/16/88	416.57	71.86	0	344.71	-0.31	--	--	--	29	43	5	236	--	--	--	--	--	--	--	--	--	--		
	5/10/88	416.57	71.95	0.13	344.62	--	--	--	--	0.5	12	0.5	0.5	--	--	--	--	--	--	--	--	--	--		
	6/1/88	416.57	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	8/24/88	416.57	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/17/89	416.57	--	1.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/12/90	416.57	73.74	0	342.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/90	416.57	74.58	0.15	341.99	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/90	416.57	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/90	416.57	73.97	0.10	342.60	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	12/16/90	416.57	--	0.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/13/91	416.57	--	1.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/5/91	416.57	--	0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/14/91	416.57	74.14	0.39	342.43	--	--	--	--	40	95	29	1,300	--	--	--	--	--	--	--	--	--	--		
	3/28/91	416.57	--	0.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/15/91	416.57	74.18	0.56	342.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/1/91	416.57	--	1.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/20/91	416.57	--	3.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/8/91	416.57	77.54	3.35	339.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/27/91	416.57	--	0.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/17/1991	416.57	--	0.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/27/91	416.57	--	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/18/92	416.57	--	0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/17/92	416.57	--	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/8/92	416.57	--	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/4/92	416.57	--	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/2/92	416.57	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/92	416.57	--	0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/30/92	416.57	74.35	0.39	342.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/16/92	416.57	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	416.57	73.07	0	343.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/2/93	416.57	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/15/93	416.57	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/18/93	416.57	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/1/93	416.57	73.66	0	342.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/1/93	416.57	72.98	0	343.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels ⁽¹⁾⁽²⁾							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-2	12/28/93	416.57	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
continued	10/18/93	416.57	73.66	0	342.91	--	370	--	--	0.8	0.5	5.0	4.4	--	--	--	--	--	--	--	--	--	--	--	
	2/1/94	416.57	72.98	0	343.59	-0.68	1,100	--	--	1.8	0.5 U	4.8	27.0	--	--	--	--	--	--	--	--	--	--	--	
	9/19/94	416.57	--	0	--	--	--	--	--	1.0 U	5.0 U	5.0 U	15 U	--	--	--	--	--	--	--	--	--	--	--	
	1/31/95	416.57	73.60	0.13	342.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/27/95	416.57	73.20	0.13	343.37	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/31/95	416.57	73.20	0.13	343.37	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/28/95	416.57	72.20	0.13	344.37	-1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/31/95	416.57	73.40	0.13	343.17	1.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/30/95	416.57	73.65	0.13	342.92	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/24/95	416.57	74.26	Trace	342.31	0.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/29/95	416.57	74.31	Trace	342.26	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/27/95	416.57	74.07	Trace	342.50	-0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/31/96	416.57	73.40	Trace	343.17	-0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/29/96	416.57	72.22	0	344.35	-1.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/96	416.57	72.50	0	344.07	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/29/96	416.57	72.60	0	343.97	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/22/96	416.57	72.50	0	344.07	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/28/96	416.57	73.90	0	342.67	1.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/31/96	416.57	73.80	0	342.77	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/30/96	416.57	73.50	0	343.07	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/30/96	416.57	72.70	0	343.87	-0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/31/96	416.57	74.50	0	342.07	1.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/19/96	416.57	74.50	0	342.07	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/30/97	416.57	73.52	0	343.05	-0.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/28/97	416.57	73.30	0	343.27	-0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/19/97	416.57	73.00	0	343.57	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/97	416.57	72.83	0	343.74	-0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/2/97	416.57	72.90	0	343.67	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/26/98	416.57	72.85	0	343.72	-0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/25/98	416.57	73.34	0	343.23	0.49	119	--	--	0.5 U	0.715	0.636	1.46	--	--	--	--	--	--	--	--	--	--	--	
	9/17/98	416.57	72.82	0	343.75	-0.52	50 U	--	--	0.5 U	0.5	1.03	1.95	--	--	--	--	--	--	--	--	--	--	--	
	12/18/98	416.57	72.41	0	344.16	-0.41	59.7	--	--	0.5 U	0.5 U	0.501	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	3/29/99	416.57	72.53	0	344.04	0.12	113	--	--	0.518	0.5 U	0.5 U	1.05	--	--	--	--	--	--	--	--	--	--	--	
	6/24/99	416.57	73.40	0	343.17	0.87	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	10/8/99	416.57	74.32	0	342.25	0.92	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	12/20/99	416.57	73.67	0	342.90	-0.65	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	3/14/00	416.57	73.19	0	343.38	-0.48	124	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	6/8/00	416.57	73.86	0	342.71	0.67	115	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	9/13/00	416.57	74.67	0	341.90	0.81	138	--	--	0.5 U	0.551	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	12/6/00	416.57	73.95	0	342.62	-0.72	82.8	--	--	0.5 U	0.5	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	3/26/01	416.57	73.35	0	343.22	-0.60	130	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	
	6/5/01	416.57	73.81	0	342.76	0.46	52.6	--	--	0.5 U	0.772	0.5 U	2.15	--	--	--	--	--	--	--	--	--	--	--	

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates												
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol						
							<i>MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																						
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE						
<i>Units:</i>							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	
MW-2 continued	9/25/01	416.57	74.50	0	342.07	0.69	112	--	--	0.5 U	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/02	416.57	75.12	0	341.45	0.62	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/11/03	416.57	74.71	0	341.86	-0.41	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/17/04	416.57	74.07	0	342.50	-0.64	48 U	1,900	130	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/11/05	416.57	74.05	0	342.52	-0.02	48 U	2,700	1,500	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--		
	7/7/06	416.57	73.25	0	343.32	-0.80	48 U	1,000	220	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--		
	11/15/07	416.49	74.05	0	342.44	0.88	50 U	2,000	460	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--		
	10/8/08	416.49	73.44	0	343.05	-0.61	50 U	1,200	210	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	0.2 U	--	--	--		
	6/30/10	417.28	72.80	0	344.48	-1.43	50 U	3,600	3,300	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	10 U	--	--	--		
	12/15/10	417.28	73.21	0	344.07	0.41	50 U	3,100	2,400	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	--	10 U	--	--	--	--		
	5/29/14	417.28	72.83	--	344.45	-0.38	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U		
	10/29/14	417.28	74.03	--	343.25	1.20	250 U	250 U	500 U	0.50 U	0.68	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U		
	6/4/15	417.28	73.31	--	343.97	-0.72	250 U	140	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U		
	9/28/15	417.28	74.42	--	342.86	1.11	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U			
	8/29/16	417.28	74.52	--	342.76	0.10	50 U	1,400	710	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U	10 U			
	12/5/16	417.28	74.02	--	343.26	-0.50	50 U	410	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U	10 U			
	5/17/17	417.28	72.86	--	344.42	-1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/24/17	417.28	74.12	--	343.16	1.26	250 U	580	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U	10 U			
	6/14/18	417.28	72.89	--	344.39	-1.23	250 U	450	480	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U	10 U			
	12/2/18	417.23	73.93	--	343.30	1.09	100 U	1,300	1,800	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U	4.0 U				
6/26/19	417.23	73.49	--	343.74	-0.44	100 U	1,500	1,200	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U						
12/11/19	417.23	73.75	0.00	343.48	0.26	100 U	1,600	1,100	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U	0.220 U						
6/24/20	417.23	73.38	0.00	343.85	-0.37	100 U	1,200	930	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U						
12/15/20	417.23	73.71	0.00	343.52	-0.04	100 U	460	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U						
5/25/21	417.23	73.69	0.00	343.54	-0.02	31.6 U	1,250	901	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U	4.95 U						

