Chevron Environmental Management Company

Draft for Regulatory Review - Remedial Investigation Report

Former Chevron Station No. 209335

1201 – 1225 North 45th Street

Seattle, Washington

FSID: 70996824

CSID: 6537

May 26, 2023

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Acronyms and Abbreviations

AO	Agreed Order
Arcadis	Arcadis U.S., Inc.
ASTM	ASTM International
bgs	below ground surface
BTEX	collectively benzene, toluene, ethylbenzene, and total xylenes
CEMC	Chevron Environmental Management Company
COC	constituent of concern
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CUL	cleanup level
CSID	Cleanup Site Identification Number
Delta	Delta Environmental Consultants, Inc.
DRO	diesel range organics
Ecology	Washington Department of Ecology
EDB	ethylene dibromide
EDC	1,2-dichloroethane
EIM	Environmental Information Management
FSID	Facility Site Identification Number
HRG	Housing Resource Group
GRO	gasoline range organics
HO	heavy oil range organics
IDW	investigation-derived waste
LUST	Leaking Underground Storage Tank
MTBE	methyl tertiary butyl ether
MTCA	Model Toxics Control Act
PID	photo ionization detector
PLP	Potentially Liable Person
PVC	polyvinyl chloride
RI	Remedial Investigation
ROW	right-of-way
SAIC	Science Applications International Corporation

SHA	Seattle Housing Authority
site	1201 – 1225 North 45th Street, Seattle, Washington 98103
Standard Oil	Standard Oil Company of California
Stone Way	Stone Way Apartments, LLC
TPH	total petroleum hydrocarbon
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

1 Introduction

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) has prepared this *Draft for Agency Review – Remedial Investigation* (RI) *Report* (report) for former Chevron Station No. 209335 located at the southwest corner of North 45th Street and Stone Way North in Seattle, Washington (Site). The "Site" is defined in the Agreed Order (AO) No. DE 19432, effective February 2, 2021. Former Chevron Service Station No. 209335 was located on the eastern half of current tax parcel 7821200255. This tax parcel, as well as the adjoining one to the west (tax parcel 7821200275), are currently owned by Stone Way Apartments LLC (Stone Way). Tax parcels 7821200255 and 7821200275 are collectively referred to in this RI report as the "Property." Under AO No. DE 19432, the Site is defined by the extent of contamination caused by the release of hazardous substances at the former Chevron Service Station No. 209335. In this RI we will therefore utilize the same definition of "Site." A Site location map is presented on **Figure 1**. An aerial map showing the Site vicinity is included as **Figure 2**. The Site plan is included as **Figure 3.** A parcel map and parcel data for the Site are presented in **Appendix A**.

The Site is formally known as Chevron 209335 in the Washington Department of Ecology's (Ecology's) database. The identifiers are:

- Facility Site Identification Number (FSID): 70996824
- Cleanup Site Identification Number (CSID): 6537
- Leaking Underground Storage Tank (LUST) ID: 5695
- AO Number: 19432
- Address: 1201 – 1225 North 45th Street, Seattle, Washington 98103

Ecology's website for the Site and associated electronically available documents can be accessed from this web page: https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=6537. Data collected during investigations of the Site are available in Ecology's Environmental Information Management (EIM) database under EIM identification number FS70996824.

Potentially Liable Persons (PLPs) for the Site as identified in AO No. DE 19432 are CEMC and Stone Way (Ecology 2021).

This report documents the investigation activities conducted at the Site in October 2022 and December 2022 that were performed in general accordance with the September 20, 2021 *Remedial Investigation Work Plan* (Work Plan; Arcadis 2021), which was approved via email from Ecology on September 29, 2021.

The objectives of the work were to address data gaps regarding the nature and extent of contaminants in soil and groundwater associated with the historical use of the Property (tax parcels 7821200255 and 7821200275).

2 Site Background

This section discusses general Site and background information as well as the environmental history at the Site.

2.1 General Site Information

The Site's general information is listed below:

- **Site Location:** southwest corner of North 45th Street and Stone Way North, Seattle, Washington
- **Site County:** King County, Washington
- **Site Parcel Number, Address, Area, Current Use:**

Parcel ID	Definition	Address	Current Use	Land Use[1]
7821200255	The former Chevron Service Station No. 209335 (Site) was historically located on the eastern half of current tax parcel 7821200255 (part of Property)	1201 – 1225 North 45th Street	0.23-acre parcel on the corner of Stone Way North and North 45th Street. A portion of Stone Way Apartments are located on the parcel, as well as retail space. Former wells on the parcel prior to redevelopment: MW-1 through MW-5. Wells MW-6 through MW-8 are currently on the parcel. MW-9 through MW-14 are located in the adjoining rights-of way (ROWs)	Neighborhood Commercial (NC2P-55 (M))
7821200275	Offsite (part of Property)	1205 North 45th Street	0.45-acre parcel on the southeast corner of Midvale Avenue North and North 45th Street. A portion of Stone Way Apartments are located on the parcel, as well as retail including a gym (Fuerte Fitness) and a coffee shop (Seattle Meowtropolitan). There are no former or current wells on this parcel. There is no known contamination on this parcel.	Neighborhood Commercial (NC2P-55 (M))

1. The land use of a parcel is defined by the Seattle zoning map available in Appendix A. Any potential parcel use change will be defined by the land use as described on the Seattle zoning map.

- **Vicinity Land Use**: Surrounding properties are also zoned as neighborhood commercial and low rise residential. Surrounding properties include Walgreens, Stonehedge Apartments, T-Mobile, and Archie McPhee novelty store.

2.2 Site History

The eastern half of current tax parcel 7821200255 (historical Parcel 0245 [Environmental Associates 1999]) was first developed as a gasoline service station in 1935. The 1935 station was purchased by Standard Oil Company of California (Standard Oil) in 1954 and reconfigured in 1956. The 1935 and 1956 stations were configured with

the pump islands and the former station office in the northeastern corner and a service garage in the southern half. A hydraulic hoist was also present (presumed located within the garage in the southern half). The service station and garage were demolished in 1969. Seattle Housing Authority (SHA) purchased historical Parcel 0245 from Standard Oil in 1978 (Environmental Associates 1999, SAIC 2010b).

According to a Phase 1 Environmental Site Assessment (ESA) conducted in 1999, the western half of current tax parcel 7821200255 (historical Parcel 0255 [Environmental Associates 1999]) was occupied by a 1940-vintage building known as the Wallingford Medical Building. The Wallingford Medical Building heating system consisted of a boiler system fueled by heating oil stored in a 294-gallon UST reportedly located south of the building (Environmental Associates 1999). No historical gas station activities were conducted on historical Parcel 0255. The Parcel was owned throughout the years by private owners, corporations, or partnerships not associated with the owner of historical Parcel 0245 (Environmental Associates 1999).

In 2005, SHA sold historical Parcels 0245 and 0255 (together forming current tax parcel 7821200255) to Housing Resources Group (HRG, now Bellwether Housing) who immediately conveyed them to Stone Way.

In 2005, the entire Property was excavated to 13 feet below ground surface (feet bgs) to accommodate an underground parking garage that Stone Way constructed on the Property beneath a four-story mixed-use apartment building with ground-floor retail (SAIC 2010b).

An estimated 11 underground storage tanks (USTs) were present on current tax parcel 7821200255 as described below, 10 being associated with the historical service station activities. None of the USTs remained in place after the Property-wide excavation implemented in 2005 for the underground parking garage. According to the documentation available, the original station included two 1,000-gallon fuel USTs, one 550-gallon UST, and one hydraulic hoist. In 1956, during station redevelopment, one 3,000-gallon UST, one 2,000-gallon UST, and one 550-gallon UST were reportedly installed. Four 500-gallon steel USTs were encountered during the 2005 excavation in the northeast corner of the Property and removed. An additional heating oil UST, not associated with the service station, was also located at 3 feet bgs, 5 feet south of the Wallingford Medical Building according to the site reconnaissance conducted on former Parcel 0255 by Environmental Associates in 1999 (Environmental Associates 1999). The 2005 Property-wide excavation was implemented lot line to lot line and therefore included the presumed location of the heating oil UST. While no documentation is available to Arcadis, it is assumed this heating oil UST has been removed from the Property.

UST History

Installation Date	Quantity	Specifications	Contents	Location	Current Status
1935	2	1,000-gallon	“Fuel”	Likely corresponding to the 1000-gallon UST located near MW-2 removed in 2001 and to the UST located near MW-2 removed in 2005[1]	Removed
1935	1	550-gallon	Unknown	Unknown	Removed
1956	1	3,000-gallon	Unknown	Unknown	Removed

[1] Original report from Delta Environmental Consultant Inc., March 28, 2001, Environmental Investigation, Chevron Service Station 20-9335 is unavailable.

Installation Date	Quantity	Specifications	Contents	Location	Current Status
1956	1	2,000-gallon	Unknown	Unknown	Removed
1956	1	550-gallon	Unknown	Unknown	Removed
Unknown[2]	4	500-gallon steel UST each	Unknown	Northeast corner of the Site along eastern parcel boundary adjacent to one another	Removed
1940	1	294-gallon	Heating Oil	South of the former Wallingford Medical Building (not associated with the service station activities)	Removed

Regarding the history of surrounding properties, according to historical Sanborn maps, tax parcel 7821200275 (the western parcel of the Property) had been developed into multiple buildings by 1950 and had been further developed with shops and an office building by 1968, including a large building selling audio-visual supplies (**Appendix B**). In 2005, HRG purchased the western and eastern parcels of the Property and immediately conveyed the Property to Stone Way. In 2006, Stone Way built the existing development at the Property (SAIC 2010).

The south-adjoining property (4453 Stone Way North) was redeveloped in 2020-2021 with a four-story mixed-use apartment building with underground parking. During redevelopment, two 500-gallon, unregistered, empty, abandoned gasoline USTs were discovered. The USTs were removed, along with approximately 26.77 tons of petroleum contaminated soil. Confirmation soil samples did not contain gasoline-, diesel-, or heavy oil-range petroleum hydrocarbons above laboratory reporting limits (ZipperGeo 2022). Ecology issued a No Further Action (NFA) determination dated February 2, 2023 indicating that the UST removal and cleanup was in compliance with applicable Model Toxics Control Act (MTCA) cleanup levels.

The 1999 Phase I identified the following notable uses on surrounding/adjoining properties:

- Big Wheel Auto Parts was located on the south-adjoining parcel (4453 Stone Way North). Historical records indicated a Shell gasoline station was located on the southern portion of this parcel in at least 1936 but was no longer present by 1956.
- A former auto repair shop was located 250 feet to the north of the Site (1220 North 45th Street) from at least 1919 through 1954.
- A gasoline service station (Unocal) was located to the northeast, diagonally across the intersection of North 45th Street and Stone Way North (4500 Stone Way North), in at least 1960 but was no longer present by 1974.

A plan from the Phase I showing the locations of the surrounding former gasoline service stations and auto repair shop is included in **Appendix A** (Environmental Associates 1999).

[2] While the UST capacities do not correspond, it is possible that some of the four USTs removed during the 2005 excavation correspond to the 1935 and 1956 USTs mentioned above.

2.3 Site Regulatory History

The Site regulatory history is listed below:

- Notice of a confirmed release at the Site was received by Ecology on September 25, 2001, and the Site was enrolled in the LUST database and the Confirmed and Suspected Contaminated Sites List (Farallon 2003).
- The Site was first enrolled in the Voluntary Cleanup Program (VCP) in 2005. It was re-enrolled in November 2009 following removal due to lack of activity in October 2009 (VCP number NW1415) (SAIC, 2010). The VCP agreement was terminated on May 3, 2017, when Ecology decided to pursue an AO at the Site (Ecology 2017).
- CEMC and Stone Way were identified as PLPs on February 8, 2017, and May 23, 2017, respectively (Ecology 2021).
- AO No. DE 19432 was executed on February 2, 2021 (Ecology 2021).

2.4 Environmental Setting

The Site environmental setting is listed below:

- **Site Elevation:** The Site is generally flat, with a minor downhill slope to the west. The Site sits approximately 215 feet above mean sea level (amsl) (Environmental Associates 1999).
- **Climate:** Temperate climate with local annual precipitation averaging 34.1 inches. Local temperatures range from average lows in the mid-30s Fahrenheit in the winter months to highs in the 70s Fahrenheit in summer months (U.S. Climate Data 2020).
- **Nearest Waterbodies:** Green Lake is 0.7 mile to the north. Lake Union and the Fremont Cut are approximately 1 mile south/southwest.
- **Site Soils:** Regional soils are comprised of dense, heterogeneous glacial till with varying amounts of sand, silt, and gravel on the Seattle Drift Plain (Environmental Associates 1999, SAIC 2013). Soil borings at the Site have shown the predominant material to be a dense to very dense, well-graded, fine- to medium-grained sand with some silt and rounded gravel from approximately 8.5 to 20 feet bgs. Very dense, brown to light brown, poorly graded, fine-to medium-grained sand underlies that layer to the maximum depth explored (45.5 feet bgs) (SAIC 2013). Available boring logs are presented in **Appendix C**.
- **Site Groundwater:** Groundwater monitoring began during the fourth quarter of 2000 with MW-1 through MW-5 until the wells were decommissioned in March 2005 during the redevelopment of the Property. Wells MW-6 through MW-8 were installed in November 2005 and monitoring resumed in the first quarter of 2006. Wells MW-9 and MW-10 were installed in the ROW in December 2006. Monitoring of MW-6 through MW-10 continued quarterly until the fourth quarter of 2019. Monitoring wells MW-11 through MW-14 were installed in October 2022. Quarterly groundwater monitoring resumed in December 2022. Well construction details are presented in **Table 1**.
    - Monitoring network: MW-1 through MW-5 (2000 – 2005 [decommissioned]), MW-6 through MW-10 (2006 - 2019), MW-11 through MW-14 (2022-)
    - Observed depth to water in MW-1 through MW-5: 27 – 40 feet bgs (SAIC 2010a, SAIC 2013)

  - Groundwater elevation: Approximately 170 to 181 feet [North American Vertical Datum of 1988 (NAVD 88)]
  - Groundwater flow direction: South/southeast, with some possible variation to the southwest (Farallon 2003, SAIC 2013)
  - Hydraulic gradient: Approximately 0.007 - 0.04 feet/foot (Farallon 2003, SAIC 2010a)

- **Site Surface Water:** No surface water is present on or near the Site, and no risks to surface water have been identified.
- **Site Sediment:** No sediment is present on or near the Site. Therefore, no risks to sediments have been identified.

3 Historical Environmental Investigations

Investigations have been conducted at the Site since 1999 and included soil, groundwater, soil vapor, and light non-aqueous phase liquid (LNAPL) assessment. Those investigations are summarized in the following sections.

3.1 Historical Soil Investigations

Historical soil sample locations are shown on Figure 4.

A Phase I Environmental Site Assessment was conducted at the Site in 1999. The Phase I identified the possibility of petroleum impacts to soil and groundwater due to former service station use and identified a heating oil UST on the parcel to the west of the Site (tax parcel 7821200275) (SAIC 2010).