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates									
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
MTC Method A Cleanup Levels (1)(2)							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-3	1983	423.30	83.20	0	340.10	--	--	--	--	19	1.0 U	--	1.2	--	--	--	--	--	--	--	--	--	--	--		
	8/26/87	423.30	78.68	0	344.62	-4.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/11/87	423.30	77.92	0	345.38	-0.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/5/88	423.30	77.86	0	345.44	-0.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/3/88	423.30	77.91	0	345.39	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/1/88	423.30	77.90	0	345.40	-0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/5/88	423.30	77.74	0	345.56	-0.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/3/88	423.30	77.84	0	345.46	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/12/90	423.30	78.52	0	344.78	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/88	423.30	79.19	0	344.11	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/90	423.30	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/90	423.30	78.72	0	344.58	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--		
	12/16/90	423.30	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/13/91	423.30	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/13/91	423.30	78.27	0	345.03	--	--	--	--	ND	3.9	7.3	80	--	--	--	--	--	--	--	--	--	--	--		
	3/28/91	423.30	--	0.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/15/91	423.30	79.03	0.71	344.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/1/91	423.30	--	0.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/20/91	423.30	--	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/4/91	423.30	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/27/91	423.30	--	0.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/17/91	423.30	--	0.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/27/91	423.30	--	1.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/18/92	423.30	--	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/17/92	423.30	--	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/8/92	423.30	--	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/21/92	423.30	78.68	0.45	344.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/28/92	423.30	--	1.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/92	423.30	--	2.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/28/92	423.30	--	1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/30/92	423.30	80.05	1.16	343.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/16/92	423.30	--	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	423.30	78.61	0.00	344.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/2/93	423.30	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/15/93	423.30	--	1.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/18/93	423.30	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/5/93	423.30	--	1.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/28/93	423.30	--	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/1/94	423.30	80.26	0	343.04	--	17,000	--	--	0.01	0.01	0.05	0.26	--	--	--	--	--	--	--	--	--	--	--		
	9/19/94	423.30	--	0	--	--	--	--	--	4.6	21	136	187	--	--	--	--	--	--	--	--	--	--	--		
	1/31/95	423.30	80.20	0.12	343.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/27/95	423.30	80.30	0.12	343.00	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/31/95	423.30	80.40	0.12	342.90	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates									
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
							<i>MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																			
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-3	4/28/95	423.30	79.10	0.12	344.20	-1.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
continued	5/31/95	423.30	80.60	0.1	342.70	1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/30/95	423.30	79.85	0.1	343.45	-0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/24/95	423.30	80.73	0.13	342.57	0.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/29/95	423.30	80.60	0.10	342.70	-0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/27/95	423.30	80.28	0.07	343.02	-0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/31/96	423.30	80.40	0.05	342.90	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/29/96	423.30	80.50	0.20	342.80	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/29/96	423.30	80.30	0.47	343.00	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/29/96	423.30	79.65	0.65	343.65	-0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/22/96	423.30	80.10	0.78	343.20	0.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/28/96	423.30	80.00	0.17	343.30	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/31/96	423.30	79.95	0.22	343.35	-0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/30/96	423.30	79.80	0.30	343.50	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/30/96	423.30	78.70	1.13	344.60	-1.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/31/96	423.30	82.26	0.90	341.04	3.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/96	423.30	80.77	0.17	342.53	-1.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/30/97	423.30	80.10	Trace	343.20	-0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/28/97	423.30	79.80	0.10	343.50	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/19/97	423.30	79.50	Trace	343.80	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/20/97	423.30	79.50	Trace	343.80	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/2/97	423.30	79.50	Trace	343.80	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/26/98	423.30	79.58	Trace	343.72	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/24/98	423.30	80.00	0	343.30	0.42	13,500	--	--	10 U	10 U	20 U	--	--	--	--	--	--	--	--	--	--	--			
	9/17/98	423.30	79.46	0	343.84	-0.54	250 U	--	--	4.93	4.93	6.74	17.4	--	--	--	--	--	--	--	--	--	--			
	12/18/98	423.30	79.07	0	344.23	-0.39	500 U	--	--	5.0	5.0 U	5.0 U	10 U	--	--	--	--	--	--	--	--	--	--			
	3/29/99	423.30	79.21	0	344.09	0.14	1,380	--	--	2.5 U	2.5 U	2.5 U	5.0 U	--	--	--	--	--	--	--	--	--	--			
	6/24/99	423.30	79.50	0.01	343.80	0.29	823	--	--	2.98	2.5 U	2.5 U	5.0 U	--	--	--	--	--	--	--	--	--	--			
	10/8/99	423.30	81.59	0.77	341.71	2.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/20/99	423.30	80.23	0	343.07	-1.36	5,880	--	--	1.3 U	1.1 U	4.1 U	21.1	--	--	--	--	--	--	--	--	--	--			
	3/14/00	423.30	79.77	0	343.53	-0.46	48,600	--	--	25	25 U	30.6	125	--	--	--	--	--	--	--	--	--	--			
	6/8/00	423.30	80.17	0	343.13	0.40	34,800	--	--	12.9	2.5 U	14.3	92.2	--	--	--	--	--	--	--	--	--	--			
	9/13/00	423.30	82.11	0.75	341.19	1.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/6/00	423.30	80.65	0	342.65	-1.46	42,100	--	--	2.93	0.5 U	10.0	27.4	--	--	--	--	--	--	--	--	--	--			
	3/27/01	423.30	79.50	0	343.80	-1.15	1,820	--	--	1.25 U	1.25 U	1.25 U	3 U	--	--	--	--	--	--	--	--	--	--			
	6/5/01	423.30	80.45	Trace	342.85	0.95	2,270	--	--	1.23	1.25 U	1.06	2.54	--	--	--	--	--	--	--	--	--	--			
	9/25/01	423.30	81.90	0.20	341.40	1.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/5/02	423.30	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/11/03	423.30	82.57	0.42	340.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/17/04	423.30	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/11/05	423.30	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/07/06	423.30	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/15/07	424.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
<i>MTCA Method A Cleanup Levels ⁽¹⁾⁽²⁾</i>							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
<i>Units:</i>							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-3 continued	10/8/08	424.45	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/30/10	423.42	78.97	Trace	344.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/14/10	423.42	79.38	0	344.04	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/28/14	423.42	78.85	--	344.57	-0.53	250 U	1,100	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U		
	10/30/14	423.42	80.18	--	343.24	1.33	620	18,000	500 U	0.50 U	1.4	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U		
	6/4/15	423.42	79.46	--	343.96	-0.72	250 U	3,300	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.51	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	24.8	93.2		
	9/29/15	423.42	80.58	--	342.84	1.12	733	3,300	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	--	--		
	8/30/16	423.42	80.60	--	342.82	0.02	1,400	11,000	1,100	2.0 U	2.0 U	3.0 U	3.0 U	2.5	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U		
	12/6/16	423.42	80.17	--	343.25	-0.43	290	6,600	290	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U		
	5/16/17	423.42	79.04	--	344.38	-1.13	500 U	2,600	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U		
	10/25/17	423.42	80.23	--	343.19	1.19	380	5,700	410	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U		
	6/14/18	423.42	79.20	--	344.22	-1.03	250 U	4,700	860	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U		
	12/4/18	423.40	80.00	--	343.40	0.82	180 J	8,800	2,000	0.53 U	0.39 U	0.50 U	3.0 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U		
	6/26/19	423.40	79.64	--	343.76	-0.36	300	8,600	1,900	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U		
	12/11/19	423.40	79.93	0.00	343.47	0.29	230 J	2,700 J	830 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U		
	6/24/20	423.40	79.57	0.00	343.83	-0.36	200 J	4,400 J	920 J	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U		
	12/16/20	423.40	79.92	0.00	343.48	0.35	150 J	2,200	210 J	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U		
	5/27/21	423.40	79.86	0.00	343.54	-0.06	632 U	12,100 J	3,500 J	0.471 U	1.39 U	0.685 U	0.870 U	5.00 U	0.00536 U	0.4090 U	0.525 U	0.505 U	0.505 U	20.3 U	0.975 U	4.76 U	4.95 U		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers						Fuel Oxygenates										
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
MTC A Method A Cleanup Levels ⁽¹⁾⁽²⁾							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-4	1983	410.12	74.30	0	335.82	--	--	--	--	1.0 U	1.0 U	--	1.0 U	--	--	--	--	--	--	--	--	--	--			
	8/26/87	410.12	68.41	0	341.71	-5.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/11/87	410.12	67.71	0	342.41	-0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/5/88	410.12	67.64	0	342.48	-0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/3/88	410.12	67.72	0	342.40	0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/1/88	410.12	67.61	0	342.51	-0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/5/88	410.12	67.53	0	342.59	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/3/88	410.12	67.58	0	342.54	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/7/88	410.12	68.26	0	341.86	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/5/88	410.12	68.66	0	341.46	0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/12/90	410.12	68.25	0	341.87	-0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/6/90	410.12	68.87	0	341.25	0.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/90	410.12	68.42	0	341.70	-0.45	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	2/14/91	410.12	68.00	0	342.12	-0.42	--	--	--	0.5 U	39	7.3	80	--	--	--	--	--	--	--	--	--	--			
	5/15/91	410.12	68.18	0	341.94	0.18	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--			
	8/8/91	410.12	69.13	0	340.99	0.95	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	4/1/92	410.12	68.05	0	342.07	-1.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/1/92	410.12	68.80	0	341.32	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/8/92	410.12	68.37	0	341.75	-0.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/1/93	410.12	--	0	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--			
	11/1/93	410.12	68.90	0	341.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/1/94	410.12	68.04	0	342.08	-0.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/31/95	410.12	68.30	Trace	341.82	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/27/95	410.12	68.00	Trace	342.12	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/31/95	410.12	68.20	Trace	341.92	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/28/95	410.12	68.00	Trace	342.12	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/31/95	410.12	68.20	Trace	341.92	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/30/95	410.12	68.43	Trace	341.70	0.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/24/95	410.12	68.73	Trace	341.39	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/29/95	410.12	68.61	Trace	341.51	-0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/27/95	410.12	68.10	Trace	342.02	-0.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/31/96	410.12	68.40	Trace	341.72	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/29/96	410.12	68.30	Trace	341.82	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/29/96	410.12	68.40	0	341.72	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/29/96	410.12	68.10	0	342.02	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/22/96	410.12	68.00	0	342.12	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/28/96	410.12	68.42	0	341.70	0.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/31/96	410.12	65.50	0	344.62	-2.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/30/96	410.12	68.60	0	341.52	3.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/30/96	410.12	68.60	0	341.52	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/31/96	410.12	68.90	0	341.22	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/96	410.12	68.30	0	341.82	-0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/30/97	410.12	62.40	0	347.72	-5.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels (1)(2)							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-4 continued	2/28/97	410.12	62.10	0	348.02	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/19/97	410.12	62.00	0	348.12	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/20/97	410.12	62.00	0	348.12	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/2/97	410.12	62.00	0	348.12	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/26/98	410.12	67.40	0	342.72	5.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/26/98	410.12	65.90	--	344.22	-1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/17/98	410.12	75.28	0	334.84	9.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/18/98	410.12	66.86	0	343.26	-8.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/29/99	410.12	67.15	0	342.97	0.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/24/99	410.12	67.92	0	342.20	0.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/8/99	410.12	68.73	0	341.39	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/20/99	410.12	68.13	0	341.99	-0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/14/00	410.12	67.70	0	342.42	-0.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/8/00	410.12	68.31	0	341.81	0.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/13/00	410.12	69.07	0	341.05	0.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/6/00	410.12	68.37	0	341.75	-0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/1/01	410.12	67.80	0	342.32	-0.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/26/01	410.12	67.80	0	342.32	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--		
	6/5/01	410.12	68.11	0	342.01	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/25/01	410.12	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/02	410.12	--	--	--	--	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--		
	9/11/03	410.12	--	--	--	--	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--		
	11/17/04	410.12	68.50	0	341.62	--	48 U	78 U	97 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--		
	7/11/05	410.12	68.52	0	341.60	0.02	48 U	200	520	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--		
	7/7/06	410.12	67.72	0	342.40	-0.80	48 U	400	540	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--		
	11/14/07	410.59	68.04	0	342.55	-0.15	50 U	77 U	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--		
	10/8/08	410.59	67.91	0	342.68	-0.13	50 U	260	97 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	0.2 U	--	--		
	6/29/10	412.09	68.01	0	344.08	-1.40	50 U	120 U	240 U	1.00 U	1.00 U	1.00 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--		
	12/15/10	412.09	68.43	0	343.66	0.42	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--		
	5/28/14	412.09	67.98	--	344.11	-0.45	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U		
	10/28/14	412.09	69.17	--	342.92	1.19	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U		
	6/3/15	412.09	68.48	--	343.61	-0.69	250 U	100 U	250 U	0.50 U	0.52	0.5 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U		
	9/28/15	412.09	69.52	--	342.57	1.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/30/16	412.09	69.66	--	342.43	0.14	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U		
	12/5/16	412.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/15/17	412.09	68.02	--	344.07	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U		
	6/13/18	412.05	68.15	--	343.90	0.17	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U		
	6/26/19	412.05	68.68	--	343.37	0.53	100 U	69 U	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U		
	12/9/19	412.05	68.98	0.00	343.07	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/23/20	412.05	68.62	0.00	343.43	-0.36	100 U	69 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U		
	12/14/20	412.05	68.90	0.00	343.15	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/25/21	412.05	68.84	0.00	343.21	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers						Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol	
MTCA Method A Cleanup Levels ⁽¹⁾⁽²⁾							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE	
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-5 (48" diameter culvert)	11/19/90 2/1/94	-- --	17.74 17.82	0 0	-- --	-- --	-- --	-- --	-- --	ND ND	ND ND	ND ND	ND ND	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	
Well destroyed in May 1989																								

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates											
							TPH-g	TPH-g	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol					
							MTC A Method A Cleanup Levels ⁽¹⁾⁽²⁾																					
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE					
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L		
MW-6 continued	8/20/97	358.07	16.10	0	341.97	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
	11/2/97	358.07	16.10	0	341.97	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
	3/26/98	358.07	16.19	0	341.88	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
	6/24/98	358.07	16.07	0	342.00	-0.12	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	9/17/98	358.07	16.56	0	341.51	0.49	50 U	--	--	0.5 U	0.5 U	0.5 U	1.18	--	--	--	--	--	--	--	--	--	--					
	12/18/98	358.07	16.14	0	341.93	-0.42	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	3/29/99	358.07	15.59	0	342.48	-0.55	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	6/24/99	358.07	16.09	0	341.98	0.50	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	10/8/99	358.07	16.85	0	341.22	0.76	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	12/20/99	358.07	16.64	0	341.43	-0.21	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	3/14/00	358.07	16.46	0	341.61	-0.18	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	6/8/00	358.07	16.76	0	341.31	0.30	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	9/13/00	358.07	17.25	0	340.82	0.49	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	12/6/00	358.07	16.71	0	341.36	-0.54	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	3/1/01	358.07	16.33	0	341.74	-0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
	3/26/01	358.07	16.33	0	341.74	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--					
	6/5/01	358.07	16.92	0	341.15	0.59	52.6	--	--	0.5 U	0.772	0.5 U	2.15	--	--	--	--	--	--	--	--	--	--					
	9/25/01	358.07	16.98	0	341.09	0.06	50 U	--	--	0.5 U	1.0 U	1.0 U	1.5 U	--	--	--	--	--	--	--	--	--	--					
	9/5/02	358.07	17.60	0	340.47	0.62	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--					
	9/11/03	358.07	17.58	0	340.49	-0.02	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--					
	11/17/04	358.07	16.91	0	341.16	-0.67	48 U	78 U	98 U	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	--	--	--	--	--	--					
	7/11/05	358.07	17.18	0	340.89	0.27	48 U	76 U	130	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	0.3 U	--	--	--	--	--					
	7/7/06	358.07	16.19	0	341.88	-0.99	48 U	76 U	95 U	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	0.3 U	--	--	--	--	--					
	11/15/07	358.77	16.96	0	341.81	0.07	50 U	76 U	95 U	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	0.3 U	--	--	--	--	--					
	10/8/08	358.77	16.39	0	342.38	-0.57	50 U	76 U	95 U	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	0.3 U	--	--	0.2 U	--	--					
	6/29/10	358.61	15.84	0	342.77	-0.39	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--					
	12/14/10	358.61	16.34	--	342.27	0.50	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--					
	5/29/14	358.61	15.57	--	343.04	-0.77	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U				
	10/29/14	358.61	16.82	--	341.79	1.25	250 U	250 U	500 U	0.50 U	4.9	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U				
	6/3/15	358.61	16.18	--	342.43	-0.64	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U				
	9/28/15	358.61	17.15	--	341.46	0.97	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	--	--				
	8/30/16	358.61	17.15	--	341.46	0.00	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U					
	12/5/16	358.61	16.91	--	341.70	-0.24	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U					
	5/16/17	358.61	15.88	--	342.73	-1.03	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U					
	10/23/17	358.61	17.01	--	341.60	1.13	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U					
	6/11/18	358.61	15.73	--	342.88	-1.28	250 U	180	460	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U					
	12/2/18	358.52	16.95	--	341.57	1.31	100 U	71 J	350 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U					
	6/26/19	358.52	16.48	--	342.04	-0.47	100 U	71 U	110 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U					
	12/10/19	358.52	16.97	0.00	341.55	0.49	100 U	62 U	92 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 UJ	0.220 UJ					
	6/23/20	358.52	16.31	0.00	342.21	-0.66	100 U	69 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U					
	12/16/20	358.52	16.61	0.00	341.91	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U					
	5/24/21	358.52	16.44	0.00	342.08	-0.17	31.6 U	66.7 U	120 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U					