A Preliminary Subsurface Environmental Study was completed in August 1999 following the Phase I. Four soil borings (B-1 through B-4) were advanced to depths ranging from 9 to 24 feet bgs. Soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), heavy oil range organics (HO), and/or BTEX.[3] GRO soil concentrations above MTCA Method A Cleanup Levels (CULs) were observed near a metallic anomaly detected during a geophysical survey in the north-central portion of the former onsite service station; at 8.5 feet bgs in boring B-1, and at 14 and 24 feet bgs in boring B-2. Detected ethylbenzene and total xylenes concentrations in B-2 at 14 feet bgs also exceeded MTCA Method A CULs (Environmental Associates 1999). Samples collected from B-3 and B-4 did not exceed MTCA Method A CULs. Two additional soil borings (B-5 and B-6) were advanced in September 1999 and soil samples were analyzed for GRO and BTEX (two of the samples were additionally analyzed for lead). Boring B-5 identified GRO and xylenes concentrations in soil above MTCA Method A CULs in the vicinity of the metallic anomaly at 37.5 feet bgs (SAIC 2010). Samples collected from B-6 did not exceed MTCA Method A CULs.

In November 2000, five monitoring wells (MW-1 through MW-5) were installed. A 1,000-gallon UST was discovered during the drilling of MW-2 in the west-central portion of the former service station. The UST was removed in February 2001. Upon removal, there was one hole observed in the top of the UST that was thought to have been caused by the drilling rig. Soil samples collected from the sidewalls and bottom of the UST excavation were analyzed for GRO, DRO, HO, and BTEX, and none of these analytes were detected.

[3] BTEX consists collectively of benzene, toluene, ethylbenzene, and total xylenes.

Soil samples were collected from each boring during installation of MW-1 through MW-5 at a depth of 35 feet bgs. An additional soil sample was collected from MW-5 at a depth of 5 feet bgs. Soil samples were analyzed for GRO, DRO, HO, and BTEX. The GRO soil concentration exceeded the MTCA Method A CUL in one sample (MW-2 at 35 feet bgs). All other soil samples did not exceed MTCA Method A CULs.

In May and June 2004, a supplemental site investigation was conducted, which included an additional geophysical survey to identify potential USTs, and the advancement of 10 soil borings (SB-1 through SB-10) to depths of 43 to 46 feet bgs. The borings were placed in the southeast corner of current tax parcel 7821200255, the northeast corner of the former 1935 service station building, and near the east wall of the 1956 service station building—these locations were flagged as locations of potential USTs during the geophysical survey. A UST was found to be abandoned-in place and filled with concrete at the northeast corner of the 1935 service station building. The other location investigated did not show the presence of additional USTs. Twenty soil samples were collected and analyzed for GRO, DRO, HO, BTEX, and methyl tertiary-butyl ether (MTBE). Five soil samples, collected from SB-3, SB-5, SB-8, and SB-9, contained GRO at concentrations exceeding the MTCA Method A CUL. Two soil samples, collected from SB-3 and SB-5, also contained ethylbenzene, toluene, and total xylenes at concentrations exceeding the respective MTCA Method A CULs (SAIC 2010). All other soil samples did not exceed MTCA Method A CULs.

In December 2004, a geotechnical investigation was conducted in preparation for the development of the current building at the Property (Shannon & Wilson 2004). The investigation consisted of four borings, ranging in depth from 25 to 31.5 feet bgs. No hydrocarbon odors were observed in borings located on the western parcel of the Property (parcel 7821200275) (Shannon & Wilson 2004). Boring logs and a site plan showing the approximate location of the geotechnical borings are included in **Appendix C**.

In April 2005, six additional soil borings (SB-11 through SB-16) were drilled to depths of 39.5 to 46 feet bgs. These borings were exploratory in nature and used to estimate the total volume of petroleum impacts in soil to be excavated. Field screening techniques (observation of soil for any visible sheen, visual hydrocarbon staining, or volatilization using a photo-ionization detector [PID] or a flame ionization detector [FID]) were used to identify impacts; no analytical samples were collected from these borings, but the boring logs are included in **Appendix C** (SAIC 2010b).

A total of 46 confirmation samples were collected in 2005 during Property redevelopment from the excavation that extended across the entire Property (13 feet bgs) and from targeted deep soil excavations (42 feet bgs) and analyzed for GRO, DRO, HO, and BTEX. Of these, only two samples, sidewall excavation sample EX-W8-10 at 10 feet bgs (GRO 26,000 mg/kg, toluene 42 mg/kg, ethylbenzene 110 mg/kg, and total xylenes 870 mg/kg) and deep excavation sample BA20-39 at 39 feet bgs (GRO 4,200 mg/kg, toluene 18 mg/kg, ethylbenzene 31 mg/kg, and total xylenes 180 mg/kg) had concentrations above MTCA Method A CULs. The soil at BA20-39 was over-excavated until a clean sample was obtained at BA39-42 (42 feet bgs). Both samples were located in the northeast corner of the former service station. Sidewall excavation sample EX-W8-10 is delineated vertically by excavation sample EX-W8-13 collected at 13 feet bgs.

In 2016, soil borings FB-1 and FB-2 were advanced to 35 and 30 feet bgs, respectively, on the Former Big Wheel Auto Parts parcel directly south of the Property. The samples were analyzed for GRO, DRO, HO, and 136 volatile organic compounds (VOCs), including BTEX, MTBE, ethylene dibromide (EDB), 1,2-dichloroethane (EDC), and chlorinated volatile organic compounds (CVOCs); which were all non-detect (Farallon 2016). A four-story mixed-use building with one level of underground parking was constructed on this parcel in 2021. As described in Section 2.2 above, two 500-gallon, unregistered, empty, abandoned gasoline USTs were discovered during

redevelopment. The USTs were removed, along with approximately 26.77 tons of petroleum contaminated soil. Confirmation soil samples did not contain gasoline-, diesel-, or heavy oil-range petroleum hydrocarbons above laboratory reporting limits (ZipperGeo 2022). Ecology issued a NFA determination dated February 2, 2023 indicating that the UST removal and cleanup was in compliance with applicable MTCA cleanup levels. Aside from the petroleum contaminated soil associated with the USTs, no additional observations of impacted soil or groundwater were reported during construction.

3.2 Historical Groundwater Investigations

During the September 1999 investigation, groundwater was encountered in boring B-5 at approximately 38 feet bgs. A grab groundwater sample was collected and contained GRO and BTEX concentrations in exceedance of MTCA Method A CULs (SAIC 2010).

Quarterly groundwater monitoring began in November 2000 with the installation of MW-1 through MW-5. MW-2 was installed near boring B-5. Groundwater was analyzed for GRO, DRO, HO, BTEX, MTBE, and total lead. Groundwater samples collected at MW-2, MW-4, and MW-5 were in exceedance of MTCA Method A CULs for GRO, DRO and BTEX. Groundwater samples collected from MW-1 and MW-3 were always in compliance with MTCA Method A CULs. All wells were decommissioned in 2005 when the Property was redeveloped (SAIC 2010).

Wells MW-6 through MW-8 were installed in November 2005 after Property redevelopment, and wells MW-9 and MW-10 were installed in the ROW in December 2006. MW-6 through MW-10 were sampled annually in 2006 and 2007, with quarterly sampling from 2009 until 2019. Concentrations of GRO, DRO, BTEX, and total lead above MTCA Method A CULs were observed in wells MW-6 through MW-8. Groundwater samples collected from ROW wells MW-9 and MW-10 have been in compliance with MTCA Method A CULs with the exception of some total lead exceedances.

Well construction details are shown in **Table 1**. Historical groundwater gauging and sampling results are shown in **Table 3**. Available boring logs and well construction diagrams are presented in **Appendix C**.

LNAPL was measured in MW-2, MW-4, and MW-5 shortly after installation and until the 2005 excavation with a maximum thickness of 2.44 feet observed at MW-2 in October 2003. Following the 2005 excavation and the subsequent installation of the new monitoring well network, LNAPL was observed at MW-7 with a maximum thickness of 1.26 feet measured in November 2010. During the last four gauging events conducted at MW-7 from May 2017 to November 2019, LNAPL was either not observed or was only measured at a 0.02 feet thickness. LNAPL historically has not been observed in MW-1, MW-3, MW-6, MW-8, MW-9, or MW-10.

Groundwater samples were analyzed for GRO, DRO, HO, BTEX, MTBE, and total lead. GRO, DRO, BTEX, and total lead were detected above MTCA Method A CULs. HO and MTBE consistently were not detected or were below MTCA Method A CULs.

Historically, six wells (MW-2, MW-4, MW-5, MW-6, MW-7 and MW-8) have had groundwater concentrations of GRO, DRO, and/or BTEX above MTCA Method A CULs at least once. Two former wells (MW-1 and MW-3) and two ROW wells (MW-9 and MW-10) were or have been, respectively, in compliance with MTCA Method A CULs for GRO, DRO, and/or BTEX since installation.

Total lead was/has been detected above MTCA Method A CULs in MW-5 through MW-10. Total lead is the only analyte to exceed CULs in MW-9 and MW-10.

In 2016, grab groundwater samples were collected from borings FB-1 and FB-2 on the Former Big Wheel Auto Parts parcel located directly south of the Property. FB-1 was located on the northern edge of that parcel, just south of the former 1956 service station. The samples were analyzed for GRO, DRO, ORO, and VOCs, and all were non-detect (Farallon 2016).

3.3 Historical Soil Vapor Investigations

Johnson and Ettinger (J&E) vapor modeling was completed in 2005 to evaluate any potential vapor intrusion concerns in the planned underground parking garage at the Property (SAIC 2005a). The model was developed using conservative assumptions and focused on soil contamination found between 15 and 45 feet bgs; groundwater to vapor pathways were not evaluated. At the time, the modeling indicated that the incremental risk to human health was insignificant and that no additional engineered controls beyond soil excavation to 15 feet bgs, LNAPL removal, and the excavation of deeper soil "hot spots" with impacts below 15 feet bgs were required to protect human health (SAIC 2005a).

4 Summary of Previous Remedial Actions

4.1 2005 Excavation and Redevelopment

Three excavations were implemented as part of the Property redevelopment from August to October 2005: an initial Property-wide excavation to a depth of 13 feet bgs for the underground parking garage, targeted excavations to 42 feet below the original grade via bucket auger for deep-soil remediation, and a supplemental excavation to 18 feet bgs to remove additional impacted soil. According to a May 16, 2005 letter from SAIC (SAIC 2005b), SAIC provided technical oversight during redevelopment activities including soil sampling to determine where impacted soils were present and soil segregation for disposal or re-use purposes based on field observations, such as degree of hydrocarbon odor, PID readings, sheen tests, and soil analytical data from previous borings. SAIC provided oversight during the lateral excavation of contaminated soil "until field observations and laboratory analytical data indicated that contamination was no longer present" (SAIC 2010a). In total, approximately 2,490 tons of soil were removed (SAIC 2010a). The approximate extents of excavations are shown on **Figure 4**. The three excavations are discussed further below.

Initial excavation to 13 feet below original grade:

The Property-wide excavation to 13 feet bgs was completed between August 31 and September 22, 2005 (SAIC 2010a, SAIC 2010b). Five USTs were discovered during the work: four 500-gallon steel USTs in the northeast corner of the Site along Stone Way North, and one just north of MW-2 in the west-central portion of the Site near former service station buildings. All five USTs were in good condition with no holes, cracks, or significant corrosion observed. Confirmation samples were collected from the bottom and sidewalls of the UST excavations (SAIC 2010b). In addition, 23 confirmation soil samples were collected during the initial excavation from 14 locations along the north, east and south boundaries of the eastern parcel of the Property, where the former service stations were located. Of those 23 samples, only one sample, EX-W8-10 in the northeast corner along the northern sidewall, had concentrations above MTCA Method A CULs (GRO, ethylbenzene, toluene, and total xylenes). Benzene was not detected in this sample; however, the laboratory reporting limit was above the MTCA CUL. The impacts detected in EX-W8-10 were delineated vertically by a deeper sample (EX-W8-13). Investigation and removal of impacted soil to the north of EX-W8-10 was implemented to the maximum extent practicable given

the field constraints (presence of utilities, sidewalk, and road ROWs). Approximately 1,450 tons of impacted soil were removed during this initial excavation and disposed at the Waste Management facility in Arlington, Oregon. Any impacted soil observed below 13 feet bgs was noted and mapped for targeted or supplemental excavation conducted in October 2005.

Targeted excavations to 42 feet below original grade:

Between October 3 and 7, 2005, additional excavation was completed to address remaining petroleum-hydrocarbon impacted soil below the initial Property-wide excavation. Two areas were targeted for deep-soil remediation: in the northeast corner of the former gas station in the vicinity of the four previously undocumented USTs, and in the west-central portion of the former gas station in the vicinity of the fifth undocumented UST and former monitoring well MW-2 (SAIC 2010b). Twenty large-diameter bucket auger borings were advanced to remove deeper impacts. The bucket auger borings (BA-1 through BA-20) were 6.5 feet in diameter and extended to 42 feet below original grade. Specifically, soils surrounding MW-2, which historically had contained LNAPL, were removed via BA-1, BA-3 and BA-8. Similarly, soils surrounding MW-5, which also historically contained LNAPL, were removed via BA-2, BA-6 and BA-11. Soil from the bucket-auger borings was field screened for petroleum-hydrocarbon impacts (visible sheen, visual hydrocarbon staining, or volatilization using a PID or an FID). Samples were collected to depths where field screening observations indicated impacts were no longer present. A total of 21 confirmation soil samples were collected for analyses of GRO, DRO, HO, and BTEX; 20 of which were in compliance with MTCA Method A CULs. Sample BA20-39 at 39 feet bgs was above CULs for GRO, toluene, ethylbenzene, and total xylenes; this location was over-excavated until a sample in compliance with MTCA Method A CULs was obtained at 42 feet bgs (BA20-42). An additional approximately 940 cubic yards was removed during the auger excavations and disposed offsite leaving only a minimal volume of impacted soil in the annular space between the bucket-auger borings. These deep excavation activities are therefore considered to have been implemented to the maximum extent practicable given field constraints. After soil removal, the borings were backfilled with soil-cement slurry (SAIC 2010b). Cross sections showing residual impacts at the time of excavation are provided in **Appendix A**.

Supplemental excavation to 18 feet below the original grade:

After the large-diameter, bucket-auger activities were completed, the base of the Property-wide excavation to 13 feet bgs was field screened for possible remaining impacted soil in the northeastern corner of the Site. The areas that contained impacted soil underwent additional excavation until field screening indicated that remaining soil was no longer impacted. An additional 120 cubic yards of impacted soil were removed during this work. Two samples (SS1-13.5 and SS2-13.5) were collected at the base of the supplemental excavation and analyzed for GRO, DRO, HO, and BTEX. No exceedances of MTCA CULs were detected (SAIC 2010b).

4.2 2004 - 2005, 2010 LNAPL Bailing

LNAPL bailing was conducted at MW-2 between August 2004 and March 2005. The frequency of bailing events varied from daily to bi-weekly, and approximately 26 gallons of LNAPL were removed from MW-2 during this period. LNAPL thickness varied during this time, with a maximum of 1.92 feet in January 2005 and a minimum of 1.27 feet in November 2004. The final LNAPL thickness was 1.53 feet on January 14, 2005. MW-2 was decommissioned prior to excavation, and the area was subsequently excavated during the deep excavation, as described above in Section 4.1 (SAIC 2010b).

Additional bailing activities were conducted at MW-7 between February and August 2006, following the remedial excavation. The frequency of bailing events varied from daily to bi-weekly, and approximately 4 gallons of LNAPL were removed during this period. Bailing efforts stopped, and all removed LNAPL was disposed offsite when HRG raised concerns about storing the LNAPL at a residential facility (SAIC 2013).

In September 2010, LNAPL recovery test activities were undertaken at MW-7 (SAIC 2010a). Initially, approximately 1.5 gallons of LNAPL and water were bailed from MW-7. The initial thickness of LNAPL in the well was 0.56 feet and after 3 hours the thickness was 0.38 feet.

4.3 2013 Surfactant-Enhanced Recovery

Surfactant injection and extraction activities were conducted in March 2013 in efforts to reduce or eliminate persistent LNAPL occurrences at MW-7. A 4-5% non-ionic surfactant solution (Release Gold Crew HIT-E-001 Hydrocarbon Desorption Agent) was injected at a gravity-fed, low-flow rate into MW-7. In total, 100 gallons of solution were injected at a rate of approximately 2.3 gallons per minute over a 45-minute period. Over a three-day period following injection, 327 gallons of LNAPL, surfactant, and water were extracted from MW-7 (SAIC 2013). As shown in **Table 3**, LNAPL thicknesses observed in MW-7 decreased to below 0.1 feet following the injection and extraction activities. LNAPL was only observed at thicknesses above 0.1 feet four times since March 2013 (out of 16 monitoring events) with thicknesses ranging from 0.12 to 0.40 feet. During the last four gauging events conducted at MW-7 from May 2017 to November 2019, LNAPL was either not observed or was measured at a 0.02 feet thickness.

5 Cleanup Standards

Based on Ecology's focus sheet for establishing cleanup standards (Ecology Publication No. F-TC-94-130) (Ecology 2018), Arcadis compared soil and groundwater concentrations to MTCA Method A CULs for Unrestricted Land Use to assess current Site COCs.

The chemicals of potential concern (COPCs) for the Site include GRO, DRO, HO, BTEX, EDB, EDC, lead, MTBE, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) (including benzo(a)pyrene).

MTCA Method A CULs for the Site COPCs in soil and groundwater are presented in the table below.

MTCA Method A CULs for Site COPCs for Soil and Groundwater

COPC	MTCA CUL Groundwater (µg/L)	MTCA CUL Soil (mg/kg)
GRO[1]	800/1,000	30/100
DRO	500	2,000
HO	500	2,000
Benzene	5	0.03
Toluene	1,000	7

COPC	MTCA CUL Groundwater (µg/L)	MTCA CUL Soil (mg/kg)
Ethylbenzene	700	6
Total Xylenes	1,000	9
EDB	0.01	0.005
EDC	5	--
Naphthalene	160	5
Lead	15 (dissolved lead)	250
MTBE	20	0.1
Benzo(a)pyrene	0.1	0.1
Total cPAHs	0.1	--

[1]For GRO, MTCA CULs depend on the presence of benzene: with benzene present (800 micrograms per liter [µg/L] and 30 milligrams per kilogram [mg/kg]) and without (1,000 µg/L and 100 mg/kg).

MTCA Method B indoor air CULs and sub-slab soil vapor screening levels for Site COPCs are presented below.

MTCA Method B CULs for Air

COPC	MTCA Method B CUL Indoor Air[1] (µg/m3)	MTCA Method B Screening Level Sub-Slab Soil Vapor[1] (µg/m3)
Benzene	0.32	10.6
Toluene	2,300	76,190
Ethylbenzene	460	15,238
Total Xylenes	46	1,524
Naphthalene	0.073	2.45
Total Petroleum Hydrocarbons[2]	46	1,500

[1] Method B cancer risk values used when provided. If cancer risk values are not provided, noncancer risk is listed.

[2] Total petroleum hydrocarbon (TPH) concentration is the sum total of volatile organic compounds and aliphatic and aromatic hydrocarbons.

µg/m^3 = micrograms per cubic meter

Analysis of MTBE, EDB, and EDC in indoor air and sub-slab soil vapor samples is only required when their presence is confirmed in soil or groundwater at the site.

6 Remedial Investigation Activities

Arcadis conducted Site investigation activities on October 3 through 7, 2022. During that time, four groundwater monitoring wells (MW-11 through MW-14) were installed to further evaluate the extent of petroleum impacts in soil and groundwater at the Site. Groundwater samples were collected on December 2, 2022. This section discusses objectives, field activities, analytical results, and the management of investigation-derived waste (IDW) associated with the completed Site investigation.

6.1 Remedial Investigation Objectives

RI activities were completed to further delineate the extent of residual soil and groundwater impacts at the Site, as described in the Work Plan (Arcadis 2021).

The investigation consisted of the advancement of four soil borings which were converted to groundwater monitoring wells. Soil samples were collected from the borings to further delineate soil impacts. Four monitoring wells were installed in the ROWs (sidewalks) adjacent to the Site (MW-11, MW-12, MW-13, and MW-14). MW-11 was installed in the southern sidewalk of North 45th Street to the north of the Site, and MW-12, MW-13, and MW-14 were installed in the western sidewalk of Stone Way North to the east of the Site (Figure 2).

6.2 Pre-field Activities

Before mobilizing to the Site, Arcadis performed the following activities:

- Prepared an updated Health and Safety Plan (HASP), including job safety analyses (JSAs) and a traffic control plan
- Secured ROW permits from the City of Seattle (City)
- Notified and coordinated with the Property owner and tenants at least 30 days before field work commenced
- Notified Ecology at least 21 days prior to commencing field work
- Marked the proposed boring locations and contacted the state one-call public locate service a minimum of 48 hours prior to initiating the field activities; and
- Contracted a private utility locator to additionally identify potential conflicting utilities or other underground structures in addition to potential preferential pathways.

6.3 Utility Locate

At least 48 hours prior to conducting subsurface activities, Washington811 was notified to mark known public utilities within the work areas. In addition, GPRS, a private utility locating company, conducted an additional utility survey on September 9, 2022. The survey included the use of ground-penetrating radar, electromagnetic pipe and cable locator, and a visual survey to confirm that the proposed well locations were clear of underground utilities and other features. MW-11 was moved to the west of the originally proposed location due to location of underground utilities. Survey results, along with utility site plans provided by the City, were used to map utilities.

6.4 Well Boring Drilling and Sampling

Drilling activities were conducted by a licensed drilling subcontractor, Cascade Drilling, L.P. of Bothell, Washington (Cascade) under the supervision of Arcadis personnel. As the well borings were in the sidewalk, they had to first be cored through the concrete using a circular saw. After coring, the boring locations were cleared of any utilities by vacuum truck and/or hand auger to a minimum depth of 5 feet bgs in accordance with Arcadis health and safety protocols. After pre-clearance, boreholes were advanced using hollow stem auger drilling methods to a total depth of approximately 46.5 feet bgs. Boring depths and sampling intervals are presented in the table below.

Location	Boring Type	Total Depth (feet bgs)	Groundwater Encountered (feet bgs)	Laboratory Analytical Sample Intervals (feet bgs)
MW-11	Soil boring/Monitoring Well	46.5	38.09	11, 15, 35, and 46.5
MW-12	Soil boring/Monitoring Well	46.5	38.61	38.5, 41.5, and 46.5
MW-13	Soil boring/Monitoring Well	46.5	37.97	37.5, 40, and 46
MW-14	Soil boring/Monitoring Well	46.5	37.47	38.5, 40, and 45

During pre-clearance, soil samples were collected by hand auger from 0 to 5 feet bgs and by split-spoon at approximately 5 foot intervals from 5 feet bgs to the bottom of the borings for lithologic logging, and screened for VOCs using a PID. During drilling, Arcadis conducted lithologic logging in accordance with the Arcadis TGI for Soil Description (**Appendix D**). Boring logs can be found in **Appendix C**. Field samples were placed into sealed zipper-locked bags for visual inspection and VOC screening.

Soil encountered in each boring generally consisted of silty sand or sand with some gravel to the explored depths. Groundwater was first encountered at depths of 38 to 40 feet bgs. Additional information on the encountered soil is provided on the boring logs in **Appendix C**.

One blind duplicate soil sample was collected for data quality assurance (QA) purposes from MW-11 at 35 feet bgs (sample DUP-1_221007).

Analytical samples were collected in laboratory-provided containers and placed in a cooler with ice. Samples were submitted to Pace Analytical (an Ecology-accredited laboratory) located in Mount Juliet, Tennessee (Pace), under standard chain-of-custody protocols. Soil samples were analyzed for the following:

- GRO analyzed by Northwest Method Total Petroleum Hydrocarbons – Gasoline (NWTPH-Gx)
- DRO and HO analyzed by Northwest Method Total Petroleum Hydrocarbons – Diesel (NWTPH-Dx, without silica gel cleanup)
- BTEX by USEPA Method 8260
- EDB and EDC by USEPA Method 8260
- Lead by USEPA Method 6010

- cPAHs, including naphthalene by USEPA Method 8270 – selected ion monitoring (SIM)

6.5 Monitoring Well Installation

Four groundwater monitoring wells (MW-11 through MW-14) were installed in the boreholes during the October field event by Cascade. The groundwater monitoring wells were installed to a depth of 45 feet bgs. The wells were constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) 0.010-inch slotted screen from 35-45 feet bgs. Blank PVC casing was installed from the top of the screen to near surface grade. Sand filter pack was placed in the annular space of the borehole from the bottom of boring to approximately 1 foot above the top of the well screen, followed by transition seal consisting of hydrated bentonite chips to approximately 2 feet bgs. The remaining open borehole annulus was sealed with neat cement to near ground surface.

Construction details for monitoring wells MW-11 through MW-14 are summarized in **Table 1**. Each well was installed in accordance with the Minimum Standards for Construction and Maintenance of Wells (Washington Administrative Code [WAC] 173-160; Ecology 2013). Well construction diagrams are included on the boring logs in **Appendix C**.

The wellheads were completed at the ground surface with a locking well cap and bolt-down flush-mounted well vaults. Following the installation of monitoring wells, the well location, ground surface, and top-of-casing elevations were surveyed by a professional Washington-licensed land surveyor, OTAK, Inc. of Lake Oswego, Oregon on October 7, 2022. Monitoring wells were developed by Cascade at least 24 hours after installation to ensure removal of fine-grained sediments from the vicinity of the well screen.

6.6 Groundwater Monitoring and Sampling

Groundwater samples were collected from monitoring wells MW-6 through MW-8 and MW-11 through MW-14 in December 2022. Monitoring wells MW-9 and MW-10 were dry and therefore samples were not collected. Samples were collected using low-flow methods and in accordance with the methodology described in the Arcadis TGI for Standard Groundwater Sampling for Monitoring Wells (**Appendix D**). Groundwater sampling field forms are included in **Appendix E**. Groundwater samples were collected in pre-preserved laboratory-provided bottles and placed in a cooler with ice. Samples were submitted to Pace under standard chain-of-custody protocol for the following analyses:

GRO by Northwest TPH-Gx

DRO and HO by Northwest TPH-Dx (no silica gel)

BTEX by USEPA Method 8260

EDB and EDC by USEPA Method 8260

Dissolved Lead by USEPA Method 6010D

cPAHs by USEPA Method 8270E - SIM

In addition, the groundwater samples from three monitoring wells (MW-6, MW-7, and MW-8) were additionally analyzed for VOCs since these wells are located on the property, which may have had a used oil UST associated with the former service garage.

6.7 Investigation-Derived Waste

Soil cuttings, purged groundwater, and equipment rinse water generated during investigation activities were contained in Department of Transportation-approved 55-gallon steel drums. The investigation-derived waste (IDW) was labeled and temporarily stored on-site pending disposal. Following receipt of laboratory analytical data, the soil and water IDW were transported for appropriate disposal at a certified waste disposal facility. Copies of the waste manifests are provided in **Appendix F**.

7 Investigation Results

7.1 Quality Assurance

The following quality assurance and quality control (QA/QC) samples were collected during the 2022 well installation and soil sampling event.

- One field duplicate sample for soil (sample DUP-1_221007) was collected and submitted as a blind sample to the analytical laboratory per 10 samples.
- One matrix spike/matrix spike duplicate per 20 samples.
- One trip blank per cooler containing samples was analyzed for BTEX and GRO.

Analytical results of the duplicate sample collected as part of this investigation were generally comparable to the parent sample. Based on the results of the quality control sampling and testing, and on the data validation reports, sample results are considered usable. Data validation reports are included in Appendices G and H.

7.2 Soil Results

Soil analytical results for samples collected from borings MW-11 through MW-14 were either below MTCA Method A CULs or the analytes were not detected above laboratory reporting limits. Soil results are presented in **Table 2**[4]. The soil laboratory analytical report and chain-of-custody documentation are provided in **Appendix G**.

7.3 Groundwater Results

During the December 2022 groundwater monitoring event, samples were collected from MW-6 through MW-8 and MW-11 through MW-14. Monitoring wells MW-9 and MW-10 were dry and therefore samples were not collected. MTCA Method A CUL exceedances are listed below:

December 2022 MTCA Method A CULs Exceedances

- Concentrations in MW-7 exceeded MTCA Method A CULs for GRO (33,400 µg/L), DRO (7,380 µg/L), ethylbenzene (732 µg/L), xylenes (2,590 µg/L), naphthalene (365 µg/L), and total lead (26.6 µg/L)

[4] Samples collected in 2022 were also analyzed for cPAHs; however only naphthalene was detected above laboratory reporting limits; additional cPAH results are not included in Table 2.

The groundwater analytical results are presented on **Figure 5** and in **Table 3**[5]. The groundwater laboratory analytical reports and chain-of-custody documentation are provided in **Appendix H**.

The groundwater flow direction was estimated to be to the south-southwest during the December 2022 event. Overall, the flow direction appears to be to the southeast (see rose diagram on Figure 5). Note, gauging data from MW-6, MW-7, and MW-8 were not utilized for calculating the groundwater gradient due to inconsistencies with the survey data of the original and new wells. Arcadis will coordinate an additional survey to include all the site monitoring wells to rectify this issue going forward.

8 Conceptual Site Model

The conceptual site model (CSM) uses data collected during investigation activities to understand constituent occurrence, movement, and potential exposures at the Site.

8.1 Source Characterization

As described in Sections 3 and 4, multiple investigations and remediation activities have been conducted at the Site, including the Property-wide excavation to 13 feet bgs and deeper soil removal in select locations to 42 feet bgs. The primary source of petroleum hydrocarbons at the Site is presumed historical leaks from the former service station facilities (product piping, dispensers, and/or USTs). Those historical releases/leaks are considered to have been addressed during the remedial excavations as all the former station equipment has been removed. The secondary sources are residual hydrocarbon impacted soil, and potentially LNAPL (observed in MW-7 in 2019).

8.1.1 Constituents of Concern

Constituents of concern (COCs) are those expected to account for most of the risks at a site, and cleanup standards must be developed for each COC in each medium. The COCs for groundwater and soil were developed in accordance with WAC 173-340-703 and Table 830-1 “Required Testing for Petroleum Releases.” The COCs are presented in this section.