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
							<i>MTCA Method A Cleanup Levels (1)(2)</i>																		
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
<i>Units:</i>							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-7	8/26/87	410.12	67.52	0	342.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/11/87	410.12	66.85	0	343.27	-0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/5/88	410.12	66.68	0	343.44	-0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/3/88	410.12	66.66	0	343.46	-0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/1/88	410.12	66.66	0	343.46	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/5/88	410.12	66.58	0	343.54	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/3/88	410.12	66.67	0	343.45	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/7/88	410.12	67.35	0	342.77	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/5/88	410.12	67.79	0	342.33	0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/12/90	410.12	67.34	0	342.78	-0.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/90	410.12	68.01	0	342.11	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/18/90	410.12	65.55	0	344.57	-2.46	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	2/14/91	410.12	67.09	0	343.03	1.54	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	5/15/91	410.12	67.29	0	342.83	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/8/91	410.12	68.28	0	341.84	0.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/1/92	410.12	67.12	0	343.00	-1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/1/92	410.12	67.93	0	342.19	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	410.12	67.47	0	342.65	-0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/1/93	410.12	67.95	0	342.17	0.48	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	2/1/94	410.12	67.08	0	343.04	-0.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/95	410.12	67.40	0.38	342.72	0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/27/95	410.12	67.00	0.38	343.12	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/31/95	410.12	67.10	0.38	343.02	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/28/95	410.12	67.20	0.25	342.92	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/31/95	410.12	67.30	0.13	342.82	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/30/95	410.12	67.30	0.13	342.82	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/24/95	410.12	65.13	0.01	344.99	-2.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/29/95	410.12	65.20	0.01	344.92	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/27/95	410.12	65.40	0.01	344.72	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/96	410.12	67.30	0.01	342.82	1.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/29/96	410.12	66.80	0.01	343.32	-0.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/29/96	410.12	66.80	0	343.32	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/29/96	410.12	66.85	0	343.27	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/22/96	410.12	66.60	0	343.52	-0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/96	410.12	67.64	0	342.48	1.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/31/96	410.12	67.50	0	342.62	-0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/30/96	410.12	67.70	0	342.42	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/30/96	410.12	68.00	0	342.12	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/96	410.12	68.05	0	342.07	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/96	410.12	67.60	0	342.52	-0.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/30/97	410.12	67.05	0	343.07	-0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/28/97	410.12	66.90	0	343.22	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/19/97	410.12	66.80	0	343.32	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates							
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol	
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE	
	Units:	ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	
MW-7 continued	8/20/97	410.12	67.64	0	342.48	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/2/97	410.12	67.20	0	342.92	-0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/26/98	410.12	66.40	0	343.72	-0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/98	410.12	66.90	--	343.22	0.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/17/98	410.12	66.36	0	343.76	-0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/18/98	410.12	65.98	0	344.14	-0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/99	410.12	66.16	0	343.96	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/99	410.12	67.04	0	343.08	0.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/8/99	410.12	68.87	0	341.25	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/20/99	410.12	67.19	0	342.93	-1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/00	410.12	66.72	0	343.40	-0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/8/00	410.12	67.45	0	342.67	0.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/13/00	410.12	68.25	0	341.87	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/6/00	410.12	67.50	0	342.62	-0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/27/01	410.12	--	--	--	--	50 U	--	--	0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	--	--	--	--	
	3/1/01	410.12	66.85	0	343.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/27/01	410.12	66.85	0	343.27	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	--	--	--	--	
	6/5/01	410.12	67.37	0	342.75	0.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/25/01	410.12	68.05	0	342.07	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/5/02	410.12	68.07	0	342.05	0.02	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	
	9/11/03	410.12	68.25	0	341.87	0.18	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	
	11/17/04	410.12	67.58	0	342.54	-0.67	48 U	76 U	95 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	
	7/11/05	410.12	67.60	0	342.52	0.02	48 U	690	570	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	
	7/7/06	410.12	66.80	0	343.32	-0.80	48 U	76 U	95 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	
	11/15/07	410.01	67.05	0	342.96	0.36	50 U	76 U	95 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	
	10/8/08	410.01	66.97	0	343.04	-0.08	50 U	77 U	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	0.2 U	--	--	
	6/30/10	411.4	66.96	0	344.44	-1.40	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--	
	12/15/10	411.40	67.37	--	344.03	0.41	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--	
	5/28/14	411.40	67.02	--	344.38	-0.35	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U
	10/29/14	411.40	68.23	--	343.17	1.21	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U
	6/3/15	411.40	67.48	--	343.92	-0.75	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U
	9/28/15	411.40	68.61	--	342.79	1.13	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	--	--
	8/30/16	411.40	68.74	--	342.66	0.13	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U
	12/5/16	411.40	68.18	--	343.22	-0.56	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U
	5/15/17	411.40	67.02	--	344.38	-1.16	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U
	10/24/17	411.40	68.22	--	343.18	1.20	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U		6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U
	6/13/18	411.40	67.16	--	344.24	-1.06	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U
	12/4/18	411.32	68.03	--	343.29	0.95	100 U	86 J	97 U	0.53 U	0.39 U	0.60 J	3.0 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U
	6/26/19	411.32	67.68	--	343.64	-0.35	100 U	110	98 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U
	12/11/19	411.32	67.58	0.00	343.74	-0.10	100 U	67 J	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U	0.220 U
	6/23/20	411.32	67.57	0.00	343.75	-0.01	100 U	66 U	98 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U
	12/14/20	411.32	67.87	0.00	343.45	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U
	5/25/21	411.32	67.82	0.00	343.50	-0.05	31.6 U	66.7 U	103 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U	4.95 U

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels ⁽¹⁾⁽²⁾							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-8	8/26/87	384.58	41.95	0	342.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/11/87	384.58	41.21	0	343.37	-0.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/5/88	384.58	41.12	0	343.46	-0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/3/88	384.58	41.17	0	343.41	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/1/88	384.58	41.06	0	343.52	-0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/5/88	384.58	41.00	0	343.58	-0.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/3/88	384.58	41.09	0	343.49	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/7/88	384.58	41.77	0	342.81	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/5/88	384.58	42.21	0	342.37	0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/12/90	384.58	41.77	0	342.81	-0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/90	384.58	42.44	0	342.14	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/18/90	384.58	41.96	0	342.62	-0.48	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	2/14/91	384.58	41.50	0	343.08	-0.46	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--		
	5/14/91	384.58	41.71	0	342.87	0.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/8/91	384.58	42.70	0	341.88	0.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/1/92	384.58	41.54	0	343.04	-1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/1/92	384.58	42.36	0	342.22	0.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	384.58	41.89	0	342.69	-0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/1/93	384.58	42.40	0	342.18	0.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/1/94	384.58	41.51	0	343.07	-0.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/95	384.58	41.70	0.25	342.88	0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/27/95	384.58	41.40	0.25	343.18	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/31/95	384.58	41.40	0.25	343.18	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/28/95	384.58	41.40	0.13	343.18	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/31/95	384.58	41.70	0.13	342.88	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/30/95	384.58	41.80	Trace	342.78	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/24/95	384.58	42.28	Trace	342.30	0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/29/95	384.58	42.31	Trace	342.27	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/27/95	384.58	42.47	Trace	342.11	0.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/96	384.58	42.50	Trace	342.08	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/29/96	384.58	42.40	Trace	342.18	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/29/96	384.58	42.40	Trace	342.18	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/29/96	384.58	41.10	Trace	343.48	-1.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/22/96	384.58	41.20	Trace	343.38	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/96	384.58	41.03	0	343.55	-0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/31/96	384.58	40.90	0	343.68	-0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/30/96	384.58	40.80	0	343.78	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/30/96	384.58	40.50	0	344.08	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/96	384.58	41.60	0	342.98	1.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/96	384.58	40.70	0	343.88	-0.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/30/97	384.58	40.80	0	343.78	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/28/97	384.58	48.50	0	336.08	7.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/19/97	384.58	46.50	0	338.08	-2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates											
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol					
							MTC A Method A Cleanup Levels (1)(2)																					
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE					
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L		
MW-8 continued	8/20/97	384.58	41.83	0	342.75	-4.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/2/97	384.58	41.70	0	342.88	-0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/26/98	384.58	40.85	0	343.73	-0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/24/98	384.58	41.32	--	343.26	0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/17/98	384.58	41.78	0	342.80	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	12/18/98	384.58	41.28	0	343.30	-0.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/29/99	384.58	40.60	0	343.98	-0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/24/99	384.58	41.45	0	343.13	0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	10/8/99	384.58	42.30	0	342.28	0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	12/20/99	384.58	41.61	0	342.97	-0.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/14/00	384.58	41.15	0	343.43	-0.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/8/00	384.58	41.90	0	342.68	0.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/13/00	384.58	42.63	0	341.95	0.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	12/6/00	384.58	41.85	0	342.73	-0.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/26/01	384.58	41.23	0	343.35	-0.62	50 U	--	--	0.5 U	0.5 U	0.5	1 U	--	--	--	--	--	--	--	--	--	--	--				
	6/5/01	384.58	41.81	0	342.77	0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/25/01	384.58	42.39	0	342.19	0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/5/02	384.58	42.48	0	342.10	0.09	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--				
	9/11/03	384.58	40.41	0	344.17	-2.07	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--				
	11/17/04	384.58	39.72	0	344.86	-0.69	48 U	76 U	96 U	0.2 U	0.2 U	0.2 U	1 U	--	--	--	--	--	--	--	--	--	--	--				
	7/11/05	384.58	39.74	0	344.84	0.02	48 U	78	230	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--				
	7/7/06	384.58	38.91	0	345.67	-0.83	48 U	76 U	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--				
	11/15/07	384.27	39.19	0	345.08	0.59	50 U	75 U	94 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--				
	10/8/08	384.27	39.11	0	345.16	-0.08	50 U	78 U	97 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	0.2 U	--	--				
	6/30/10	383.91	39.51	0	344.40	0.76	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--	--				
	12/15/10	383.91	39.93	--	343.98	0.42	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	10 U	--	--	--				
	5/28/14	383.91	39.56	--	344.35	-0.37	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U				
	10/29/14	383.91	40.78	--	343.13	1.22	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U				
	6/3/15	383.91	40.04	--	343.87	-0.74	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	55.6				
	9/28/15	383.91	41.13	--	342.78	1.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/30/16	383.91	40.30	--	343.61	-0.83	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U				
	12/5/16	383.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/17/17	383.91	39.56	--	344.35	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U				
	6/11/18	383.76	39.65	--	344.11	0.240	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U				
	6/26/19	383.76	40.26	--	343.50	0.610	100 U	71 U	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U				
	12/9/19	383.76	40.48	0.00	343.28	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/23/20	383.76	40.14	0.00	343.62	-0.34	100 U	68 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U				
	12/14/20	383.76	40.44	0.00	343.32	0.300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/26/21	383.76	40.38	0.00	343.38	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	14.2	14.2				
MW-9	Well destroyed in May 1987																											