Operations at the Site included the storage and distribution of “fuel”, from 1935, when the USTs were installed, to 1969 when gas station operations ceased. Although the exact contents of the Site USTs are unknown, based on the current and historical soil and groundwater data, the years of operation, and an evaluation of Table 830-1, COCs are:

- GRO, because it has been observed above MTCA Method A CULs
- DRO (groundwater), because it has been observed above MTCA Method A CULs in groundwater beneath the Site
- BTEX, because the individual constituents have been observed above MTCA Method A CULs
- Lead, because it has been observed above MTCA Method A CULs

[5] Samples collected in 2022 were also analyzed for cPAHs; however only naphthalene was detected above laboratory reporting limits; additional cPAH results are not included in Table 3.

As a service garage appears to have been present in the southern half of the Site, it is possible that a used oil UST was associated with the garage; however, based on soil analytical results from the October 2022 investigation, VOCs are not considered COCs for the Site. As discussed above, VOCs were analyzed in the grab-groundwater samples FB-1 and FB-2 collected south of the Site and were non-detect. HO was not detected in soil samples collected from borings surrounding the former heating oil UST in the area of the former medical building on the western parcel of the Property (SB-10, B-4 and EX-W12). As no mention of an electric transformer was found during historical research conducted as part of the 1999 Phase I, polychlorinated biphenyls (PCBs) are not considered COCs for the Site.

8.2 Nature and Extent of Contamination

This section describes the type of contaminants at the Site (nature) and the distribution of these contaminants laterally and vertically across the Site (extent). The nature and extent of contamination were identified based on data collected during the Site investigations described in Section 3 and Site remediation described in Section 4, along with data collected during this RI investigation.

8.2.1 Soil Quality

Soil sampling activities were predominantly completed from 1999 to 2006, prior to Property redevelopment as described in Section 3.1. Soil sampling was also conducted during Property redevelopment excavation activities as described in Section 4.1. Current soil compliance status with MTCA Method A CULs is presented on **Figure 4**. Samples that were subsequently excavated are shown as gray symbols on Figure 4. Soil data is presented in **Table 2**.

Soil samples collected in the listed years were analyzed for the following:

- GRO/DRO/HO: 1999, 2000, 2004, 2005, 2006, 2022
- BTEX: 1999, 2000, 2004, 2005, 2006, 2022
- MTBE: 2004, 2006
- Lead: two samples collected in 1999, 14 samples collected in 2022
- EDB and EDC, 2022
- cPAHs, 2022

The only soil samples with concentrations that exceeded MTCA Method A CULs and were not over-excavated are EX-W8-10, B-2, and B-5, all three located in the former service station area. EX-W8-10 was a sidewall sample located at the northeast corner of the Site and contained concentrations above CULs for GRO (26,000 mg/kg), toluene (42 mg/kg), ethylbenzene (110 mg/kg), and total xylenes (870 mg/kg) at 10 feet bgs. Soil sample EX-W8-10 was delineated vertically by samples EX-W8-7.5 and EX-W8-13 collected at 7.5 and 13.5 feet bgs, respectively (**Table 2**). During the 2022 investigation, MW-11 was advanced in the ROW north of the Property. MW-11 could not be advanced directly north of soil sample EX-W8-10 due to the presence of numerous underground utilities, therefore soil impacts were unable to be delineated directly to the north of EX-W8-10. However, as this is in the cross-gradient direction, residual impacted soil is not expected to extend a significant distance in this direction.

Samples collected from borings B-2 and B-5, collected during a 1999 subsurface investigation, also contained concentrations exceeding MTCA Method A CULs. The sample collected from B-2 at 22.5-24 feet bgs contained GRO at 230 mg/kg, with 24 feet bgs being the maximum depth explored at that location. The sample collected from B-5 at 37.5-39 feet bgs contained concentrations of GRO (210 mg/kg) and total xylenes (12.6 mg/kg), with 44 feet bgs being the maximum depth explored at that location. Therefore, no deeper samples were collected from these borings for vertical delineation.

Soil samples collected from MW-12, MW-13, and MW-14 in October 2022 did not contain COCs above MTCA Method A CULs; therefore, no further delineation to the east is warranted.

The table below summarizes the maximum soil concentrations historically observed at the Site for analytes detected above MTCA Method A CULs.

	MTCA Method A CULs (mg/kg)	Historical maximum concentration detected (mg/kg)	Date and sample ID of historical maximum concentration detected
GRO	30/100	26,000	EX-W8-10, 9/15/2005, remaining
Toluene	7	48 42	SB-8-37.5, 6/1/2004, removed EX-W8-10, 9/15/2005, remaining
Ethylbenzene	6	110	EX-W8-10, 9/15/2005, remaining
Total Xylenes	9	870	EX-W8-10, 9/15/2005, remaining

Notes: mg/kg = milligrams per kilogram.
GRO=Gasoline Range Organic compounds measured using NWTPH-Gx

Benzene, lead, naphthalene, DRO and HO were either non-detect or were detected at concentrations below MTCA Method A CULs. MTBE was not detected in any of the soil samples analyzed at the Site.

Soil analytical results for samples collected from borings MW-11 through MW-14 during the October 2022 investigation were either below MTCA Method A CULs or the analytes were not detected, as described in Section 7.2.

8.2.2 Groundwater Quality

Groundwater monitoring began in October 2000. Five groundwater monitoring wells (MW-1 through MW-5) were installed in the former service station area; but were decommissioned in 2005 due to pending redevelopment. The current groundwater monitoring network consists of nine groundwater monitoring wells: three in the former service station area (MW-6 to MW-8) and six located in the ROW of Stone Way North or North 45th Street (MW-9 to MW-14). Historical and current groundwater data are further discussed below.

8.2.2.1 Historical Groundwater Quality

Groundwater samples were historically collected from ten groundwater monitoring wells (MW-1 through MW-10) using various methodologies as described in **Table 3**. Groundwater samples for analysis were not collected from wells with measurable LNAPL. Four wells (MW-1, MW-3, MW-9, and MW-10) historically were or have been in compliance with MTCA Method A CULs for GRO, DRO, HO, and BTEX. MTCA Method A CUL exceedances of

GRO, DRO, and/or BTEX were/have been detected in MW-2 and MW-4 through MW-8. Total lead has also been detected at concentrations above the MTCA Method A CUL in six wells (MW-5 through MW-10). Groundwater compliance status with MTCA Method A CULs is presented on **Figure 6**.

A grab groundwater sample was collected from boring B-5 in 1999, and detected concentrations exceeded MTCA Method A CULs for GRO and BTEX.

As described above, grab groundwater samples were collected by Farallon in 2016 from borings FB-1 and FB-2 on the south-adjoining property. FB-1 was located on the northern edge of the south-adjoining property, just south of the former 1956 service station. FB-2 was located near the southeast corner of the south-adjoining property. Groundwater samples collected from the borings were analyzed for GRO, DRO, HO, and VOCs (including BTEX). None of the analytes were found to be above MTCA Method A CULs.

Groundwater samples from all monitoring wells were analyzed routinely for the following constituents:

- GRO
- DRO
- HO
- BTEX
- MTBE
- Total Lead

The table below summarizes the maximum groundwater concentrations of constituents historically observed above MTCA Method A CULs. All other analytes were non-detect or below MTCA Method A CULs.

	MTCA Method A CULs (µg/L)	Historical maximum concentration detected (µg/L)	Date and well of historical maximum concentration detected
GRO	800/1000	480,000	MW-7, 05/17/2017
DRO	500	200,000	MW-7, 03/11/2015
Benzene	5	326	MW-4, 12/16/2000
Toluene	1000	15,100	MW-5, 12/16/2000
Ethylbenzene	700	4,160	MW-5, 12/16/2000
Total Xylenes	1,000	24,200	MW-5, 03/26/2001
Total Lead	15	1,020	MW-7, 05/17/2017

Notes: µg/L = micrograms per liter
DRO=Diesel Range Organic compounds measured using NWTPH-Dx

8.2.2.2 2019 Groundwater Quality

More recent groundwater sampling events were performed in May and November 2019 at the five monitoring wells (MW-6 through MW-10) existing at the time. In May 2019, MW-7 had exceedances of MTCA Method A CULs for GRO (95,000 µg/L), DRO (5,900 µg/L), ethylbenzene (1,200 µg/L), total xylenes (6,700 µg/L), and total lead (144 µg/L). In November 2019, LNAPL was observed at MW-7 at a thickness of 0.02 feet, and therefore it was not sampled. Groundwater compliance status with MTCA Method A CULs for GRO, DRO, HRO, and BTEX is presented on **Figure 6**.

Groundwater samples collected in 2019 from MW-6, MW-7, and MW-9 had exceedances of the MTCA Method A CUL for total lead, with concentrations of 32.2 µg/L, 144 µg/L, and 18.2 µg/L respectively. Lead exceedances do not correlate with detection of petroleum constituents.

Groundwater samples were analyzed for the following analytes:

- GRO
- DRO
- HO
- BTEX
- Total Lead

The table below summarizes the maximum detected groundwater concentrations in 2019.

	Constituents detected above MRLs	Maximum concentration detected (µg/L)	Well ID of maximum concentration detected	Constituents detected above MTCA Method A CUL
GRO	Yes	95,000	MW-7	Yes
DRO	Yes	5,900	MW-7	Yes
HO	Yes	160	MW-7	No
Benzene	No	-	-	-
Toluene	Yes	200	MW-7	No
Ethylbenzene	Yes	1,200	MW-7	Yes
Total Xylenes	Yes	6,700	MW-7	Yes
Total Lead	Yes	144	MW-7	Yes

Notes: µg/L = micrograms per liter
MRL=Method Reporting Limit
DRO=Diesel Range Organic compounds measured using NWTPH-Dx
HO=Organic compounds measured using NWTPH-Dx

8.2.2.3 Current Groundwater Quality

As described in Section 7.3, a groundwater monitoring event was conducted in December 2022 including the four newly installed wells (MW-11 through MW-14). Wells MW-9 and MW-10 were found to be dry and thus no samples were collected. Concentrations of COCs were either non-detect or below MTCA Method A CULs in all wells sampled, except for MW-7. MW-7 contained concentrations of GRO (33,400 µg/L), DRO (7,380 µg/L), ethylbenzene (732 µg/L), xylenes (2,590 µg/L), naphthalene (365 µg/L), and total lead (26.6 µg/L) above MTCA Method A CULs.

8.2.3 Light Non-Aqueous Phase Liquid

LNAPL has historically been observed at a thickness greater than 0.01 foot in four groundwater monitoring wells (MW-2, MW-4, MW-5, and MW-7). Wells MW-2, MW-4, and MW-5 were decommissioned in 2005. As shown below, LNAPL was detected in MW-7 most recently in 2019. LNAPL was not encountered in any Site wells during the December 2022 groundwater monitoring event.

A summary of historical and recent LNAPL detections is included in the table below.

Well	Date of first occurrence of LNAPL	Historical maximum thickness (feet)	Date of most recent measurable thickness	Most recent measurable thickness (feet)
MW-2	03/08/2002	2.44	03/01/2005	1.67
MW-4	03/04/2003	0.04	09/11/2004	0.03
MW-5	09/24/2001	0.50	08/18/2003	0.30
MW-7	02/09/2006	1.26	11/04/2019	0.02

8.3 Fate and Transport

8.3.1 General Fate and Transport Mechanism

As a generality (non-site-specific), petroleum hydrocarbons can exist in four phases in soils (unsaturated vadose zone and/or smear zone):

- *Residual phase*. Petroleum hydrocarbons are sorbed to soil or trapped within soil pore space.
- *Dissolved or aqueous phase*. Petroleum hydrocarbons are dissolved in water within soil pore space.
- *Vapor phase*. Petroleum hydrocarbons are volatilized into soil pore space.
- *Free phase*. Recoverable LNAPL.

Following a release, petroleum hydrocarbons are driven by gravity toward the water table and, depending on the quantity released, soil type, and depth to groundwater, may reach the groundwater table. As the hydrocarbons migrate toward the water table, residual LNAPL may be left behind in each of the phases (residual, dissolved, and free).

When residual-, dissolved-, or free-phase LNAPL comes into contact with groundwater, dissolution of the hydrocarbons to the groundwater can occur. If a release of petroleum hydrocarbons is large enough, LNAPL may overcome the capillary forces at the capillary fringe within smear zone soil and pool on top of the groundwater. When rainwater infiltrates subsurface soil in the area of a release, the water will flow downward through the soil and may preferentially follow high-conductivity soil lenses horizontally and pick up constituents before reaching groundwater.

8.3.2 Site Fate and Transport Mechanism

Petroleum hydrocarbons encountered at the Site are described as follows:

Residual phase. Soil impacts at the Site are delineated to the south, east, and west. Due to underground utilities located directly to the north of historical soil sample EX-W8-10, a boring was unable to be advanced in this location. However, as described above, impacts are not expected to extend significantly in this direction; therefore, no further delineation of soil impacts is warranted.

Dissolved phase. The current groundwater analytical results are generally consistent with the 2019 results, with petroleum impacts above MTCA Method A CULs only at MW-7. Lead exceedances in 2019 in MW-9 (2019) and in MW-10 (2011, 2012, and 2015), do not correlate with detection of petroleum constituents. Analytical data from newly installed wells MW-11 through MW-14 indicate that groundwater petroleum impacts do not extend to the north, east, and southeast of the Property beneath the ROWs.

Vapor phase. As discussed above, J&E vapor modeling was completed for the underground parking garage in 2005 and concluded that incremental risk to human health was insignificant as long as excavation and LNAPL removal were performed (SAIC 2005a). Excavation was conducted in 2005 and LNAPL removal was conducted in 2004, 2005, and 2010. The groundwater to vapor pathway is further evaluated in Section 8.4.2.1 below.

Free phase. LNAPL was observed most recently at MW-7 in 2019, at a thickness of 0.02 feet. LNAPL was also historically observed at MW-2, MW-4, and MW-5 prior to their decommissioning. LNAPL has never been observed in wells MW-6, MW-8, MW-9, or MW-10, and was not observed during the December 2022 groundwater monitoring event. Therefore, LNAPL no longer appears to be a concern at the Site.

8.4 Exposure Pathways and Potential Receptors

8.4.1 Potential Receptors

The primary potential human receptors at the Site are residents of the apartments on the Property. Additional human receptors include workers and the general public at the retail establishments on the Property.

Current potential ecological receptors include Site vegetation and animals that may pass through the Site. A terrestrial ecological evaluation (TEE) is required when a hazardous substance is released to soil at a site [WAC 173-340-7490(2)]. However, there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site; therefore, no further TEE is required under WAC 173-340-7491(1)(c). The TEE Form is included in **Appendix I**.

8.4.2 Potential Exposure Pathways

Potential exposure pathways for the Site are:

- *Soil*. Potential exposure to soil via incidental ingestion, dermal contact, inhalation of windblown dust, and leaching to groundwater.
- *Groundwater*. Potential exposure to groundwater via incidental ingestion and dermal contact.
- *Soil vapor*. Potential exposure to soil vapor via inhalation (volatilization of petroleum impacts contained in groundwater and/or soil).

Potential exposure pathways are evaluated below.

8.4.2.1 Potential Soil Exposure Pathways

Potential soil exposure pathways include:

- *Exposure to soil via incidental ingestion, dermal contact, and inhalation of windblown dust*. Current human receptors (commercial workers, visitors, and residents) are highly unlikely to be exposed to deeper soils since the Site is primarily covered with the building. Impacted soil was excavated onsite to a minimum depth of 13 feet bgs. Any residual soil impacts are therefore located below 13 feet bgs except at the Site boundaries. Soil sidewall sample EX-W8-10 showed that soils at the northeast Site boundary exceeded MTCA A CULs at 10 feet bgs at the shallowest. Due to the depth, surface cover, and location of the impacted soil, inhalation of dust, ingestion or dermal contact for workers, visitors, or residents are considered incomplete. Exposure to impacted soil via incidental ingestion, dermal contact, and inhalation of windblown dust is a potentially complete pathway for future construction workers and others who may perform subsurface work. While future construction workers may be exposed to residual petroleum hydrocarbon impacted soil through dermal contact or incidental ingestion when working at depths of approximately 10 feet bgs or deeper, which is not expected given the typical shallow depth of utility repair or landscaping work, the temporary nature of any exposure to soil exceeding MTCA Method A CULs suggests that this would not result in unacceptable risk.
- *Soil leaching to groundwater*. COC concentrations in groundwater have been shown to be above MTCA Method A groundwater CULs. Therefore, the soil leaching to groundwater pathway is potentially complete.

8.4.2.2 Potential Groundwater Exposure Pathways

Site groundwater samples were collected in December 2022 and analyzed for GRO, DRO, HO, BTEX, EDB, EDC, MTBE, cPAHs, and total lead (**Table 3**[6]). Groundwater analytical data from the last four sampling events has detected petroleum concentrations above MTCA Method A CULs at MW-7. Current human receptors (users of ROWs, residents of apartments, and visitors and workers in ground floor businesses) are not exposed to groundwater. Groundwater beneath the Site is not currently used as drinking water. Based on the deeper depth of groundwater (ranging from approximately 24 to 40 feet bgs), and because it is not currently used for drinking water, no ingestion or dermal contact are likely. Since petroleum COCs were not detected above MTCA Method A CULs in groundwater beneath the ROW in MW-11 through MW-14, historical lead exceedances in MW-9 and MW-10 do not correlate with detection of petroleum constituents, and given the depth to groundwater, typical

[6] Samples collected in 2022 were also analyzed for cPAHs; however only naphthalene was detected above laboratory reporting limits; additional cPAH results are not included in Table 3.

construction activities would not be expected to encounter groundwater. Therefore, exposure to groundwater impacts during potential future construction is not a concern, and no further assessment is warranted.

8.4.2.3 Potential Soil Vapor Exposure Pathway

No soil vapor samples have been collected at the Site to date. However, an underground parking garage extends across the entire building footprint, with the parking garage floor at 10 feet bgs. Additionally, building plans indicate that a 15 ml polyethylene vapor barrier was installed beneath the concrete slab of the parking garage as part of the redevelopment to mitigate any potential vapor intrusion.

Additionally, as required to provide air exchange due to vehicle exhaust, the parking garage contains a mechanically operated fan (26,155 cubic feet per minute ([CFM]) that is operated by a carbon monoxide sensor. A smaller volume ventilation system (1,300 CFM) operates continuously to meet local building codes for air exchange. The exchange rate based on the lower volume ventilation system is approximately 2.7 exchanges per hour. The ventilation system airflow rate is at least 0.75 CFM/feet^2, in compliance with City of Seattle building codes. These systems provide additional mitigation measures for any potential vapor intrusion into the overlying businesses and residential units.

Remaining petroleum impacts that may volatize to the surface were in one soil sample (EX-W8-10) at 10 feet bgs in the northeast corner of the Site. Potential future human receptors (construction workers in the ROW) may potentially be exposed through inhalation to vapor phase petroleum hydrocarbons volatilizing from soil in this area. However, as mentioned above, typical construction is not anticipated to reach this depth.

Known remaining petroleum impacts in soil at B-2 are at 22.5 to 24 feet bgs. The vertical distance between impacts at B-2 and the parking garage floor is 12.5 feet. The parking garage ventilation system and the installed vapor barrier mitigate any potential risk to people in the underground parking garage and residents and workers in the building on the Property.

Known remaining petroleum impacts in soil at B-5 are at 37.5-39 feet bgs. The vertical distance between impacts at B-5 and the parking garage floor is greater than 15 feet. Therefore, no additional vapor intrusion assessment is warranted, based on the recommended vertical separation distances shown in the table below and as indicated in Appendix B of Ecology's Vapor Intrusion Guidance (Ecology 2022). Additionally, as discussed above, mitigation measures are in place to address any potential vapor intrusion.

Groundwater concentrations during the December 2022 groundwater sampling event were above MTCA Vapor Intrusion Method B Groundwater CULs for GRO, DRO, ethylbenzene, xylenes, and naphthalene at MW-7. The depth to groundwater in MW-7 has ranged from approximately 26 to 28 feet bgs. Therefore, the vertical distance between impacted groundwater and the parking garage floor is greater than 15 feet. Therefore, no additional vapor intrusion assessment is warranted, based on the table below and as indicated in Ecology's Guidance for Evaluating Vapor Intrusion in Washington State (Ecology 2022). Additionally, as discussed above, mitigation measures are in place to address any potential vapor intrusion.

The recommended vertical separation distances between contamination and building parking garage floors specified in the *Technical Guidance for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* (USEPA 2015) are summarized in the table below:

Media	Benzene	TPH	Vertical Separation Distance (feet)
Soil (mg/kg)	≤10	≤100 (unweathered gasoline) ≤250 (weathered gasoline, diesel)	6
	>10 (LNAPL)	>100 (unweathered gasoline) > (weathered gasoline, diesel)	15
Groundwater (mg/L)	≤5 (5,000 µg/l)	≤30 (30,000 µg/l)	6
	>5 (LNAPL) (5,000 µg/l)	>30 (LNAPL) (30,000 µg/l)	15

Based on the above information, potential vapor intrusion is not a concern, and no further assessment or evaluation is warranted.

9 Conclusions and Recommendations

This report documents RI activities conducted in 2022 which were completed to further delineate the extent of residual soil and groundwater impacts at the Site.

The investigation included the advancement of four soil borings completed as monitoring wells (MW-11 through MW-14). Soil and groundwater samples were collected to further delineate soil and groundwater impacts beneath the ROW to the north and east of the Property.

Due to underground utilities located directly to the north of historical soil sample EX-W8-10, as well as overhead obstructions, a boring was unable to be advanced in this location. However, based on the overall groundwater flow direction (to the south), residual impacted soil is not expected to extend significantly to the north, and thus no further assessment is warranted. The only other historical soil samples with concentrations that exceeded MTCA Method A CULs and were not over-excavated are B-2, and B-5, at depths of 22.5-24 feet bgs and 37.5-39 feet bgs, respectively. Since soil samples collected during this investigation indicated that petroleum COCs in soil do not extend east of the Property, and since no soil impacts were observed during the development at the south-adjoining property (except for soil impacts associated with USTs discovered on the south-adjoining property), no further delineation of soil impacts is warranted.

LNAPL was not observed in MW-7 during the most recent groundwater monitoring event in December 2022. Based on the results, petroleum COCs in groundwater above MTCA Method A CULs do not extend to the east of the Property, and the only remaining petroleum groundwater impacts above MTCA Method A CULs are in MW-7, located on the Property. Since lead was not detected in MW-10, MW-13, or MW-14 above MTCA Method A CULs, and since historical lead exceedances in groundwater do not correlate with detection of petroleum constituents, lead exceedances in MW-9 (2019) and in MW-10 (2011, 2012, and 2015), do not appear to be associated with the Site. Additional evaluation will be conducted after four consecutive quarters of groundwater samples are collected from the current monitoring well network.

Based on the results of this investigation, Arcadis recommends the following:

- Continue quarterly groundwater gauging and sampling in 2023.
- Evaluate groundwater conditions after four groundwater monitoring events have been completed.

10 References

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Tables

Table 1
Well Construction Details
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well ID	Well Setup	Construction Details					
		Installation Date	Decommission Date	Well Diameter	Top of Screen Depth	Bottom of Screen Depth	Total Well Depth
				inches	feet bgs	feet bgs	feet bgs
ON SITE							
MW-1	Single casing, PVC	10/10/2000	3/18/2005	2	32	42	42
MW-2	Single casing, PVC	10/11/2000	3/18/2005	2	32	42	43
MW-3	Single casing, PVC	10/11/2000	3/18/2005	2	35	45	45.5
MW-4	Single casing, PVC	10/10/2000	3/18/2005	2	32	42	43
MW-5	Single casing, PVC	10/11/2000	3/18/2005	2	32	42	43
MW-6	Single casing, PVC	11/7/2005	--	2	18	35	35
MW-7	Single casing, PVC	11/7/2005	--	2	20	35	35
MW-8	Single casing, PVC	11/7/2005	--	2	20	35	35
MW-9	Single casing, PVC	12/4/2006	--	2	29.1	44.1	45
MW-10	Single casing, PVC	12/4/2006	--	2	30	45	44.1
MW-11	Single casing, PVC	10/7/2022	--	2	35	45	45
MW-12	Single casing, PVC	10/6/2022	--	2	35	45	45
MW-13	Single casing, PVC	10/5/2022	--	2	35	45	45
MW-14	Single casing, PVC	10/4/2022	--	2	35	45	45

Notes and Acronyms:
MW = monitoring well
-- = Not applcable
bgs = below ground surface

Table 2
Soil Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Sample ID	Date	Depth	TPH-GRO	TPH-DRO	TPH-HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Lead
MTCA Method A Soil Cleanup Levels			**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**0.005**		**0.1**	**5**	**15**
Soil Boring Analytical Results														
B1-7.5-8.5	8/29/1999	7.5-8.5	**1,200**	--	--	**<0.29**	<0.29	0.45	2.6	--	--	--	--	--
B1-17.5-19	8/29/1999	17.5-19	<5.4	<27	<54	<0.054	<0.054	<0.054	<0.054	--	--	--	--	--
B2-12.5-14	8/29/1999	12.5-14	**1,900**	--	--	**<0.26**	2.9	**12**	**94**	--	--	--	--	--
B2-22.5-24	8/29/1999	22.5-24	**230**	<27	<53	**<0.27**	<0.27	<0.27	5	--	--	--	--	--
B3-2.5-4	8/29/1999	2.5-4	74	--	--	**<0.27**	<0.27	<0.27	1.87	--	--	--	--	--
B4-2.5-9	8/29/1999	2.5-9	--	<28	140	--	--	--	--	--	--	--	--	--
B5-32.5-34	9/21/1999	32.5-34	<5.3	--	--	<0.053	<0.053	<0.053	<0.053	--	--	--	--	--
B5-37.5-39	9/21/1999	37.5-39	**210**	--	--	**<0.30**	2.5	2.3	**12.6**	--	--	--	--	--
B6-17.5-18.5	9/21/1999	17.5-18.5	<28	--	--	**<0.28**	<0.28	<0.28	<0.28	--	--	--	--	--
B6-22.5-24	9/21/1999	22.5-24	<5.5	--	--	<0.055	<0.055	<0.055	<0.055	--	--	--	--	--
MW1-35	10/10/2000	35	<5.00	<10	<25	<0.050	<0.050	<0.050	<0.10	--	--	--	--	--
MW2-35	10/11/2000	35	**430**	94.1	<25	<0.050	<0.57	<2.45	<7.65	--	--	--	--	--
MW3-35	10/10/2000	35	<5.00	<10	<25	<0.050	<0.050	<0.050	<0.10	--	--	--	--	--
MW4-35	10/11/2000	35	<5.00	<10	<25	<0.050	<0.050	<0.050	<0.10	--	--	--	--	--
MW5-5	10/11/2000	5	<5.00	<10	<25	<0.050	<0.050	<0.050	<0.10	--	--	--	--	--
MW5-35	10/11/2000	35	9.41	<10	<25	<0.050	<0.050	<0.050	0.328	--	--	--	--	--
SB1-38	5/27/2004	38	<1.0	<3.0	<10	<0.005	0.008	<0.005	<0.02	--	--	--	--	--
SB2-37.5	5/27/2004	37.5	<1.0	<3.0	<10	<0.005	0.02	0.01	0.09	--	--	--	--	--
SB3-12.5	5/27/2004	12.5	**4,100**	410	<200	**<0.5**	<0.5	0.7	5.6	--	--	--	--	--
SB3-37.5	5/27/2004	37.5	**2,900**	560	<200	**<1.0**	**37**	**33**	**200**	--	--	--	--	--
SB3-45.5	5/27/2004	45.5	3.7	3.5	<10	<0.005	0.01	0.006	0.03	--	--	--	--	--
SB3-20	5/27/2004	20	6.6	<3.0	10	<0.005	<0.005	<0.005	0.02	--	--	--	--	--
SB3-42.5	6/1/2004	42.5	<1.0	<3.0	<10	<0.005	0.02	<0.005	0.02	--	--	--	--	--
SB4-37.5	5/28/2004	37.5	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
SB5-37.5	5/28/2004	37.5	**240**	23	<10	**<0.1**	0.2	1.3	7.2	--	--	--	--	--
SB5-45	5/28/2004	45	1.7	<3.0	<10	<0.005	0.02	0.01	0.08	--	--	--	--	--
SB6-37.5	5/28/2004	37.5	<1.0	<3.0	<10	<0.005	0.01	0.008	0.04	--	--	--	--	--
SB6-40	5/28/2004	40	<1.0	<3.0	<10	<0.005	0.02	0.01	0.07	--	--	--	--	--
SB7-37.5	5/28/2004	37.5	<1.0	<3.0	<10	<0.005	0.009	<0.005	0.02	--	--	--	--	--
SB8-12.5	6/1/2004	12.5	**860**	160	<10	**<0.1**	<0.1	0.1	0.3	--	--	--	--	--
SB8-25	6/1/2004	25	<1.0	<3.0	<10	<0.005	0.01	<0.005	0.04	--	--	--	--	--
SB8-37.5	6/1/2004	37.5	**5,000**	980	<500	**<1.0**	**48**	**61**	**320**	--	--	--	--	--
SB8-45	6/1/2004	45	<1.0	<3.0	<10	<0.005	0.005	<0.005	<0.02	--	--	--	--	--
SB9-37.5	6/1/2004	37.5	56	130	<100	<0.02	0.04	0.2	1	--	--	--	--	--
SB9-45	6/1/2004	45	<1.0	<3.0	<10	<0.005	0.02	0.01	0.06	--	--	--	--	--
SB10-37.5	6/1/2004	37.5	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
MW-9-37.5	12/4/2006	37.5	<1.0	<3.0	<10	<0.0005	<0.0009	<0.0009	<0.0009	--	--	--	--	--
MW-10-37.5	12/4/2006	37.5	<1.0	<3.0	<10	<0.0005	<0.0009	<0.0009	<0.0009	--	--	--	--	--