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-10	4/12/90	407.40	64.60	0	342.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/6/90	407.40	65.27	0	342.13	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/19/90	407.40	64.80	0	342.60	-0.47	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	2/14/91	407.40	64.31	0	343.09	-0.49	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	5/15/91	407.40	64.52	0	342.88	0.21	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	8/8/91	407.40	65.52	0	341.88	1.00	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	4/1/92	407.40	64.37	0.27	343.03	-1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/1/92	407.40	65.17	0	342.23	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/8/92	407.40	64.72	0	342.68	-0.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/18/93	407.40	--	--	--	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	11/1/93	407.40	65.22	0	342.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/1/94	407.40	64.36	0	343.04	-0.86	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	
	1/31/95	407.40	64.40	Trace	343.00	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/27/95	407.40	64.30	Trace	343.10	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/31/95	407.40	64.30	Trace	343.10	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/28/95	407.40	64.50	Trace	342.90	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/31/95	407.40	64.70	Trace	342.70	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/30/95	407.40	64.60	Trace	342.80	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/24/95	407.40	67.89	Trace	339.51	3.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/29/95	407.40	67.77	Trace	339.63	-0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/27/95	407.40	67.50	Trace	339.90	-0.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/31/96	407.40	65.60	Trace	341.80	-1.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/29/96	407.40	65.30	0	342.10	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/96	407.40	65.40	0	342.00	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/29/96	407.40	64.70	0	342.70	-0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/22/96	407.40	64.50	0	342.90	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/28/96	407.40	64.84	0	342.56	0.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/31/96	407.40	64.70	0	342.70	-0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/30/96	407.40	64.70	0	342.70	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/30/96	407.40	64.30	0	343.10	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/31/96	407.40	65.35	0	342.05	1.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/19/96	407.40	64.80	0	342.60	-0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/30/97	407.40	64.32	0	343.08	-0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	2/28/97	407.40	64.10	0	343.30	-0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	4/19/97	407.40	64.00	0	343.40	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/20/97	407.40	64.65	0	342.75	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/2/97	407.40	64.60	0	342.80	-0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/26/98	407.40	63.63	0	343.77	-0.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/98	407.40	64.18	--	343.22	0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/17/98	407.40	63.60	0	343.80	-0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/18/98	407.40	63.12	0	344.28	-0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/99	407.40	63.42	0	343.98	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/99	407.40	64.29	0	343.11	0.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates									
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
							<i>MTC Method A Cleanup Levels (1) (2)</i>																			
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
<i>Units:</i>							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-10 continued	10/8/99	407.40	65.12	0	342.28	0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/20/99	407.40	64.45	0	342.95	-0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/00	407.40	63.97	0	343.43	-0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/8/00	407.40	64.65	0	342.75	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/13/00	407.40	65.45	0	341.95	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/6/00	407.40	64.73	0	342.67	-0.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/1/01	407.40	64.10	0	343.30	-0.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/27/01	407.40	64.10	0	343.30	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--	--	
	6/5/01	407.40	64.62	0	342.78	0.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/25/01	407.40	65.30	0	342.10	0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/6/02	407.40	65.34	0	342.06	0.04	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	4 U	--	--	--	--	--	--	
	9/11/03	407.40	65.55	0	341.85	0.21	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--	--	
	11/17/04	407.40	64.84	0	342.56	-0.71	48 U	84 U	110 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	--	--	
	7/11/05	407.40	64.84	0	342.56	0.00	48 U	310	260 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	
	7/7/06	407.40	64.04	0	343.36	-0.80	48 U	79	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	
	11/15/07	407.27	64.28	0	342.99	0.37	50 U	75 U	94 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	
	10/8/08	407.27	64.22	0	343.05	-0.06	50 U	76 U	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	0.2 U	--	--	
	6/30/10	407.91	63.42	0	344.49	-1.44	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	--	10 U	--	--	
	12/15/10	407.91	63.84	--	344.07	0.42	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	--	10 U	--	--	
	5/28/14	407.91	63.46	--	344.45	-0.38	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	5.0 U	50.0 U	50.0 U	
	10/29/14	407.91	64.68	--	343.23	1.22	250 U	250 U	500 U	0.50 U	1.1	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	5.0 U	50.0 U	50.0 U	
	6/3/15	407.91	63.91	--	344.00	-0.77	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	5.0 U	50.0 U	63.7	
	9/28/15	407.91	65.02	--	342.89	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/30/16	407.91	65.22	--	342.69	0.20	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U	10 U	
	12/5/16	407.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/15/17	407.91	63.50	--	344.41	--	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U	10 U	
	6/13/18	407.83	63.58	--	344.25	0.16	250 U	110 U	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U	10 U	
	6/26/19	407.83	64.15	--	343.68	0.57	100 U	88 J	110 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U	4.0 U	
	12/9/19	407.83	64.37	0.00	343.46	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/23/20	407.83	64.03	0.00	343.80	-0.34	100 U	66 U	98 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U	0.220 U	
	12/14/20	407.83	64.36	0.00	343.47	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/25/21	407.83	64.30	0.00	343.53	-0.06	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U	4.95 U	4.95 U	

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTC A Method A Cleanup Levels (1)(2)							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-11	1/23/89	423.70	--	0	--	--	--	--	--	350	1050	700	2120	--	--	--	--	--	--	--	--	--	--		
	4/12/90	423.70	80.75	0	342.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/90	423.70	81.40	0	342.30	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/90	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/90	423.70	80.92	0	342.78	--	--	--	--	56	99	140	90	--	--	--	--	--	--	--	--	--	--		
	12/16/90	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/13/91	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/5/91	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/14/91	423.70	80.51	0	343.19	--	--	--	--	110	8	130	25	--	--	--	--	--	--	--	--	--	--		
	3/28/91	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/6/91	423.70	--	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/15/91	423.70	80.90	0.27	342.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/1/91	423.70	--	0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/20/91	423.70	--	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/4/91	423.70	--	0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/8/91	423.70	82.25	0.70	341.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/27/91	423.70	--	0.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/17/91	423.70	--	0.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/27/91	423.70	--	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/18/92	423.70	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/92	423.70	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/17/92	423.70	--	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/18/1992	423.70	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/4/92	423.70	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/21/92	423.70	--	0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/1/92	423.70	80.65	0	343.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/2/92	423.70	--	0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/28/92	423.70	--	0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/92	423.70	--	1.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/26/92	423.70	--	1.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/30/92	423.70	82.71	1.70	340.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/16/92	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	423.70	80.99	0	342.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/2/93	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/15/93	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/18/93	423.70	81.85	0	341.85	--	3,200	--	--	0.5 U	0.8	1.8	4.1	--	--	--	--	--	--	--	--	--	--		
	11/5/93	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/28/93	423.70	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/7/94	423.70	80.80	0	342.90	--	100 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--		
	1/31/95	423.70	79.00	0	344.70	-1.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/27/95	423.70	80.50	0	343.20	1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/31/95	423.70	80.50	0	343.20	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/1/95	423.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates											
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol					
							<i>MTC A Method A Cleanup Levels (1)(2)</i>																					
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE					
<i>Units:</i>							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L		
MW-11 continued	4/28/95	423.70	80.70	0	343.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/31/95	423.70	79.20	0	344.50	-1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/30/95	423.70	79.30	Trace	344.40	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/24/95	423.70	81.51	Trace	342.19	2.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/29/95	423.70	81.45	Trace	342.25	-0.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/27/95	423.70	81.66	Trace	342.04	0.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/31/96	423.70	81.40	Trace	342.30	-0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/29/96	423.70	81.10	Trace	342.60	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/29/96	423.70	80.90	0	342.80	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/29/96	423.70	80.61	0	343.09	-0.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	5/22/96	423.70	81.50	0	342.20	0.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/28/96	423.70	81.40	0	342.30	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	7/31/96	423.70	81.45	0	342.25	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/30/96	423.70	81.10	0	342.60	-0.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	9/30/96	423.70	80.70	0	343.00	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	10/31/96	423.70	81.67	0	342.03	0.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/19/96	423.70	80.30	0	343.40	-1.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	1/30/97	423.70	80.90	0	342.80	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	2/28/97	423.70	81.00	0	342.70	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	4/19/97	423.70	81.25	0	342.45	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	8/20/97	423.70	81.00	0	342.70	-0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	11/2/97	423.70	81.00	0	342.70	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/26/98	423.70	80.04	0	343.66	-0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	6/25/98	423.70	80.54	0	343.16	0.50	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	9/17/98	423.70	79.94	0	343.76	-0.60	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	12/18/98	423.70	79.55	0	344.15	--	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	3/29/99	423.70	79.62	0	344.08	0.07	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	6/24/99	423.70	80.51	0	343.19	0.89	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	10/8/99	423.70	81.39	0	342.31	0.88	54.5	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	12/20/99	423.70	80.75	0	342.95	-0.64	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	3/14/00	423.70	80.30	0	343.40	-0.45	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	6/8/00	423.70	80.95	0	342.75	0.65	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	9/13/00	423.70	81.47	0	342.23	0.52	50 U	--	--	0.5 U	0.539	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--				
	12/6/00	423.70	81.05	0	342.65	-0.42	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	3/3/01	423.70	80.40	0	343.30	-0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
	3/27/01	423.70	80.40	0	343.30	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	6/5/01	423.70	80.87	0	342.83	0.47	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--				
	9/25/01	423.70	81.60	0	342.10	0.73	100 U	--	--	0.5 U	1.0 U	1.0 U	2.47	--	--	--	--	--	--	--	--	--	--	--				
	9/6/02	423.70	81.60	0	342.10	0.00	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--				
	9/11/03	423.70	81.80	0	341.90	0.20	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--				
	11/17/04	423.70	81.11	0	342.59	-0.69	48 U	1,000	180	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	--				
	7/11/05	423.70	81.70	0	342.00	0.59	48 U	1,900	4,200	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--				
	7/7/06	423.70	80.31	0	343.39	-1.39	48 U	490	400	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--				

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates											
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol					
							<i>MTCA Method A Cleanup Levels (1) (2)</i>																					
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE					
<i>Units:</i>							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L				
MW-11	11/14/07	423.52	80.57	0	342.95	0.44	50 U	120	94	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--					
continued	10/8/08	423.52	80.51	0	343.01	-0.06	50 U	160	99	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	0.2 U	--					
	6/30/10	423.48	79.06	0	344.42	-1.41	50 U	1,100	450	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	10 U	--					
	12/16/10	423.48	79.46	--	344.02	0.40	50 U	200	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	10 U	--					
	5/29/14	423.48	79.19	--	344.29	-0.27	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U			
	10/30/14	423.48	80.31	--	343.17	1.12	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U			
	6/4/15	423.48	79.55	--	343.93	-0.76	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	52.6			
	9/29/15	423.48	80.67	--	342.81	1.12	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	--	--			
	8/29/16	423.48	80.42	--	343.06	-0.25	50 U	520	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U				
	12/5/16	423.48	80.29	--	343.19	-0.13	50 U	360	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U				
	5/16/17	423.48	79.15	--	344.33	-1.14	500 U	390	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U				
	10/25/17	423.48	80.31	--	343.17	1.16	250 U	360	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U				
	6/14/18	423.48	79.30	--	344.18	-1.01	250 U	160	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U				
	12/2/18	423.44	80.14	--	343.30	0.88	100 U	500	570 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U				
	6/27/19	423.44	79.79	--	343.65	-0.35	100 U	400	320 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U				
	12/11/19	423.44	80.01	0.00	343.43	0.22	100 U	130	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U	0.220 U				
	6/24/20	423.44	79.66	0.00	343.78	-0.35	100 U	3,900	2,300	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U				
	12/15/20	423.44	79.95	0.00	343.49	0.29	100 U	210 J	130 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U				
	5/25/21	423.44	79.95	0.00	343.49	0.00	31.6 U	765 J	428 J	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U	4.95 U				