Table 2
Soil Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Sample ID	Date	Depth	TPH-GRO	TPH-DRO	TPH-HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Lead
MTCA Method A Soil Cleanup Levels			**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**0.005**		**0.1**	**5**	**15**
Soil Boring Analytical Results from 2022 Well Installation														
MW-11-11.0	10/7/2022	11	<3.24	3.69 J	11.6	<0.000606	0.00186 J	<0.00324	<0.00844	<0.00324	<0.00324	--	<0.0227	2.56
MW-11-15.0	10/7/2022	15	<2.87	<4.29	<10.7	0.000625 J	0.00347 J	<0.00287	0.00227 J	<0.00287	<0.00287	--	<0.0215	2.24
MW-11-35.0	10/7/2022	35	<2.83	<4.26	<10.7	0.00128	0.00344 J	0.00119 J	0.00327 J	<0.00283	<0.00283	--	<0.0213	1.92
MW-11-46.5	10/7/2022	46.5	<3.84	<4.94	<12.4	<0.00154	<0.00769	<0.00384	<0.0100	<0.00384	<0.00384	--	<0.0247	1.75
MW-11-DUP-1	10/7/2022		<2.78	<4.22	<10.5	<0.00111	<0.00557	<0.00278	0.00197 J	<0.00278	<0.00278	--	<0.0211	1.61
MW-12-38.5	10/6/2022	38.5	8.32	<4.90	6.06 J	<0.00149	0.0149	<0.00373	0.00308 J	<0.00373	<0.00373	--	<0.0245	2.94
MW-12-41.5	10/6/2022	41.5	<4.10	2.19 J	4.35 J	<0.00164	0.00359 J	<0.00410	<0.0107	<0.00410	<0.00410	--	<0.0256	1.59
MW-12-46.5	10/6/2022	46.5	<4.24	<4.87	<12.2	0.0028	0.00829 J	<0.00424	0.00241 J	<0.00424	<0.00424	--	<0.0244	1.78
MW-13-37.5	10/5/2022	37.5	<3.78	<4.93	<12.3	<0.000706	0.00204 J	<0.00378	0.00429 J	<0.00378	<0.00378	--	<0.0256	3.29
MW-13-40.0	10/5/2022	40	<3.78	<4.90	<12.2	0.000716 J	<0.00755	0.00379	0.00417 J	<0.00378	<0.00378	--	<0.0245	1.32
MW-13-46.0	10/5/2022	46	<3.78	<4.90	<12.2	<0.00152	<0.00762	0.00292 J	0.00341 J	<0.00381	<0.00381	--	0.518	1.83
MW-14-38.5	10/4/2022	38.5	<3.97	<5.05	<12.6	<0.00159	<0.00795	0.00156 J	0.00254 J	<0.00397	<0.00397	--	<0.0252	1.62
MW-14-40.0	10/4/2022	40	<3.63	2.45 J	<12.0	<0.00145	<0.00727	0.00109 J	0.00397 J	<0.00363	<0.00363	--	0.00983 J	4.86
MW-14-45.0	10/4/2022	45	<4.05	<5.12	<12.8	<0.00162	<0.00811	0.00247 J	0.00300 J	<0.00405	<0.00405	--	<0.0256	1.62
Remedial Excavation Soil Analytical Results														
EX-W1-3	1/10/2004	3	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W2-3	1/10/2004	3	<0.8	<3.0	<10	<0.004	<0.004	<0.004	<0.01	--	--	--	--	--
EX-W3-3	1/10/2004	3	<0.9	4.1	31	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W4-7	9/12/2005	7	<1.1	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W5-7.5	9/12/2005	8	<1.1	4.2	80	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W5-13	9/19/2005	13	<0.9	<3.0	<10	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W6-7.5	9/12/2005	7.5	<1.1	3.2	28	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W6-10	9/15/2005	10.0	<1.3	<3.0	<10	<0.006	<0.006	<0.006	<0.02	--	--	--	--	--
EX-W6-13	9/19/2005	13.0	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W7-7.5	9/12/2005	7.5	<0.9	<3.0	<10	<0.005	<0.005	<0.006	<0.01	--	--	--	--	--
EX-W7-10	9/15/2005	10.0	<0.9	<3.0	<10	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W7-13	9/19/2005	13.0	<1.0	<3.0	<10	<0.005	0.006	0.006	0.04	--	--	--	--	--
EX-W8-7.5	9/12/2005	7.5	<0.9	<3.0	<10	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W8-10	9/15/2005	10.0	**26,000**	60	<10	<1.0	**42**	**110**	**870**	--	--	--	--	--
EX-W8-13	9/19/2005	13.0	<1.1	<3.0	<10	<0.006	0.01	<0.006	0.04	--	--	--	--	--
EX-W9-7.5	9/12/2005	7.5	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W9-13	9/19/2005	13	<0.9	<3.0	<10	<0.005	<0.005	<0.005	<0.01	--	--	--	--	--
EX-W10-7.5	9/12/2005	8	<1.1	7.7	36	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W10-13	9/19/2005	13	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W11-7.5	9/12/2005	7.5	<0.9	<3.0	<10	<0.004	<0.004	<0.004	<0.01	--	--	--	--	--
EX-W12-8	9/15/2005	8.0	<1.8	<3.0	<10	<0.009	<0.009	<0.009	<0.03	--	--	--	--	--
EX-W13-8	9/15/2005	8.0	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
EX-W14-8	9/15/2005	8.0	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
SS1-13.5	10/7/2005	13.5	4.3	3.1	<10	<0.005	0.03	0.03	0.1	--	--	--	--	--
SS2-13.5	10/7/2005	13.5	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--

Table 2
Soil Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Sample ID	Date	Depth	TPH-GRO	TPH-DRO	TPH-HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Lead
MTCA Method A Soil Cleanup Levels			**30/100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**0.005**		**0.1**	**5**	**15**
Bucket-Auger Boring Soil Analytical Results														
BA1-42	9/26/2005	42	3.7	<3.0	<10	<0.005	0.04	0.04	0.2	--	--	--	--	--
BA2-42	9/27/2005	42	4.3	<3.0	<10	<0.005	0.1	0.08	0.5	--	--	--	--	--
BA3-42	9/27/2005	42	4.5	<3.0	<10	<0.005	0.04	0.05	0.3	--	--	--	--	--
BA4-42	9/28/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA5-42	9/28/2005	42	<1.0	<3.0	<10	<0.005	0.005	<0.005	<0.02	--	--	--	--	--
BA6-42	9/29/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA7-42	9/29/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA8-42	9/29/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA9-42	9/30/2005	42	<1.0	<3.0	<10	<0.005	0.006	<0.005	0.02	--	--	--	--	--
BA10-42	9/30/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA11-42	10/3/2005	42	<1.0	<3.0	<10	<0.005	0.01	0.007	0.04	--	--	--	--	--
BA12-42	10/3/2005	42	<1.0	<3.0	<10	<0.005	0.01	0.007	0.03	--	--	--	--	--
BA13-40	10/4/2005	40	19	<3.0	<10	0.009	0.2	0.2	1.0	--	--	--	--	--
BA13-42	10/4/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	0.02	--	--	--	--	--
BA14-42	10/4/2005	42	1.8	<3.0	<10	0.006	0.09	0.03	0.2	--	--	--	--	--
BA15-42	10/4/2005	42	<1.0	<3.0	<10	<0.005	0.008	0.009	0.04	--	--	--	--	--
BA17-42	10/5/2005	42	<1.0	<3.0	<10	<0.005	0.01	0.007	0.04	--	--	--	--	--
BA18-42	10/6/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
BA19-42	10/6/2005	42	<1.0	<3.0	<10	<0.005	0.01	0.03	0.09	--	--	--	--	--
BA20-39	10/6/2005	39	4,200	190	<50	**<0.2**	18	31	180	--	--	--	--	--
BA20-42	10/6/2005	42	<1.0	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--
Phase II Environmental Site Assessment, 4453 and 4455 Styone Way North														
FB-1	10/24/2016	35	< 6.8	< 30	< 60	< 0.0012	<0.0059	<0.0012	<0.0035	--	--	--	--	--
FB-2	10/24/2016	30	< 6.2	< 29	< 57	< 0.0011	< 0.0056	< 0.0011	< 0.0034	--	--	--	--	--

Notes

BOLD and highlighted values are greater than their respective MTCA Method A cleanup level

BOLD values are non-detect below the laboratory detection limit where the detection limit is higher than the MTCA Method A cleanup level

All results in milligrams per kilogram (mg/kg).

Soil Cleanup Level for gasoline mixtures (GRO) without benzene and the total of toluene, ethylbenzene, and xylenes are less than 1% of the gasoline mixture is 100 mg/kg.

For all other gasoline mixtures, the GRO Soil Cleanup Level is 30 mg/kg

Ecology MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, WAC Chapter 173-340-900, Table 740-1

Soil samples collected in 2022 were also analyzed for cPAHs; however only naphthalene was detected above laboratory reporting limits; additional cPAH results are not included in this table

Abbreviations:

ID = Identification

EDB = 1,2-Dibromoethane

EDC= 1,2-dichloroethane

MTCA = Model Toxics Control Act

TPH = Total petroleum hydrocarbons

TPH - GRO = TPH - Gasoline range Organics analyzed by Ecology Method NWTPH-Gx

TPH - DRO = TPH - Diesel Range Organics analyzed by Ecology Method NWTPH-Dx

TPH - HO = TPH - Heavy Oil Range Organics analyzed by Ecology Method NWTPH-Dx

BTEX = benzene, toluene, ethylbenzene and total xylenes - collectively by EPA Method 8260C or 8020

-- = Not applicable, not available, or not analyzed

Depth = Depth of sample in feet below ground surface (bgs)

Grey text indicates that the sample area has been excavated.

Laboratory Qualifiers

< = Not detected at or above laboratory method detection limit (MDL) for the given analysis, value shown is MDL

J = estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**
MW-1	10/11/00	97.95	--	34.50	--	63.45	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/16/00	97.95	--	35.91	0.00	62.04	74.4	<250	**<750**	<0.500	<0.500	<0.500	<1.00	--	--	<5.00	--	<1.00	
MW-1	03/26/01	97.95	--	36.54	0.00	61.41	<50.0	<250	**<750**	<0.500	<0.500	<0.500	<1.00	--	--	<1.00	--	--	
MW-1	06/25/01	97.95	--	36.78	0.00	61.17	<50.0	<281	**<842**	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-1	09/24/01	97.95	--	37.14	0.00	60.81	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-1	12/13/01	97.95	--	37.25	0.00	60.70	<80.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-1	03/08/02	97.95	--	36.79	0.00	61.16	<50.0	<250	**<750**	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	No Purge
MW-1	05/29/02	97.95	--	36.44	0.00	61.51						Sampled Semiannually							
MW-1	09/16/02	97.95	--	36.71	0.00	61.24	<50.0	<250	<250	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	No Purge
MW-1	12/05/02	97.95	--	37.09	0.00	60.86						Sampled Semiannually							
MW-1	03/04/03	97.95	--	37.26	0.00	60.69	100	<250	<250	<0.50	<0.50	<0.50	<3.0	--	--	--	--	--	No Purge
MW-1	06/03/03	97.95	--	37.09	0.00	60.86						Sampled Semiannually							
MW-1	10/27/03	97.95	--	37.42	0.00	60.53						Not Sampled due to insufficient water							
MW-1	03/31/04	97.95	--	37.12	0.00	60.83	<50	**<800**	**<1,000**	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	No Purge
MW-1	06/28/04	97.95	--	37.14	0.00	60.81						Sampled Semiannually							
MW-1	09/29/04	97.95	--	37.50	0.00	60.45						Not Sampled due to insufficient water							
MW-1	01/04/05	97.95	--	37.61	0.00	60.34	Sampled Semiannually												
MW-1											Abandoned								
MW-2	10/11/00	98.70	--	34.50	--	64.20	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/16/00	98.70	--	36.46	0.00	62.24	**28,100**	**1,000**	**<750**	**283**	**2,560**	693	**4,020**	--	--	<5.00	--	1.94	
MW-2	03/26/01	98.70	--	37.12	0.00	61.58	**17,000**	**1,180**	**<750**	**143**	**1,450**	378	**2,180**	--	--	<1.00/<1.00	--	--	
MW-2	06/25/01	98.70	--	37.37	0.00	61.33	**11,700**	418	**<750**	**92.3**	547	181	**1,010**	--	--	--	--	--	
MW-2	09/24/01	98.70	--	37.72	0.00	60.98	**22,100**	**4,840**	**<557**	**120**	**1,380**	658	**4,100**	--	--	--	--	--	
MW-2	12/13/01	98.70	--	37.89	0.00	60.81	**84,000**	**5,540**	<500	**185**	**3,960**	**1,590**	**9,950**	--	--	--	--	--	
MW-2	03/08/02	98.70	37.24	38.00	**0.76**	61.31	Not Sampled due to the presence of LNAPL												
MW-2	05/29/02	98.70	36.81	37.54	**0.73**	61.74	Not Sampled due to the presence of LNAPL												
MW-2	09/16/02	98.70	37.19	37.61	**0.42**	61.43	Not Sampled due to the presence of LNAPL												
MW-2	10/15/02	98.70	37.24	37.68	**0.44**	61.37	Not Sampled due to the presence of LNAPL												
MW-2	11/22/02	98.70	37.12	37.63	**0.51**	61.48	Not Sampled due to the presence of LNAPL												
MW-2	12/05/02	98.70	37.51	38.10	**0.59**	61.07	Not Sampled due to the presence of LNAPL												
MW-2	01/28/03	98.70	36.77	37.33	**0.56**	61.82	Not Sampled due to the presence of LNAPL												
MW-2	02/13/03	98.70	37.44	38.02	**0.58**	61.14	Not Sampled due to the presence of LNAPL												
MW-2	03/04/03	98.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	04/21/03	98.70	37.21	37.78	**0.57**	61.38	Not Sampled due to the presence of LNAPL												
MW-2	05/08/03	98.70	37.43	37.94	**0.51**	61.17	Not Sampled due to the presence of LNAPL												
MW-2	06/03/03	98.70	37.37	37.91	**0.54**	61.22	Not Sampled due to the presence of LNAPL												
MW-2	07/06/03	98.70	36.96	37.51	**0.55**	61.63	Not Sampled due to the presence of LNAPL												
MW-2	08/18/03	98.70	37.49	38.02	**0.53**	61.10	Not Sampled due to the presence of LNAPL												
MW-2	10/27/03	98.70	37.54	39.98	**2.44**	60.67	Not Sampled due to the presence of LNAPL												
MW-2	11/17/03	98.70	37.10	37.58	**0.48**	61.50	Not Sampled due to the presence of LNAPL												
MW-2	12/31/03	98.70	36.18	38.19	**2.01**	62.12	Not Sampled due to the presence of LNAPL												
MW-2	02/09/04	98.70	37.00	37.49	**0.49**	61.60	Not Sampled due to the presence of LNAPL												
MW-2	03/04/04	98.70	35.85	37.06	**1.21**	62.61	Not Sampled due to the presence of LNAPL												
MW-2	03/31/04	98.70	37.32	39.05	**1.73**	61.03	Not Sampled due to the presence of LNAPL												
MW-2	06/28/04	98.70	37.32	39.05	**1.73**	61.03	Not Sampled due to the presence of LNAPL												
MW-2	08/30/04	98.70	37.61	38.99	**1.38**	60.81	Not Sampled due to the presence of LNAPL												
MW-2	09/07/04	98.70	37.61	39.19	**1.58**	60.77	Not Sampled due to the presence of LNAPL												
MW-2	09/11/04	98.70	37.65	39.10	**1.45**	60.76	Not Sampled due to the presence of LNAPL												
MW-2	09/14/04	98.70	37.65	39.25	**1.60**	60.73	Not Sampled due to the presence of LNAPL												
MW-2	09/21/04	98.70	37.61	39.30	**1.69**	60.75	Not Sampled due to the presence of LNAPL												
MW-2	09/28/04	98.70	37.70	39.30	**1.69**	60.75	Not Sampled due to the presence of LNAPL												
MW-2	09/29/04	98.70	37.71	39.39	**1.68**	60.65	Not Sampled due to the presence of LNAPL												
MW-2	10/05.04	98.70	37.72	39.27	**1.55**	60.67	Not Sampled due to the presence of LNAPL												
MW-2	10/06/04	98.70	37.86	39.27	**1.16**	60.36	Not Sampled due to the presence of LNAPL												
MW-2	10/07/04	98.70	37.90	38.59	**0.69**	60.66	Not Sampled due to the presence of LNAPL												
MW-2	10/08/04	98.70	37.89	38.65	**0.76**	60.66	Not Sampled due to the presence of LNAPL												
MW-2	10/11/04	98.70	37.79	39.15	**1.36**	60.64	Not Sampled due to the presence of LNAPL												
MW-2	10/12/04	98.70	37.89	38.78	**0.89**	60.63	Not Sampled due to the presence of LNAPL												
MW-2	10/16/04	98.70	--	--	**0.90**	---	Not Sampled due to the presence of LNAPL												
MW-2	10/18/04	98.70	--	--	**1.10**	---	Not Sampled due to the presence of LNAPL												
MW-2	10/19/04	98.70	37.96	38.61	**0.65**	60.61	Not Sampled due to the presence of LNAPL												
MW-2	10/20/04	98.70	37.99	38.47	**0.48**	60.61	Not Sampled due to the presence of LNAPL												
MW-2	10/21/04	98.70	37.96	38.55	**0.59**	60.62	Not Sampled due to the presence of LNAPL												
MW-2	10/22/04	98.70	38.01	38.25	**0.34**	60.72	Not Sampled due to the presence of LNAPL												

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	--
MW-2	10/25/04	98.70	37.90	38.80	**0.90**	60.62						Not Sampled due to the presence of LNAPL							
MW-2	10/26/04	98.70	38.05	38.36	**0.31**	60.59						Not Sampled due to the presence of LNAPL							
MW-2	10/27/04	98.70	38.05	38.35	**0.30**	60.59						Not Sampled due to the presence of LNAPL							
MW-2	10/28/04	98.70	38.10	38.23	**0.13**	60.57						Not Sampled due to the presence of LNAPL							
MW-2	10/29/04	98.70	38.11	38.15	**0.04**	60.58						Not Sampled due to the presence of LNAPL							
MW-2	11/01/04	98.70	37.94	38.75	**0.81**	60.60						Not Sampled due to the presence of LNAPL							
MW-2	11/02/04	98.70	38.04	38.49	**0.45**	60.57						Not Sampled due to the presence of LNAPL							
MW-2	11/04/04	98.70	38.01	38.65	**0.64**	60.56						Not Sampled due to the presence of LNAPL							
MW-2	11/05/04	98.70	38.05	38.53	**0.48**	60.55						Not Sampled due to the presence of LNAPL							
MW-2	11/08/04	98.70	37.92	38.93	**1.01**	60.58						Not Sampled due to the presence of LNAPL							
MW-2	11/09/04	98.70	38.13	38.24	**0.11**	60.55						Not Sampled due to the presence of LNAPL							
MW-2	11/16/04	98.70	--	--	**1.70**	---						Not Sampled due to the presence of LNAPL							
MW-2	11/22/04	98.70	36.89	38.16	**1.27**	61.56						Not Sampled due to the presence of LNAPL							
MW-2	11/23/04	98.70	--	--	**1.60**	---						Not Sampled due to the presence of LNAPL							
MW-2	01/04/05	98.70	37.88	39.80	**1.92**	60.44						Not Sampled due to the presence of LNAPL							
MW-2	01/04/05	98.70	38.01	39.19	**1.18**	60.45						Not Sampled due to the presence of LNAPL							
MW-2	01/10/05	98.70	37.90	39.59	**1.69**	60.46						Not Sampled due to the presence of LNAPL							
MW-2	01/14/05	98.70	37.49	39.02	**1.53**	60.90						Not Sampled due to the presence of LNAPL							
MW-2	1/18/2005	98.70	37.89	39.64	**1.75**	60.46						Not Sampled due to the presence of LNAPL							
MW-2	1/28/2005	98.70	--	--	**1.50**	---						Not Sampled due to the presence of LNAPL							
MW-2	2/2/2005	98.70	--	--	**1.50**	---						Not Sampled due to the presence of LNAPL							
MW-2	02/09/05	98.70	37.90	39.64	**1.74**	60.45						Not Sampled due to the presence of LNAPL							
MW-2	02/18/05	98.70	37.88	39.60	**1.72**	60.48						Not Sampled due to the presence of LNAPL							
MW-2	02/22/05	98.70	37.92	39.53	**1.61**	60.46						Not Sampled due to the presence of LNAPL							
MW-2	03/01/05	98.70	37.89	39.56	**1.67**	60.48						Not Sampled due to the presence of LNAPL							
MW-2										Abandoned									
MW-3	10/11/00	98.76	--	34.00	--	64.76	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/16/00	98.76	--	36.39	0.00	62.37	<50.0	<250	**<750**	<0.500	0.612	<0.500	1.95	--	--	<5.00	--	<1.00	
MW-3	03/26/01	98.76	--	37.05	0.00	61.71	<50.0	<250	**<750**	<0.500	<0.500	<0.500	<1.00	--	--	<1.00	--	--	
MW-3	06/25/01	98.76	--	37.29	0.00	61.47	<50.0	<250	**<750**	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-3	09/24/01	98.76	--	37.64	0.00	61.12	<50.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-3	12/13/01	98.76	--	37.78	0.00	60.98	<80.0	<250	<500	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-3	03/08/02	98.76	--	37.28	0.00	61.48	320	<250	**<750**	<0.50	0.64	2.1	15	--	--	--	--	--	No Purge
MW-3	05/29/02	98.76	--	36.92	0.00	61.84						Sampled Semiannually							
MW-3	09/16/02	98.76	--	37.21	0.00	61.55	<50	<250	<250	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	No Purge
MW-3	12/05/02	98.76	--	37.58	0.00	61.18						Sampled Semiannually							
MW-3	03/04/03	98.76	--	37.79	0.00	60.97	<50	<250	<250	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	No Purge
MW-3	06/03/03	98.76	--	37.68	0.00	61.08						Sampled Semiannually							
MW-3	10/27/03	98.76	--	38	0.00	60.76	<50	<250	<250	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	No Purge
MW-3	03/31/04	98.76	--	37.65	0.00	61.11	<50	**<800**	**<1,000**	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	No Purge
MW-3	06/28/04	98.76	--	37.68	0.00	61.08						Sampled Semiannually							
MW-3	09/29/04	98.76	--	38.01	0.00	60.75	<50	<250	<250	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	No Purge
MW-3	01/04/05	98.76	--	38.19	0.00	60.57						Sampled Semiannually							
MW-3										Abandoned									
MW-4	10/11/00	98.52	--	35.00	--	63.52	--	--	--	**--**	--	--	--	--	--	--	--	--	
MW-4	12/16/00	98.52	--	36.35	0.00	62.17	**58,200**	<250	**<750**	**326**	**5,520**	**1,430**	**8,520**	--	--	<5.00	--	12	
MW-4	03/26/01	98.52	--	37.00	0.00	61.52	**27,200**	266	**<750**	**178**	**2,160**	**785**	**4,160**	--	--	<1.00/<1.00	--	--	
MW-4	06/25/01	98.52	--	37.25	0.00	61.27	**12,300**	<250	**<750**	**69**	654	416	**1,910**	--	--	--	--	--	
MW-4	09/24/01	98.52	--	37.60	0.00	60.92	**4,130**	<250	<500	**30.1**	154	197	684	--	--	--	--	--	
MW-4	12/13/01	98.52	--	37.72	0.00	60.80	**5,490**	<250	<500	**30.3**	175	177	679	--	--	--	--	--	
MW-4	03/08/02	98.52	--	38.36	0.00	60.16	**9,000**	<250	**<750**	**<50**	150	170	710	--	--	--	--	--	No Purge
MW-4	05/29/02	98.52	--	36.86	0.00	61.66	**6,700**	<250	**<750**	**22**	150	190	780	--	--	--	--	--	No Purge
MW-4	09/16/02	98.52	--	37.16	0.00	61.36	**7,500**	<250	<250	**46**	230	240	630	--	--	--	--	--	No Purge
MW-4	12/05/02	98.52	--	37.53	0.00	60.99	**14,000**	<250	<250	**73**	400	540	**1,500**	--	--	--	--	--	No Purge
MW-4	03/04/03	98.52	36.68	36.71	**0.03**	61.83						Not Sampled due to the presence of LNAPL							
MW-4	06/03/03	98.52	36.59	36.63	**0.04**	61.92						Not Sampled due to the presence of LNAPL							
MW-4	07/06/03	98.52	36.90	36.93	**0.03**	61.61						Not Sampled due to the presence of LNAPL							
MW-4	08/18/03	98.52	36.76	36.80	**0.04**	61.75						Not Sampled due to the presence of LNAPL							
MW-4	10/27/03	98.52	--	37.96	0.00	60.56	**2,200**	<400	<500	**16**	55	76	170	--	--	--	--	--	No Purge
MW-4	11/17/03	98.52	36.34	36.37	**0.03**	62.17						Not Sampled due to the presence of LNAPL							
MW-4	12/31/03	98.52	--	36.88	0.00	61.64	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	02/09/04	98.52	36.14	36.17	**0.03**	62.37						Not Sampled due to the presence of LNAPL							
MW-4	03/04/04	98.52	--	36.74	0.00	61.78	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	03/31/04	98.52	--	37.59	0.00	60.93	**3,900**	<250	<250	**14**	96	110	340	--	--	--	--	--	No Purge
MW-4	06/28/04	98.52	--	37.54	0.00	60.98	**1,600**	<250	<250	**8.5**	15	59	110	--	--	--	--	--	No Purge
MW-4	09/11/04	98.52	37.78	37.81	**0.03**	60.73						Not Sampled due to the presence of LNAPL							
MW-4	09/29/04	98.52	--	37.86	0.00	60.66	**1,500**	<250	<250	**18**	40	76	170	--	--	--	--	--	No Purge

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**
MW-4	11/22/04	98.52	--	36.81	0.00	61.71	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	01/04/05	98.52	--	38.11	0.00	60.41	**1,600**	**1,600**	<250	**10**	13	60	110	--	--	--	--	--	No Purge
MW-4	01/14/05	98.52	--	37.58	0.00	60.94	**--**	--	--	**--**	--	--	**--**	--	--	--	--	--	
MW-4										Abandoned									
MW-5	10/11/00	99.42	--	34.50	--	64.92	**--**	--	--	--	--	--	--			--	--	--	
MW-5	12/16/00	99.42	--	37.18	0.00	62.24	**146,000**	**5,080**	**<750**	**<500**	**15,100**	**4,160**	**24,100**	--	--	<5.00	--	**20**	
MW-5	03/26/01	99.42	--	37.91	0.00	61.51	**149,000**	**77,900**	**<750**	**256**	**10,600**	**4,000**	**24,200**	--	--	<1.00/<1.00	--	--	
MW-5	06/25/01	99.42	--	38.14	0.00	61.28	**127,000**	**109,000**	**<18,100**	**210**	**9,580**	**3,730**	**21,500**	--	--	--	--	--	
MW-5	09/24/01	99.42	38.40	38.44	**0.04**	61.01	Not Sampled due to the presence of LNAPL												
MW-5	12/13/01	99.42	38.55	38.59	**0.04**	60.86	Not Sampled due to the presence of LNAPL												
MW-5	03/08/02	99.42	37.96	38.46	**0.50**	61.36	Not Sampled due to the presence of LNAPL												
MW-5	05/29/02	99.42	37.60	38.05	**0.45**	61.73	Not Sampled due to the presence of LNAPL												
MW-5	08/07/02	99.42	37.73	38.12	**0.39**	61.61	Not Sampled due to the presence of LNAPL												
MW-5	09/16/02	99.42	38.00	38.39	**0.39**	61.34	Not Sampled due to the presence of LNAPL												
MW-5	10/15/02	99.42	38.09	38.47	**0.38**	61.25	Not Sampled due to the presence of LNAPL												
MW-5	11/22/02	99.42	37.84	38.26	**0.42**	61.50	Not Sampled due to the presence of LNAPL												
MW-5	12/05/02	99.42	38.42	38.78	**0.36**	60.93	Not Sampled due to the presence of LNAPL												
MW-5	01/28/03	99.42	37.88	38.24	**0.36**	61.47	Not Sampled due to the presence of LNAPL												
MW-5	02/13/03	99.42	38.33	38.68	**0.35**	61.02	Not Sampled due to the presence of LNAPL												
MW-5	03/04/03	99.42	37.54	37.89	**0.35**	61.81	Not Sampled due to the presence of LNAPL												
MW-5	04/21/03	99.42	37.96	38.29	**0.33**	61.39	Not Sampled due to the presence of LNAPL												
MW-5	05/08/03	99.42	38.50	38.82	**0.32**	60.86	Not Sampled due to the presence of LNAPL												
MW-5	06/03/03	99.42	37.42	37.76	**0.34**	61.93	Not Sampled due to the presence of LNAPL												
MW-5	07/06/03	99.42	37.77	38.11	**0.34**	61.58	Not Sampled due to the presence of LNAPL												
MW-5	08/18/03	99.42	38.54	38.86	**0.32**	60.82	Not Sampled due to the presence of LNAPL												
MW-5	10/27/03	99.42					Obstructed												
MW-5	11/17/03	99.42	37.87	38.17	**0.30**	61.49	Not Sampled due to the presence of LNAPL												
MW-5	12/31/03	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	02/09/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	03/04/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	03/31/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	06/28/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	09/11/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	09/29/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	11/22/04	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	01/04/05	99.42					Well Obstructed at 35.92 ft bgs												
MW-5	01/14/05	99.42					Well Obstructed at 35.92 ft bgs												
MW-5							Abandoned												
MW-6	02/09/06	197.18	--	36.74	0.00	160.44	**1,500**	**680**	98	<0.5	0.7	1.2	37	--	--	--	--	--	
MW-6	05/03/07	197.18	--	36.74	0.00	160.44	380	**1,000**	130	**29**	1	4	30	--	--	--	--	--	
MW-6	06/16/09	197.18					Inaccessible												
MW-6	07/01/09	197.18	--	27.46	0.00	169.72	<50	270	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**22.9**	No Purge
MW-6	12/11/09	197.18	--	27.55	0.00	169.63	<50	35	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.76	No Purge
MW-6	06/09/10	197.18	--	26.84	0.00	170.34	**5,900**	360	<340	<0.5	<0.5	<0.5	350	--	--	--	--	13.2	No Purge
MW-6	11/19/10	197.18	--	26.97	0.00	170.21	750	240	81	<0.5	<0.5	<0.5	11	--	--	--	--	3.7	No Purge
MW-6	06/21/11	197.18	--	25.77	0.00	171.41	**2,400**	270	88	<0.5	<0.5	0.6	9.2	--	--	--	--	3.2	No Purge
MW-6	09/22/11	197.18	--	25.90	0.00	171.28	**660**	<29	<69	<0.5	<0.5	<0.5	4.1	--	--	--	--	3.3	No Purge
MW-6	12/09/11	197.18	--	27.34	0.00	169.84	64	<29	<69	**140**	0.5	<0.5	<1.5	--	--	--	--	0.44	No Purge
MW-6	03/30/12	197.18	--	26.8	0.00	170.38	90	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.5	No Purge
MW-6	06/20/12	197.18	--	26.56	0.00	170.62	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.034	No Purge
MW-6	10/05/12	197.18	--	27.08	0.00	170.10	<50	<32	<74	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.2	No Purge
MW-6	12/27/12	197.18	--	27.13	0.00	170.05	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2	No Purge
MW-6	03/18/13	197.18	--	26.63	0.00	170.55	120	<30	<71	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
MW-6	03/22/13	197.18	--	26.71	0.00	170.47	100	<31	<72	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
MW-6	03/28/13	197.18	--	26.61	0.00	170.57	79	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	3.7	No Purge
MW-6	06/27/13	197.18	--	26.42	0.00	170.76	120	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.3	No Purge
MW-6	10/17/13	197.18	--	26.64	0.00	170.54	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.33	No Purge
MW-6	03/20/14	197.18	--	26.68	0.00	170.50	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	4	No Purge
MW-6	06/25/14	197.18	--	26.85	0.00	170.33	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.1	No Purge
MW-6	09/24/14	197.18	--	27.19	0.00	169.99	<50	<28	<66	<0.2	<0.2	<0.2	<0.2	--	--	--	--	0.48	No Purge
MW-6	12/11/14	197.18	--	27.16	0.00	170.02	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.5	No Purge
MW-6	03/11/15	197.18	--	26.66	0.00	170.52	<50	<30	<71	<0.5	0.5	<0.5	<1.5	--	--	--	--	6.3	No Purge
MW-6	10/21/15	197.18	--	27.47	0.00	169.71	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	10.9	No Purge
MW-6	04/20/16	197.18	--	26.66	0.00	170.52	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	6.4	No Purge
MW-6	10/17/16	197.18	--	26.98	0.00	170.20	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	14.8	No Purge
MW-6	05/17/17	197.18	--	25.99	0.00	171.19	<50	<29/<29[4]	<68/<68[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**30.5**	No Purge