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels (1)(2)							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-12	1/23/89	424.58	--	0	--	--	--	--	--	340	73	160	79	--	--	--	--	--	--	--	--	--	--		
	4/12/90	424.58	81.70	0	342.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/6/90	424.58	82.27	0	342.31	0.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/90	424.58	81.34	0	343.24	-0.93	--	--	--	430	210	430	2,800	--	--	--	--	--	--	--	--	--	--		
	2/14/91	424.58	80.83	0	343.75	-0.51	--	--	--	270	240	380	2,900	--	--	--	--	--	--	--	--	--	--		
	5/14/91	424.58	81.53	0	343.05	0.70	--	--	--	11	45	200	1,300	--	--	--	--	--	--	--	--	--	--		
	8/8/91	424.58	79.46	0	345.12	-2.07	--	--	--	75	68	22	560	--	--	--	--	--	--	--	--	--	--		
	8/1/91	424.58	81.97	--	342.61	2.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/1/92	424.58	80.43	0	344.15	-1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/1/92	424.58	82.28	0	342.30	1.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/8/92	424.58	81.72	0	342.86	-0.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/18/93	424.58	81.90	0	342.68	0.18	2300	--	--	23	2.7	17	61	--	--	--	--	--	--	--	--	--	--		
	2/7/94	424.58	81.26	0	343.32	-0.64	690	--	--	4.1	0.6	2.7	14	--	--	--	--	--	--	--	--	--	--		
	9/19/94	424.58	--	0	--	--	--	--	--	7.0	5.0 U	5.0 U	16	--	--	--	--	--	--	--	--	--	--		
	1/31/95	424.58	81.40	0.25	343.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/27/95	424.58	81.00	0.25	343.58	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/31/95	424.58	81.00	0.25	343.58	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/10/95	424.58	--	0	--	--	--	--	--	75	5.0 U	90	300	--	--	--	--	--	--	--	--	--	--		
	4/28/95	424.58	79.90	0.25	344.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/31/95	424.58	81.50	0.13	343.08	1.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/30/95	424.58	81.60	0.06	342.98	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/24/95	424.58	81.91	Trace	342.67	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/29/95	424.58	81.87	Trace	342.71	-0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/27/95	424.58	81.28	Trace	343.30	-0.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/31/96	424.58	80.90	Trace	343.68	-0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/29/96	424.58	80.50	0	344.08	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/29/96	424.58	80.40	0	344.18	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/29/96	424.58	81.10	0	343.48	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/22/96	424.58	80.90	0	343.68	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/28/96	424.58	81.73	0	342.85	0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	7/31/96	424.58	81.70	0	342.88	-0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/30/96	424.58	81.40	0	343.18	-0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/30/96	424.58	81.00	0	343.58	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	10/31/96	424.58	82.15	0	342.43	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/19/96	424.58	81.30	0	343.28	-0.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	1/30/97	424.58	81.28	--	343.30	-0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	2/28/97	424.58	81.10	--	343.48	-0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/19/97	424.58	81.00	0	343.58	-0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	8/20/97	424.58	81.00	0	343.58	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/2/97	424.58	81.00	0	343.58	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/26/98	424.58	80.64	0	343.94	-0.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/24/98	424.58	81.20	0	343.38	0.56	1,060	--	--	1.67	1.2 U	0.5 U	1.2 U	--	--	--	--	--	--	--	--	--	--		
	9/17/98	424.58	80.70	0	343.88	-0.50	65.8	--	--	0.5	0.5 U	0.5	2.02	--	--	--	--	--	--	--	--	--	--		

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates									
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB (2)	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
							MTCA Method A Cleanup Levels (1) (2)																			
Units:							ft NAVD29 (3)	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-12 continued	12/18/98	424.58	80.25	0	344.33	--	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	3/29/99	424.58	80.39	0	344.19	0.14	50 U	--	--	0.5 U	0.5 U	0.5 U	1.12	--	--	--	--	--	--	--	--	--	--	--		
	6/24/99	424.58	80.05	0	344.53	-0.34	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	10/8/99	424.58	82.21	0	342.37	2.16	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	12/20/99	424.58	81.58	0	343.00	-0.63	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	3/14/00	424.58	81.07	0	343.51	-0.51	72.8	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	6/8/00	424.58	81.74	0	342.84	0.67	52.3	--	--	1.74	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	9/13/00	424.58	82.56	0	342.02	0.82	82.3	--	--	0.5 U	0.667	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	12/6/00	424.58	80.95	0	343.63	-1.61	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	3/1/01	424.58	81.25	0	343.33	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/27/01	424.58	81.25	0	343.33	0.00	50 U	--	--	0.5 U	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	6/5/01	424.58	81.72	0	342.86	0.47	50	--	--	1.23	0.5 U	0.5 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		
	9/25/01	424.58	82.40	0	342.18	0.68	103	--	--	0.5 U	1.0 U	1.0 U	1.5 U	--	--	--	--	--	--	--	--	--	--	--		
	9/6/02	424.58	82.37	0	342.21	-0.03	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--		
	9/11/03	424.58	82.61	0	341.97	0.24	100 U	--	--	1.0 U	1.0 U	1.0 U	3.0 U	--	--	--	--	--	--	--	--	--	--	--		
	11/17/04	424.58	81.93	0	342.65	-0.68	48 U	890	310	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	--		
	7/11/05	424.58	81.96	0	342.62	0.03	48 U	2,100	2,300	0.3	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--		
	7/7/06	424.58	81.18	0	343.40	-0.78	48 U	1,200	650	0.4	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--		
	11/14/07	424.40	81.40	0	343.00	0.40	50 U	930	490	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	--	--	--		
	10/8/08	424.40	81.33	0	343.07	-0.07	50 U	670	220	0.3	0.2 U	0.2 U	0.6 U	--	--	--	--	0.3 U	--	--	--	0.2 U	--	--		
	6/30/10	423.65	79.22	0	344.43	-1.36	50 U	950	700	1.1	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	10 U	--	--		
	12/16/10	423.65	79.62	--	344.03	0.40	50 U	490	430	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	10 U	--	--		
	5/29/14	423.65	79.26	--	344.39	-0.36	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	
	10/30/14	423.65	80.45	--	343.20	1.19	250 U	250 U	500 U	0.50 U	0.66	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	
	6/4/15	423.65	79.72	--	343.93	-0.73	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	53.3	
	9/29/15	423.65	80.83	--	342.82	1.11	250 U	100 U	250 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	--	
	12/6/16	423.65	80.48	--	343.17	-0.35	50 U	110 U	250 U	6.0	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	10 U		
	5/16/17	423.65	79.30	--	344.35	-1.18	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U		
	10/24/17	423.65	80.45	--	343.20	1.15	250 U	160	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U		
	6/14/18	423.65	79.30	--	344.35	-1.15	250 U	160	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	10 U		
	12/3/18	423.62	80.22	--	343.40	0.95	100 U	270	240 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U		
	6/27/19	423.62	79.97	--	343.65	-0.25	100 U	270	300 J	0.63 J	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U		
	12/11/19	423.62	80.20	0.00	343.42	0.23	100 U	170	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U	0.220 U		
	6/24/20	423.62	79.85	0.00	343.77	-0.35	100 U	450	330 J	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U		
	12/16/20	423.62	80.14	0.00	343.48	0.29	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	0.220 U		
	5/27/21	423.62	80.06	0.00	343.56	-0.08	31.6 U	601	448	1.00 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U			
MW-13	Well installed above the groundwater table (always dry)																									

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers						Fuel Oxygenates										
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol			
							<i>MTCA Method A Cleanup Levels ⁽¹⁾⁽²⁾</i>																			
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE			
<i>Units:</i>							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	
MW-14	1/23/89	420.61	--	0	--	--	--	--	--	10 U	10 U	10 U	10 U	--	--	--	--	--	--	--	--	--	--			
	8/6/90	420.61	79.18	0	341.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/90	420.61	78.72	0	341.89	-0.46	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	2/14/91	420.61	78.25	0	342.36	-0.47	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	5/15/91	420.61	78.48	0	342.13	0.23	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	8/8/91	420.61	79.46	0	341.15	0.98	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--			
	4/1/92	420.61	78.30	0	342.31	-1.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/1/92	420.61	79.12	0	341.49	0.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/8/92	420.61	78.65	0	341.96	-0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/1/93	420.61	80.51	0	340.10	1.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/1/94	420.61	79.65	0	340.96	-0.86	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/31/95	420.61	79.70	Trace	340.91	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/27/95	420.61	79.10	Trace	341.51	-0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/31/95	420.61	79.20	Trace	341.41	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/28/95	420.61	79.60	Trace	341.01	0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/31/95	420.61	79.90	Trace	340.71	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/30/95	420.61	80.15	0	340.46	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/24/95	420.61	80.58	Trace	340.03	0.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/29/95	420.61	80.45	Trace	340.16	-0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/27/95	420.61	80.58	Trace	340.03	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/31/96	420.61	80.30	Trace	340.31	-0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/29/96	420.61	79.36	Trace	341.25	-0.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/29/96	420.61	78.70	Trace	341.91	-0.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/29/96	420.61	79.80	Trace	340.81	1.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/22/96	420.61	80.10	Trace	340.51	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/28/96	420.61	80.11	0	340.50	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/31/96	420.61	80.00	0	340.61	-0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/30/96	420.61	79.80	0	340.81	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/30/96	420.61	79.40	0	341.21	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/31/96	420.61	80.63	0	339.98	1.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/96	420.61	79.80	0	340.81	-0.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1/30/97	420.61	79.60	--	341.01	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2/28/97	420.61	79.80	--	340.81	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/19/97	420.61	79.80	0	340.81	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	8/20/97	420.61	79.78	0	340.83	-0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/2/97	420.61	79.80	0	340.81	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/26/98	420.61	78.98	0	341.63	-0.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/24/98	420.61	76.09	0	344.52	-2.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/17/98	420.61	77.56	0	343.05	1.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	12/18/98	420.61	77.16	0	343.45	-0.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	3/29/99	420.61	77.34	0	343.27	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/24/99	420.61	76.41	0	344.20	-0.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/8/99	420.61	79.05	0	341.56	2.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers						Fuel Oxygenates																
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol									
							<i>MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																									
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE									
<i>Units:</i>							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L		
MW-14	12/20/99	420.61	78.37	0	342.24	-0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
continued	3/14/00	420.61	77.88	0	342.73	-0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/8/00	420.61	78.57	0	342.04	0.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/13/00	420.61	79.41	0	341.20	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	12/6/00	420.61	78.70	0	341.91	-0.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	3/26/01	420.61	78.40	0	342.21	-0.30	50 U	--	--	0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/5/01	420.61	79.93	0	340.68	1.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/25/01	420.61	79.25	0	341.36	-0.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/02	420.61	80.69	0	339.92	1.44	100 U	--	--	1 U	1 U	1 U	3 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/11/03	420.61	79.52	0	341.09	-1.17	100 U	--	--	1 U	1 U	1 U	3 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	11/17/04	420.61	78.77	0	341.84	-0.75	48 U	320 U	400 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/11/05	420.61	78.60	0	342.01	-0.17	48 U	550	390 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--	--	--	--	--	
	7/7/06	420.61	78.98	0	341.63	0.38	48 U	90	95 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--	--	--	--	--	
	11/15/07	418.35	78.24	0	340.11	1.52	50 U	76 U	95 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	--	--	--	--	--	--	
	10/8/08	418.35	78.16	0	340.19	-0.08	50 U	77 U	96 U	0.2 U	0.2 U	0.2 U	0.6 U	--	--	--	--	--	0.3 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	
	6/29/10	421.97	77.52	0	344.45	-4.26	50 U	160 U	240 U	1 U	1 U	1 U	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--	--	--	
	12/15/10	421.97	77.94	--	344.03	0.42	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	
	5/29/14	421.97	77.58	--	344.39	-0.36	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U	
	10/29/14	421.97	78.80	--	343.17	1.22	250 U	250 U	500 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U	
	6/4/15	421.97	78.04	--	343.93	-0.76	250 U	100 U	250 U	0.50 U	0.72	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	5.0 U	50.0 U	50.0 U	50.0 U	50.0 U	
	9/28/15	421.97	79.18	--	342.79	1.14	250 U	100 U	250 U	0.50 U	0.72	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	0.50 U	--	--	--	--	--	--	
	8/29/16	421.97	79.32	--	342.65	0.14	50 U	120	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	25 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	12/5/16	421.97	78.75	--	343.22	-0.57	50 U	110 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	25 U	5.0 U	10 U	10 U	25 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	5/17/17	421.97	77.55	--	344.42	-1.20	500 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	100 U	6.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	10/24/17	421.97	78.78	--	343.19	1.23	250 U	100 U	250 U	2.0 U	2.0 U	3.0 U	3.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	100 U	6.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	6/13/18	421.97	77.74	--	344.23	-1.04	250 U	110	350 U	3.0 U	2.0 U	3.0 U	3.0 U	4.0 U	2.0 U	2.0 U	2.0 U	6.0 U	2.0 U	100 U	6.0 U	10 U	10 U	100 U	6.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	12/2/18	421.84	78.53	--	343.31	0.92	100 U	170	350 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
	6/27/19	421.84	78.28	--	343.56	-0.25	100 U	80 J	120 J	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	24 U	1.5 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
	12/11/19	421.84	78.52	0.00	343.32	0.24	100 U	67 U	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U	24 U	1.5 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U
	6/24/20	421.84	78.16	0.00	343.68	-0.36	100 U	73 U	110 U	0.24 U	0.39 U	0.50 U	0.39 U	1.0 J	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	9.8 U	0.58 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U
	12/15/20	421.84	78.46	0.00	343.38	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U	9.8 U	0.58 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U	0.220 U	0.150 U
	5/25/21	421.84	78.43	0.00	343.41	-0.03	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U	4.06 U	0.195 U	4.76 U	4.95 U	4.76 U	4.95 U	4.76 U	4.95 U	4.76 U

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates																	
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol											
							<i>MTCNA Method A Cleanup Levels⁽¹⁾⁽²⁾</i>																											
							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE											
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L									
							Units: ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft																							
MW-15	12/3/18	358.50	16.69	--	341.81	--	100 U	70 J	97 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	6/26/19	358.50	16.41	--	342.09	-0.28	100 U	66 U	98 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	12/10/19	358.50	16.78	0.00	341.72	0.37	100 U	64 U	95 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U											
	6/23/20	358.50	16.17	0.00	342.33	-0.61	100 U	68 U	110 J	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/14/20	358.50	16.43	0.00	342.07	0.26	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/25/21	358.50	16.34	0.00	342.16	-0.09	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											
MW-16	12/3/18	370.92	27.95	--	342.97	--	100 U	82 J	96 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	6/26/19	370.92	27.60	--	343.32	-0.35	100 U	77 J	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	12/10/19	370.92	27.79	0.00	343.13	0.19	100 U	62 U	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U											
	6/22/20	370.92	27.41	0.00	343.51	-0.38	100 U	71 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/16/20	370.92	27.69	0.00	343.23	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/25/21	370.92	27.68	0.00	343.24	-0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	10.2	4.95 U											
MW-17	12/3/18	424.28	81.00	--	343.28	--	180 J	880	850	2.9 J	1.9 J	8.6 J	38 J	4.7 J	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	6/27/19	424.28	80.62	--	343.66	-0.38	100 U	530	640	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	12/11/19	424.28	81.84	0.00	342.44	1.22	100 U	960	800	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U											
	6/24/20	424.28	80.48	0.00	343.80	-1.36	100 U	750	420	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/15/20	424.28	80.80	0.00	343.48	0.32	100 U	350	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/25/21	424.28	80.78	0.00	343.50	-0.02	31.6 U	486	358	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											
MW-18	12/3/18	423.66	--	--	--	--	280	65 U	96 U	1.4 J	0.83 J	3.2	15	1.7 J	0.40 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	6/26/19	423.69	80.01	--	343.68	--	100 U	68 J	100 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	4.0 U	4.0 U											
	12/12/19	423.69	80.12	0.00	343.57	0.11	100 U	62 U	91 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U											
	6/22/20	423.69	79.81	0.00	343.88	-0.31	100 U	68 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/15/20	423.69	80.11	0.00	343.58	0.30	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/26/21	423.69	80.11	0.00	343.58	0.00	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											
MW-19	12/3/18	424.20	80.80	--	343.40	--	18,000 J	3,100	110 J	300	160	740	630	390	0.40 U	0.53 U	0.35 U	0.91 U	21	24 U	1.5 U	4.0 U	4.0 U											
	6/27/19	424.20	80.50	--	343.70	-0.30	3,200	930	98 U	160	23	180	260	110 J	0.0024 J	0.53 U	0.35 U	0.91 U	3.7	24 U	1.5 U	4.0 U	4.0 U											
	12/10/19	424.20	80.72	0.00	343.48	0.22	530	320	93 U	27	4.1 U	14	56	18	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	0.150 U	0.220 U											
	6/24/20	424.20	80.27	0.00	343.93	-0.45	100 U	110	110 J	6.0	0.39 U	0.57 J	2.9 J	4.6 J	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/16/20	424.20	80.65	0.00	343.55	0.38	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/26/21	424.20	80.61	0.00	343.59	-0.04	51.2 J	147 J	83.3 U	1.00 U	0.278 U	0.137 U	3.00 U	1.56 J	0.00536 U	0.0819 U	0.105 U	0.101 U	0.305 J	4.06 U	0.195 U	4.76 U	4.95 U											
MW-20	12/12/19	426.52	82.84	0.00	343.68	--	100 U	77 J	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	--	--											
	6/22/20	426.52	82.68	0.00	343.84	-0.16	100 U	70 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/16/20	426.52	82.93	0.00	343.59	0.25	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/26/21	426.52	82.94	0.00	343.58	0.01	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											
MW-21	12/12/19	426.16	82.65	0.00	343.51	--	100 U	67 U	99 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	--	--											
	6/22/20	426.16	82.42	0.00	343.74	-0.23	100 U	72 U	110 J	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/15/20	426.16	82.70	0.00	343.46	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	3.0 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/26/21	426.16	82.66	0.00	343.50	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											
MW-22	12/11/19	420.45	77.00	0.00	343.45	--	100 U	64 U	94 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 U	1.5 U	--	--											
	6/23/20	420.45	76.76	0.00	343.69	-0.24	100 U	66 U	97 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	12/15/20	420.45	77.04	0.00	343.41	0.28	100 U	120 U	130 U	0.24 U	0.39 U	0.50 U	3.0 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U											
	5/26/21	420.45	77.00	0.00	343.45	-0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 U	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	4.76 U	4.95 U											

Well ID	Sample Date	TOC Elevation	Depth to GW	Product Thickness	GW Elevation	Change in GW Elevation	Total Petroleum Hydrocarbons			VOCs and Lead Scavengers							Fuel Oxygenates								
							TPH-g	TPH-d	TPH-o	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	EDB ⁽²⁾	EDC	DIPE	ETBE	MTBE	TBA	TAME	Ethanol	Methanol		
MTCA Method A Cleanup Levels⁽¹⁾⁽²⁾							800/1,000	500	500	5	1,000	700	1,000	160	0.01	5	NE	NE	20	NE	NE	NE	NE		
Units:							ft NAVD29 ⁽³⁾	ft btoc	ft	ft NAVD29	ft	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
MW-23	12/11/19	421.74	78.30	0.00	343.44	--	100 U	61 U	90 U	0.53 U	0.39 U	0.50 U	0.75 U	0.93 U	0.0020 U	0.53 U	0.35 U	0.91 U	0.44 U	24 UJ	1.5 U	--	--		
	6/23/20	421.74	77.94	0.00	343.80	-0.36	100 U	71 U	100 U	0.24 U	0.39 U	0.50 U	0.39 U	0.93 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U		
	12/15/20	421.74	78.26	0.00	343.48	0.32	100 U	110 U	120 U	0.24 U	0.39 U	0.50 U	3.0 U	4.0 U	0.0020 U	0.42 U	0.35 U	0.91 U	0.44 U	9.8 U	0.58 U	0.150 U	0.220 U		
	5/26/21	421.74	78.30	0.00	343.44	0.04	31.6 U	66.7 U	83.3 U	0.0941 U	0.278 U	0.137 U	0.174 U	1.00 UJ	0.00536 U	0.0819 U	0.105 U	0.101 U	0.101 U	4.06 U	0.195 U	20.6	4.95 U		
RW-1 421.74	6/29/10	417.29	72.89	--	344.40	--	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	10 U	--		
	12/16/10	417.29	73.28	--	344.01	0.39	50 U	120 U	240 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--	--	--	--	--	--	--	10 U	--		
Well abandoned September 2018																									
Tidewater Wells																									
AR-11	6/25/19	422.62	78.84	--	343.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/9/19	422.62	78.96	0.00	343.66	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/22/20	422.62	78.63	0.00	343.99	-0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/15/20	422.62	79.01	0.00	343.61	0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/24/21	422.62	78.98	0.00	343.64	-0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	6/25/19	425.02	81.29	--	343.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/9/19	425.02	81.40	0.00	343.62	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/22/20	425.02	81.07	0.00	343.95	-0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/15/20	425.02	81.46	0.00	343.56	0.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	5/24/21	425.02	81.41	0.00	343.61	-0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Notes:

Values in **bold** were detected above the limit

 = Yellow shaded detections exceed the Ecology MTCA Cleanup Level

 = Grey shaded values are limits that exceed the Ecology MTCA Cleanup Level

-- = Well Not Sampled (for one of these reasons: insufficient water in well, presence of liquid hydrocarbons, inaccessibility, date was between sampling events, or well no longer in sampling program); not submitted for this analyte; not gauged; or not calculated.

(1) MTCA Method A Cleanup Levels for Groundwater (Washington Administrative Code 173-340-900 Table 720-1)

(2) TPH-g MTCA Method A Cleanup Levels for Groundwater has two levels. If benzene is present in groundwater, the level is 800 ug/L; if no detectable benzene in groundwater, the level is 1,000 ug/L.

(3) On February 7, 2019, the wells were resurveyed by Stratton Surveying and Mapping, P.C. MW-20 through MW-23 were surveyed on December 10, 2019. Horizontal datum = Washington State Plane South Zone North American Datum 1983(1991). Vertical datum = North American Vertical Datum 29.

(4) When measurable product was present, the equivalent groundwater elevation was calculated by assuming a specific gravity of 0.8 for the product.

Acronyms:

ug/L = microgram per liter

btoc = below top of casing

DIPE = di-isopropyl ether

EDB = 1,2-dibromoethane

EDC = 1,2-dichloroethane

ETBE = ethyl tertiary-butyl ether

ft = feet

GW = groundwater

J = estimated concentration

mg/L = milligram per liter

MTBE = methyl tertiary-butyl ether

MTCA = Model Toxics Control Act

NAVD29 = North American Vertical Datum of 1929

NE = not established

SGC = samples analyzed with silica gel cleanup

TAME = tertiary-amyl methyl ether

TBA = tertiary-butanol

TOC = top of casing

TPH = total petroleum hydrocarbon

TPH-g = gasoline range hydrocarbons (as analyzed by Northwest Method NWWPTH-Gx)

TPH-d = diesel range hydrocarbons (as analyzed by Northwest Method NWWTPH-Dx)

TPH-o = motor oil range hydrocarbons (as analyzed by Northwest Method NWWTPH-Ox)

U = analyte not detected above limit shown. Starting with data collected since September 2018, the limit shown is the method detection limit.

VOC = volatile organic compound

C.2. Historic and Current Field Parameters and Natural Attenuation Results

Well ID	Sample Date	Field Parameters								Laboratory Analytical						
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Turbidity	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	Iron (Total)	Manganese (Total)	TOC
Units:		S.U.	mS/cm	mg/L	°C	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-2	6/30/10	6.96	1.61	0.16	21.49	48	7.0	0.45	25	100 J	550	0.085	0.026 U	--	--	--
	12/15/10	7.11	0.928	2.4	20.50	15	1.0	0.41	46	120	650	0.11	0.026 U	--	--	--
	5/29/14	7.16	1.215	2.49	17.58	146.3	--	1.16	13.8	100	537	0.0050 U	0.001 U	--	--	--
	10/29/14	6.85	1.578	1.07	17.51	91.6	--	1.33	2.6	140	730	0.011	0.001 U	--	--	--
	6/4/15	6.84	1.018	2.21	17.97	-66.6	--	0.53	0.1	107	558	0.0050 U	0.001 U	--	--	--
	9/28/15	6.91	1.467	1.77	17.60	-7.0	--	--	1.7	167	711	0.0050 U	0.0242	--	--	--
	8/29/16	7.38	1.40	1.74	19.89	94	--	--	--	110	--	0.02 U	0.0050 U	--	--	--
	12/5/16	6.63	1.05	6.16	15.80	282	--	--	--	89	400	--	0.0050 U	--	--	--
	10/24/17	7.34	1.27	8.93	17.58	112	--	0.01 U	9.70	110	350	0.02 U	0.01	--	--	--
	6/14/18	6.84	1.16	3.40	22.39	178	--	0.96	11.0	110	400	0.020 U	0.0050 U	--	--	--
	12/2/18	7.54	1.68	4.81	13.55	206	--	0.15	10.8	92	680	0.0017 U	0.022	--	--	--
	6/26/19	6.93	1.4	IE	17.80	115	--	0.12	17.9	120	560	0.0066 J	0.002 U	--	--	--
	12/11/19	7.00	1.54	1.55	13.57	120	2.5	0	16.8	110	530	0.0017 U	0.00050 U	0.18 U	0.055	--
	6/24/20	6.91	1.42	2.27	29.34	97	0.0	0.02	12.7	110	560	0.0017 U	0.00050 U	--	--	--
	12/15/20	7.72	1.319	2.37	15.25	109.4	74.9	0.82	5.4	100	540	0.0022 J	0.005 U	--	--	--
5/25/21	7.45	1.45	3.05	21.30	87	0.0	0.02	11.1	97.9	692	0.00178 J	0.00291 U	--	--	--	
MW-3	5/28/14	7.15	1.053	--	18.12	-105.6	--	--	--	--	--	--	--	--	--	--
	10/30/14	6.91	1.136	0.84	17.28	-144.7	--	--	--	--	--	--	--	--	--	--
	6/4/15	6.82	1.353	0.95	18.61	-154.0	--	--	--	--	--	--	--	--	--	--
	9/29/15	6.82	1.174	1.01	17.51	-174.4	--	--	--	--	--	--	--	--	--	--
	8/30/16	7.13	1.190	2.42	18.13	-153.0	--	--	--	--	--	--	--	--	--	--
	12/2/16	6.86	0.963	3.24	16.06	36	--	--	--	--	--	--	--	--	--	--
	5/16/17	7.27	0.996	0.82	17.01	-37	--	--	--	--	--	--	--	--	--	--
	10/25/17	7.41	1.20	4.01	17.58	-105	--	--	--	--	--	--	--	--	--	--
	6/14/18	6.70	1.03	2.75	19.46	42	--	--	--	--	--	--	--	--	--	--
	12/4/18	7.56	1.28	8.82	16.31	-65	--	--	--	29	520	0.96	1.7	--	--	--
	6/26/19	6.99	1.03	IE	18.20	-120	--	1.71	2.7	32	470	0.80	2.1	--	--	--
	12/11/19	7.22	1.31	0.83	14.47	-192	8.1	1.28	1.3	63	450 J	0.81	0.50	3.9	0.79	19
	6/24/20	7.02	1.22	0.96	22.25	-100	0.0	1.9	1.9	61	450	0.66	0.063	--	--	--
12/16/20	7.60	1.274	1.30	16.10	-94.2	769	1.11	0.0	49	500	0.77	1.1	--	--	--	
5/27/21	7.09	1.41	0.00	17.02	-93	0.0	1.27	1.5	37.7	557	0.719	1.92	--	--	--	
MW-4	6/29/10	7.62	0.88	6.28	22.88	117	11.5	0.24	49	110	180	0.020 U	0.026 U	--	--	--
	12/15/10	7.73	0.52	6.76	18.64	87	0.0	0	26	110	170	0.020 U	0.026 U	--	--	--
	5/28/14	7.68	0.728	--	17.78	82.2	--	--	--	--	--	--	--	--	--	--
	10/28/14	7.38	0.741	7.75	16.90	36.0	--	--	--	--	--	--	--	--	--	--
	6/3/15	7.40	0.751	8.28	17.76	-23.6	--	--	--	--	--	--	--	--	--	--
	9/28/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	8.36	0.813	7.34	18.32	59	--	--	--	--	--	--	--	--	--	--
	12/5/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	7.99	0.861	7.78	17.9	-27	--	--	--	--	--	--	--	--	--	--
	6/13/18	7.49	0.813	7.56	20.99	161	--	--	--	--	--	--	--	--	--	--
	6/26/19	7.40	0.962	6.62	19.15	150	0.0	--	--	--	--	--	--	--	--	--
	12/11/19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/20	7.57	1.05	9.28	19.38	84	0.00	--	--	--	--	--	0.00099 J	--	--	--
	5/25/21	7.60	1.12	7.74	17.46	165	0.0	--	--	--	--	--	--	--	--	--

Well ID	Sample Date	Field Parameters								Laboratory Analytical						
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Turbidity	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	Iron (Total)	Manganese (Total)	TOC
Units:		S.U.	mS/cm	mg/L	°C	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-6	6/29/10	7.52	0.91	7.56	17.78	161	56.2	0.37	38	110	170	0.026	0.026 U	--	--	--
	12/15/10	7.64	0.51	7.06	17.95	94	0.7	0	26	110	170	0.020 U	0.026 U	--	--	--
	5/29/14	7.93	0.095	8.78	15.40	127.1	--	0	18.5	110	252	0.0050 U	0.0010 U	--	--	--
	10/29/14	7.43	0.817	6.79	19.45	84.7	--	0.40	0	100	185	0.0050 U	0.0010 U	--	--	--
	6/3/15	7.53	0.744	8.59	17.18	-44.8	--	0	0	107	169	0.0050 U	0.00168	--	--	--
	9/28/15	7.53	0.812	6.76	19.23	-8.5	--	--	15.7	108	189	0.0050 U	0.0010 U	--	--	--
	8/30/16	8.30	0.836	7.39	18.88	110	--	--	--	100	--	0.020 U	0.0050 U	--	--	--
	12/5/16	6.83	0.851	6.84	14.54	207	--	--	--	93	170	0.020 U	0.0050 U	--	--	--
	5/16/17	8.06	0.824	7.89	14.65	66	--	--	--	96	150	0.020 U	0.0085	--	--	--
	10/23/17	7.61	0.863	9.32	19.68	186	--	0.01 U	0.04	98	180	0.020 U	0.0050 U	--	--	--
	6/11/18	7.38	0.828	8.38	20.69	156	--	0.01 U	8.09	96 J	150	0.020 U	0.0050 U	--	--	--
	12/2/18	7.98	0.963	7.86	18.65	241	--	0.01 U	66.5	100	170	0.0021 J	0.0017 U	--	--	--
	6/26/19	7.54	0.831	IE	17.70	121	--	0.00 U	14.7	100	140	0.0050 U	0.0017 U	--	--	--
	12/10/19	7.69	1.07	9.47	14.60	10	0.0	0.01	9.2	110	160	0.0017 U	0.0010 U	0.18 U	0.0023 U	--
	6/23/20	7.55	1.08	9.05	19.09	103	0.0	0.11	8.1	110	160	0.0017 U	0.00050 U	--	--	--
	12/16/20	7.88	2.036	8.38	16.20	92	68	0.00	17.4	110	150	0.0017 U	0.0005 U	--	--	--
5/24/21	7.60	1.19	5.53	20.50	102	2.0	0.04	18.3	107	164	0.000855 U	0.0133	--	--	--	
MW-7	6/30/10	7.46	0.92	5.03	19.65	88	84.5	0.53	44	110	190	0.071	0.026 U	--	--	--
	12/15/10	7.59	0.52	6.96	17.69	89	6.2	0	27	110	170	0.020 U	0.026 U	--	--	--
	5/28/14	7.63	0.775	--	18.48	101.7	--	--	--	--	--	--	--	--	--	--
	10/29/14	7.48	0.773	7.43	16.81	84.1	--	--	--	--	--	--	--	--	--	--
	6/3/15	7.10	0.843	6.78	18.03	-1.8	--	--	--	--	--	--	--	--	--	--
	9/28/15	7.10	0.798	7.40	17.31	-6.4	--	--	6.0	103	203	0.0086	0.0010 U	--	--	--
	8/30/16	7.96	0.964	6.92	19.01	94	--	--	--	--	--	--	--	--	--	--
	12/5/16	7.06	0.839	7.90	15.85	165	--	--	--	--	--	--	--	--	--	--
	5/15/17	7.62	0.863	6.10	17.30	35	--	--	--	--	--	--	--	--	--	--
	10/24/17	7.83	0.918	7.73	17.67	145	--	--	--	--	--	--	--	--	--	--
	6/13/18	7.25	0.837	6.58	22.15	182	--	--	--	--	--	--	--	--	--	--
	12/4/18	8.02	0.976	8.26	13.19	173	--	--	--	--	--	--	--	--	--	--
	6/26/19	7.42	1.19	4.35	21.12	166	0.0	--	--	--	--	--	--	--	--	--
	12/11/19	7.36	1.05	5.38	14.10	107	0.8	--	--	--	--	--	--	--	--	--
	6/23/20	7.31	1.03	8.37	21.48	94	21.0	--	--	--	--	--	--	--	--	--
	12/14/20	7.66	0.979	8.02	15.20	132	66	--	--	--	--	--	--	--	--	--
5/25/21	7.40	1.20	6.20	16.48	180	12.0	--	--	--	--	--	--	--	--	--	
MW-8	6/30/10	7.54	0.93	5.11	17.57	99	0.0	0.01	45	110	180	0.020 U	0.026 U	--	--	--
	12/15/10	7.52	0.53	6.94	16.94	94	0.0	0	27	110	170	0.020 U	0.026 U	--	--	--
	5/28/14	7.70	0.755	--	17.50	89.5	--	0.59	16.8	110	242	0.0050 U	0.0010 U	--	--	--
	10/29/14	7.37	0.774	7.05	17.34	75.3	--	0	18.4	100	190	0.0072 U	0.0010 U	--	--	--
	6/3/15	7.39	0.778	7.38	17.90	-42.7	--	0	16.7	108	185	0.0050 U	0.0010 U	--	--	--
	9/28/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	7.72	0.843	5.29	19.46	143	--	--	--	100	--	0.020 U	0.0050 U	--	--	--
	12/5/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/17/17	7.88	0.869	5.68	17.96	28	--	--	--	100	170	0.020 U	0.0050 U	--	--	--
	6/11/18	7.28	0.866	7.46	19.77	175	--	0.01 U	42.9	120	180	0.020 U	0.0050 U	--	--	--
	6/26/19	7.58	0.848	IE	18.29	116	--	--	--	--	--	--	--	--	--	--
	12/11/19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/20	7.46	0.925	5.11	25.04	107	0.00	0.00	15.9	130	180	0.0017 U	0.00062 J	--	--	--
5/26/21	7.56	1.14	7.16	17.73	153	4.9	0.06	>35.0	124	197	0.000855 U	0.00291 U	--	--	--	

Well ID	Sample Date	Field Parameters								Laboratory Analytical							
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Turbidity	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	Iron (Total)	Manganese (Total)	TOC	
	Units:	S.U.	mS/cm	mg/L	°C	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
MW-10	6/30/10	7.56	0.93	5.53	18.12	80	0.0	0	48	110	180	0.020 U	0.026 U	--	--	--	
	12/15/10	7.68	0.52	6.30	18.19	99	0.0	0	27	110	170	0.020 U	0.026 U	--	--	--	
	5/28/14	7.65	0.764	--	17.91	137.6	--	--	--	--	--	--	--	--	--	--	
	10/29/14	7.40	0.769	7.45	17.02	80.6	--	--	--	--	--	--	--	--	--	--	
	6/3/15	7.29	0.78	7.32	17.90	-34.4	--	--	--	--	--	--	--	--	--	--	
	9/28/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/30/16	8.28	0.831	5.40	18.26	100	--	--	--	--	--	--	--	--	--	--	--
	12/5/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/15/17	7.39	0.888	6.24	17.41	29	--	--	--	--	--	--	--	--	--	--	--
	6/13/18	7.35	0.730	4.96	28.26	178	--	--	--	--	--	--	--	--	--	--	--
	6/26/19	7.60	1.01	6.38	18.25	155	8.0	--	--	--	--	--	--	--	--	--	--
	12/11/19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/20	7.40	1.04	7.45	20.04	91	0.00	--	--	--	--	--	--	--	--	--	--
5/25/21	7.71	1.04	6.67	16.54	100	0.0	--	--	--	--	--	--	--	--	--	--	
MW-11	6/30/10	7.20	1.10	2.08	18.86	83	0.0	0.05	35	88	310	0.079	0.026 U	--	--	--	
	12/16/10	7.04	0.57	6.22	18.49	84	0.0	0	23	100	230	0.14	0.026 U	--	--	--	
	5/29/14	7.20	0.889	1.08	19.27	102.7	--	--	--	--	--	--	--	--	--	--	--
	10/30/14	6.96	0.932	1.12	18.47	89.0	--	--	--	--	--	--	--	--	--	--	--
	6/4/15	6.89	0.916	0.94	18.97	-49.8	--	--	--	--	--	--	--	--	--	--	--
	9/29/15	6.89	0.914	0.89	18.40	-15.4	--	--	--	--	--	--	--	--	--	--	--
	8/29/16	7.32	0.952	2.67	19.99	148	--	--	--	--	--	--	--	--	--	--	--
	12/5/16	6.70	0.933	1.73	17.14	204	--	--	--	--	--	--	--	--	--	--	--
	5/16/17	7.44	0.949	4.79	17.41	46	--	--	--	--	--	--	--	--	--	--	--
	10/25/17	7.37	1.040	7.49	18.57	154	--	--	--	--	--	--	--	--	--	--	--
	6/14/18	6.71	0.956	3.35	21.77	198	--	--	--	--	--	--	--	--	--	--	--
	12/2/18	7.48	1.14	5.47	15.49	231	--	--	--	--	--	--	--	--	--	--	--
	6/27/19	6.98	1.29	1.70	17.37	213	0.0	--	--	--	--	--	--	--	--	--	--
	12/11/19	7.21	1.10	2.97	15.90	34	1	--	--	--	--	--	--	--	--	--	--
	6/24/20	6.95	1.38	0.00	20.84	83	0	--	--	--	--	--	--	--	--	--	--
12/15/20	7.43	1.154	2.73	15.93	133.1	78.3	--	--	--	--	--	--	--	--	--	--	
5/25/21	7.23	1.12	1.77	18.78	122	0.0	--	--	--	--	--	--	--	--	--	--	
MW-12	6/30/10	7.19	1.23	0.32	18.87	-74	2.3	1.09	32	120	320	0.49	0.0861	--	--	--	
	12/16/10	7.22	0.62	3.86	19.50	-30	0.0	0.50	18	120	290	0.49	0.0609	--	--	--	
	5/29/14	7.22	0.993	1.81	19.82	-27.5	--	--	9.2	110	309	0.270	0.0142	--	--	--	
	10/30/14	6.82	1.135	2.55	16.73	-50.6	--	4.68	0	110	350	0.280	0.0870	--	--	--	
	6/4/15	6.82	1.017	2.17	18.40	-74.5	--	0.34	10.4	113	312	0.201	0.0010 U	--	--	--	
	9/29/15	6.82	1.124	1.15	16.49	-63.7	--	--	7.0	107	367	0.252	0.0362	--	--	--	
	8/29/16	7.45	1.290	1.10	19.42	-10	--	--	--	83	--	0.25	0.760	--	--	--	
	12/6/16	6.80	0.993	3.22	14.52	121	--	--	--	--	270	0.19	0.063	--	--	--	
	5/16/17	7.96	0.965	3.93	15.97	36	--	--	--	100	240	0.16	0.012	--	--	--	
	10/24/17	7.50	1.100	3.39	17.70	49	--	0.01 U	10.5	98.0	270	0.19	0.090	--	--	--	
	6/14/18	6.57	1.120	1.95	18.69	212	--	0.01 U	23.8	120	290	0.043	0.0050 U	--	--	--	
	12/3/18	7.57	1.36	5.67	13.71	176	--	0.01 U	16.4	130	370	0.074	0.0017 U	--	--	--	
	6/27/19	6.97	1.11	IE	15.90	164	--	0.09	4.7	120 J	340	0.10	0.026	--	--	--	
	12/11/19	7.29	1.30	3.22	12.59	15	0.0	0.01	7.0	140	290 J	0.076	0.0015 J	0.18 U	0.074	--	
	6/24/20	6.76	1.41	0.00	22.66	114	42.0	0.11	4.3	140	430	0.12	0.0064	--	--	--	
12/16/20	7.59	1.273	3.16	15.10	121.4	70.8	0.00	7.2	140	360	0.14	0.0037	--	--	--		
5/27/21	7.44	1.44	0.19	16.49	141	0.6	0.06	12.4	114	513	0.0963	0.0386	--	--	--		

Well ID	Sample Date	Field Parameters								Laboratory Analytical						
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Turbidity	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	Iron (Total)	Manganese (Total)	TOC
	Units:	S.U.	mS/cm	mg/L	°C	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
MW-14	6/29/10	7.36	0.99	3.94	20.08	98	24.1	0.34	43	120	220	0.020 U	0.026 U	--	--	--
	12/15/10	7.33	0.52	5.77	17.81	85	1.7	0	26	110	180	0.020 U	0.026 U	--	--	--
	5/29/14	7.53	0.795	5.70	17.69	101.4	--	--	--	--	--	--	--	--	--	--
	10/29/14	7.23	0.805	5.65	17.81	105.4	--	--	--	--	--	--	--	--	--	--
	6/4/15	7.39	0.784	6.22	17.02	-46.6	--	--	--	--	--	--	--	--	--	--
	8/29/16	7.71	0.877	5.19	18.76	120	--	--	--	--	--	--	--	--	--	--
	12/5/16	6.97	0.855	6.29	15.43	178	--	--	--	--	--	--	--	--	--	--
	5/17/17	7.71	0.923	3.02	17.44	46	--	--	--	--	--	--	--	--	--	--
	10/24/17	7.70	0.932	6.18	17.69	144	--	--	--	--	--	--	--	--	--	--
	12/2/18	7.87	1.01	7.32	15.75	222	--	--	--	--	--	--	--	--	--	--
	6/27/19	7.54	1.18	3.44	16.30	160	0.0	--	--	--	--	--	--	--	--	--
	12/11/19	7.21	1.02	4.27	14.38	107	0.8	--	--	--	--	--	--	--	--	--
	6/24/20	7.24	1.06	4.61	20.61	116	0.0	--	--	--	--	--	--	--	--	--
	12/15/20	7.90	1.032	7.28	16.10	111.3	75.3	--	--	--	--	--	--	--	--	--
5/25/21	7.58	1.09	5.21	17.23	83	0.0	--	--	--	--	--	--	--	--	--	
MW-15	12/3/18	8.02	0.950	6.16	16.03	178	--	--	--	--	--	--	--	--	--	--
	6/26/19	7.60	0.990	4.44	18.75	168	0.0	--	--	--	--	--	--	--	--	--
	12/10/19	7.37	1.07	4.99	12.99	63	19.8	--	--	--	--	--	--	--	--	--
	6/23/20	7.38	0.904	4.46	27.69	108	0.0	--	--	--	--	--	--	--	--	--
	12/14/20	7.92	1.017	6.74	15.00	92.8	73.8	--	--	--	--	--	--	--	--	--
	5/25/21	7.51	1.18	5.92	16.67	170	0.0	--	--	--	--	--	--	--	--	--
MW-16	12/3/18	8.04	0.949	6.37	16.40	186	--	--	--	--	--	--	--	--	--	--
	6/2/19	7.58	1.02	4.48	18.08	166	28.0	--	--	--	--	--	--	--	--	--
	12/10/19	7.62	1.01	6.11	15.28	-73	0	0.01	8.4	120	190 J	0.0017 U	0.0029	1.1	0.023	2.7
	6/22/20	7.18	1.04	4.09	22.10	80	0	0.03	15.7	130	180	0.0017 U	0.00050 U	--	--	--
	12/16/20	7.99	1.026	6.62	16.20	69.3	75.9	0.00	17.1	130	190	0.0017 U	0.0005 U	--	--	--
	5/25/21	7.46	1.15	4.56	18.87	151	1.2	0.00	26.9	124	200	0.00120 J	0.00291 U	--	--	--
MW-17	12/3/18	7.46	1.77	5.47	13.77	139	--	--	--	--	--	--	--	--	--	--
	6/27/19	7.11	1.63	2.78	15.82	185	0.0	--	--	--	--	--	--	--	--	--
	12/11/19	6.91	1.54	2.96	13.84	118	2.2	--	--	--	--	--	--	--	--	--
	6/24/20	7.18	1.33	9.1	18.86	100	0.0	--	--	--	--	--	--	--	--	--
	12/15/20	7.38	1.259	6.94	14.10	107	65.0	--	--	--	--	--	--	--	--	--
	5/25/21	7.25	1.27	8.75	16.72	118	0.0	--	--	--	--	--	--	--	--	--
MW-18	12/4/2018*	7.95	1.06	7.62	11.93	101	--	--	--	--	--	--	--	--	--	--
	6/26/19	7.12	1.10	IE	18.79	126	--	0.12	23.4	150 J	220	0.0050 U	0.0017 U	--	--	--
	12/12/19	7.42	1.49	7.25	14.20	46	0	0.00	15.2	170	240	0.0017 U	0.0043	0.18 U	0.0023 U	--
	6/22/20	7.10	1.28	7.1	19.54	119	0	0.00	10.7	160	210	0.0017 U	0.00050 U	--	--	--
	12/15/20	7.53	1.049	8.10	15.50	109	64.0	0.01	16.5	150	220	0.0017 U	0.0005 U	--	--	--
	5/26/21	7.33	1.21	6.42	17.10	211	10.3	0.02	23.6	131	214	0.000855 U	0.00291 U	--	--	--
MW-19	12/3/2018*	7.44	2.04	4.76	13.11	-75	--	--	--	--	--	--	--	--	--	--
	6/27/19	7.27	1.05	IE	16.62	-121	--	1.37	13.8	120	240	0.14	1.3	--	--	--
	12/10/19	7.32	1.20	7.16	16.44	-134	11.2	0.14	14.0	150	220	0.079	0.27	0.61 J	0.072	4.0
	6/24/20	7.26	1.19	7.06	18.80	48	0.0	0.02	13.8	140	200	0.028	0.12	--	--	--
	12/16/20	7.64	1.985	6.41	15.80	103	69.0	0.00	16.1	140	200	0.0021 J	0.0005 U	--	--	--
	5/26/21	7.29	1.200	3.12	17.73	88	0.0	0.01	20.0	115	255	0.0248	0.0724	--	--	--

Well ID	Sample Date	Field Parameters								Laboratory Analytical						
		pH	Conductivity	Dissolved Oxygen	Temperature	ORP	Turbidity	Ferrous Iron	Nitrate	Sulfate	Alkalinity	Manganese (Dissolved)	Methane	Iron (Total)	Manganese (Total)	TOC
Units:		S.U.	mS/cm	mg/L	°C	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-20	12/12/19	7.89	0.993	6.36	15.70	7	0	0.00	21.5	130	170 J	0.012 J	0.00050 U	0.18 U	0.018	--
	6/22/20	7.53	1.01	7.95	20.41	93	0	0.08	9.8	130	170	0.0017 U	0.00075 J	--	--	--
	12/16/20	7.91	1.905	8.04	15.70	89	67.0	0.02	5.7	140	160	0.0019 J	0.0005 U	--	--	--
	5/26/21	7.29	1.20	3.12	17.54	179	0.0	0.00	33.7	124	185	0.000855 U	0.00291 U	--	--	--
MW-21	12/12/19	7.71	1.02	6.25	14.21	108	1.5	0.00	20.2	130	170	0.0017 U	0.00050 U	0.18 U	0.0024 J	--
	6/22/20	7.54	1.07	7.27	18.57	78	0.0	0.10	35	130	160	0.0017 U	0.00050 U	--	--	--
	12/15/20	7.85	1.974	8.12	14.90	103	68.0	0.01	20.6	150	170	0.0017 U	0.0005 U	--	--	--
	5/26/21	7.81	1.02	7.97	17.59	146	0.0	0.08	12.4	124	189	0.000855 U	0.00291 U	--	--	--
MW-22	12/11/19	7.50	1.05	5.69	14.61	102	0.9	0.04	25	140	170 J	0.0017 U	0.00075 J	0.18 U	0.0023 U	--
	6/23/20	7.62	0.992	6.57	21.61	107	0.0	0.09	7.4	130	170	0.0017 U	0.00050 U	--	--	--
	12/15/20	7.85	1.978	8.17	15.80	92	93.0	0.00	12.3	150	170	0.0017 U	0.0005 U	--	--	--
	5/26/21	7.89	0.999	7.46	18.68	125	0.0	0.25	27.7	127	189	0.000855 U	0.00291 U	--	--	--
MW-23	12/11/19	7.75	1.02	5.90	15.06	12	78	0.00	6.5	130	170	0.042	0.00050 U	0.51 J	0.051	--
	6/24/20	7.56	1.10	8.01	17.51	84	0	0.10	30.8	130	180	0.0017 U	0.00050 U	--	--	--
	12/15/20	8.11	1.062	8.33	16.60	116.1	87.5	0.03	20.5	150	170	0.0017 U	0.0005 U	--	--	--
	5/26/21	7.58	1.180	6.25	18.69	158	10.8	0.07	28.0	129	186	0.000855 U	0.00291 U	--	--	--

Notes:

Values in **bold** were detected above the detection limit

* The sample containers for MW-18 and MW-19 were inadvertently switched in the field and reported on the associated laboratory report incorrectly during this sampling event. The data in the table reflects the correct results for each wells.

Acronyms:

-- = not analyzed or sample not collected

°C = degrees Celsius

ft = feet

IE = Instrument Error

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

mg/L = milligrams per liter

mS/cm = milliseimens per centimeter

mV = millivolts

ORP = Oxidation Reduction Potential

S.U. = Standard Unit

U = analyte not detected above limit shown