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**
MW-6	10/19/17	197.18	--	26.03	0.00	171.15	<50	<29/32[4]	<68/<68[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**33**	No Purge
MW-6	05/17/18	197.18	--	25.71	0.00	171.47	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	8.5	No Purge
MW-6	05/02/19	197.18		25.93	0.00	171.47	<19	53 J	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**32.2**	No Purge
MW-6	11/04/19	197.18	--	26.91	0.00	171.47	<19	83 J	<67	<0.2	<0.2	<0.4	<1	--	--	--	--	**18**	No Purge
MW-6	12/02/22	197.18	--	27.03	0.00	170.15	<100	<200	<250	<0.0400	0.205	0.133	0.405	**<0.100**	<0.100	<0.0118	0.355	<6.00	
MW-7	02/08/06	197.18	--	--	**0.50**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	02/09/06	197.42	37.87	38.17	**0.30**	159.49	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/12/2006	197.42	27.27	27.68	**0.41**	170.07	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/13/2006	197.42	27.22	27.74	**0.52**	170.10	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/14/2006	197.42	27.24	26.59	**0.35**	171.11	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/17/2006	197.42	27.30	17.39	**0.09**	180.10	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/22/2006	197.42	27.22	27.53	**0.31**	170.14	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/24/2006	197.42	--	--	**0.20**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/27/2006	197.42	--	--	**0.30**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/28/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/1/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/2/2006	197.42	27.21	27.22	**0.01**	170.21	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/3/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/6/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/7/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/8/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/13/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/15/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/16/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/17/2006	197.42	27.02	27.13	**0.11**	170.38	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/22/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/24/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/27/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/29/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/31/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/3/2006	197.42	26.99	27.03	**0.04**	170.42	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/5/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/7/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/10/2006	197.42	26.92	26.97	**0.05**	170.49	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/12/2006	197.42	26.93	26.94	**0.01**	170.49	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/18/2006	197.42	--	--	**0.30**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/19/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/24/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/1/2006	197.42	26.90	26.98	**0.08**	170.50	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/03/2007	197.42	26.55	27.80	0.00	169.62	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/19/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/26/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/1/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/8/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/15/2006	197.42	26.90	26.91	**0.01**	170.52	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	06/16/09	197.42									Inaccessible								
MW-7	6/22/2006	197.42	--	--	**0.01**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/29/2006	197.42	26.86	26.89	**0.03**		--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	07/01/09	197.42	27.39	--[3]	--[3]	--[3]					Not Sampled due to the presence of LNAPL								Skimmer in Well
MW-7	07/05/06	197.42	26.97	26.97	0.00	170.45	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	07/14/06	197.42	--	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/03/06	197.42	--	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/15/06	197.42	27	27.13	**0.13**	170.39	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	08/31/06	197.42	--	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/11/09	197.42	27.50	--[3]	--[3]	--[3]					Not Sampled due to the presence of LNAPL								Skimmer in Well
MW-7	06/09/10	197.42	27.03	28.20	**1.17**	170.16					Not Sampled due to the presence of LNAPL								Skimmer in Well
MW-7	10/10/10	197.42	27.57	28.13	**0.56**	169.74	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/19/10	197.42	27.08	28.34	**1.26**	170.09					Not Sampled due to the presence of LNAPL								
MW-7	06/21/11	197.42	--	26.12	0.00	171.30	**150,000**	**11,000**	**<1,800**	**45**	**4,800**	**2,600**	**18,000**	--	--	--	--	**310**	
MW-7	09/22/11	197.42	--	26.25	0.00	171.17	**100,000**	**2,000**	<340	**29**	**4,300**	**1,900**	**17,000**	--	--	**--**	--	**94.4**	
MW-7	12/09/11	197.42	27.45	27.80	**0.35**	169.90					Not Sampled due to the presence of LNAPL								
MW-7	03/30/12	197.42	27.15	27.35	**0.20**	170.23					Not Sampled due to the presence of LNAPL								
MW-7	06/20/12	197.42	26.90	27.05	**0.15**	170.49					Not Sampled due to the presence of LNAPL								
MW-7	10/05/12	197.42	27.38	27.76	**0.38**	169.96					Not Sampled due to the presence of LNAPL								
MW-7	12/27/12	197.42	27.46	27.65	**0.19**	169.92					Not Sampled due to the presence of LNAPL								
MW-7	03/18/13	197.42	27.01	27.18	**0.17**	170.38					Not Sampled due to the presence of LNAPL								Pre-surfactant injection sample
MW-7	03/22/13	197.42	--	27.03	0.00	170.39	**99,000**	**5,200**	<69	**12**	**1,600**	**1,700**	**17,000**	--	--	--		--	Post-surfactant extraction sample
MW-7	03/28/13	197.42	26.91	27.00	**0.09**	170.49					Not Sampled due to the presence of LNAPL								

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**
MW-7	06/20/12	197.42	26.77	26.79	**0.02**	170.65						Not Sampled due to the presence of LNAPL							
MW-7	10/17/13	197.42	27.03	27.05	**0.02**	170.39						Not Sampled due to the presence of LNAPL							
MW-7	03/20/14	197.42	26.99	27.11	**0.12**	170.41						Not Sampled due to the presence of LNAPL							
MW-7	06/25/14	197.42	27.26	27.28	**0.02**	170.16						Not Sampled due to the presence of LNAPL							
MW-7	09/24/14	197.42	27.56	27.61	**0.05**	169.85						Not Sampled due to the presence of LNAPL							
MW-7	12/11/14	197.42	--	27.50	0.00	169.92	**96,000**	**55,000**	**<6,900**	**<13**	600	660	**14,000**	--	--	--	--	**168**	No Purge
MW-7	03/11/15	197.42	--	26.96	0.00	170.46	**65,000**	**200,000**	**<17,000**	<5.0	470	570	**6,700**	--	--	--	--	0.0717	No Purge
MW-7	10/21/15	197.42	27.77	28.17	**0.40**	169.57						Not Sampled due to the presence of LNAPL							
MW-7	04/20/16	197.42	26.91	27.31	**0.40**	170.43						Not Sampled due to the presence of LNAPL							
MW-7	10/17/16	197.42	27.25	27.57	**0.32**	170.11						Not Sampled due to the presence of LNAPL							
MW-7	05/17/17	197.42	--	26.38	0.00	171.04	**480,000**	**29,000/41,000[4]**	**<660/<1,300[4]**	**<50**	360	**1,400**	**18,000**	--	--	--	--	**1,020**	No Purge
MW-7	10/19/17	197.42	--	26.62	0.00	170.80	**63,000**	**24,000/29,000[4]**	**<1,300/<6,700[4]**	4.1	190	**900**	**8,100**	--	--	--	--	**203**	No Purge
MW-7	05/17/18	197.42	--	26.10	0.00	171.32	**140,000**	**12,000**	**<670**	<10	390	**1,200**	**8,700**	--	--	--	--	**78.8**	No Purge
MW-7	05/02/19	197.42	--	26.32	0.00	171.10	**95,000**	**5,900**	160 J	<10	200	**1,200**	**6,700**	--	--	--	--	**144**	No Purge
MW-7	11/04/19	197.42	27.43	27.45	**0.02**	169.99						Not Sampled due to the presence of LNAPL							
MW-7	12/02/22	197.42	--	27.30	0.00	170.12	**33,400 J**	**7,380 J**	**<2500 UJ**	<4.00	<20.0	**732**	**2,590**	**<0.100**	<10.0	<4.00	**365**	**26.6**	
																	--		
MW-8	02/09/06	197.35	--	36.74	0.00	160.61	440	280	<96	<0.5	1.1	3.3	28	--	--	--	--	--	
MW-8	05/03/07	197.35	--	36.74	0.00	160.61	**2,600**	**940**	<200	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
MW-8	06/16/09	197.35									Inaccessible								
MW-8	07/01/09	197.35	--	27.84	0.00	169.51	430	390	<700	<0.5	<0.5	<0.5	2.2	--	--	--	--	3.5	No Purge
MW-8	12/11/09	197.35	--	27.91	0.00	169.44	<50	300	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	7.3	No Purge
MW-8	06/09/10	197.35	--	27.21	0.00	170.14	350	280	180	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**16.5**	No Purge
MW-8	11/19/10	197.35	--	27.34	0.00	170.01	94	320	120	<0.5	<0.5	<0.5	<1.5	--	--	--	--	3.4	No Purge
MW-8	06/21/11	197.35	--	26.18	0.00	171.17	54	94	150	<0.5	<0.5	1	<1.5	--	--	--	--	3.6	No Purge
MW-8	09/22/11	197.35	--	26.30	0.00	171.05	140	<29	<68	<0.5	<0.5	2.9	1.7	--	--	--	--	1.8	No Purge
MW-8	12/09/11	197.35	--	27.70	0.00	169.65	320	70	<69	<2.0	<2.0	<0.5	3	--	--	--	--	0.3	No Purge
MW-8	03/30/12	197.35	--	27.20	0.00	170.15	**2,000**	<30	<70	3	3.9	45	120	--	--	--	--	2.9	No Purge
MW-8	06/20/12	197.35	--	27.00	0.00	170.35	170	<30	<70	0.7	0.7	1.3	2.2	--	--	--	--	1.8	No Purge
MW-8	10/05/12	197.35	--	27.49	0.00	169.86	490	<31	<71	1	1.7	19	32	--	--	--	--	1.3	No Purge
MW-8	12/27/12	197.35	--	27.49	0.00	169.86	280	<29	<68	0.6	0.7	4.7	6.8	--	--	--	--	1.1	No Purge
MW-8	03/18/13	197.35	--	27.06	0.00	170.29	320	<30	<70	<0.5	<0.5	29	22	--	--	--	--	--	Pre-surfactant injection sample
MW-8	03/22/13	197.35	--	27.13	0.00	170.22	360	<29	<68	<0.5	<0.5	29	22	--	--	--	--	--	Post-surfactant extraction sample
MW-8	03/28/13	197.35	--	27.09	0.00	170.26	80	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.9	No Purge
MW-8	06/27/13	197.35	--	26.86	0.00	170.49	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2	No Purge
MW-8	10/17/13	197.35	--	27.05	0.00	170.30	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.36	No Purge
MW-8	03/20/14	197.35	--	27.01	0.00	170.34	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.4	No Purge
MW-8	06/25/14	197.35	--	27.31	0.00	170.04	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.24	No Purge
MW-8	09/24/14	197.35	--	27.63	0.00	169.72	93	<29	<67	<0.2	<0.2	2.9	1	--	--	--	--	0.13	No Purge
MW-8	12/11/14	197.35	--	27.46	0.00	169.89	59	<30	<70	<0.5	0.5	0.6	<1.5	--	--	--	--	0.12	No Purge
MW-8	03/11/15	197.35	--	27.18	0.00	170.17	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.32	No Purge
MW-8	10/21/15	197.35	--	27.89	0.00	169.46	110	<28	<66	<0.5	<0.5	1.1	3.9	--	--	--	--	0.63	No Purge
MW-8	04/20/16	197.35	--	27.87	0.00	169.48	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.46	No Purge
MW-8	10/17/16	197.35	--	27.42	0.00	169.93	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.16	No Purge
MW-8	05/17/17	197.35	--	26.46	0.00	170.89	<50	<28/46[4]	<66/<66[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.56	No Purge
MW-8	10/19/17	197.35	--	26.49	0.00	170.86	<50	<28/<28[4]	<66/<66[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.31	No Purge
MW-8	05/17/18	197.35	--	26.17	0.00	171.18	<50	55	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.11	No Purge
MW-8	05/02/19	197.35	--	26.40	0.00	170.95	<19	38 J	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.4 J	No Purge
MW-8	11/04/19	197.35	--	27.37	0.00	169.98	<19	33 J	<67	<0.2	<0.2	<0.4	<1	--	--	--	--	0.74	No Purge
MW-8	12/02/22	197.35	--	22.46	0.00	174.89	<100	<200	<250	<0.0400	0.157 J	0.0900 J	<0.260	<0.100	<0.100	<0.0400	<0.250	3.20 J	
MW-9	05/03/07	208.11	--	36.74	0.00	171.37	<50	<400	<500	<0.5	<0.5	4	18	--	--	--	--	--	
MW-9	06/16/09	208.11	--	38.72	0.00	169.39	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**19.3**	
MW-9	07/01/09	208.11	--	38.03	0.00	170.08	--	<31	<71	--	--	--	--	--	--	--	--	--	No Purge
MW-9	12/11/09	208.11	--	38.86	0.00	169.25	<50	76	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	14.5	No Purge
MW-9	06/09/10	208.11	--	38.17	0.00	169.94	<50	42	110	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**21.2**	No Purge
MW-9	11/19/10	208.11	--	38.23	0.00	169.88	<50	<29	130	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**18.7**	No Purge
MW-9	06/21/11	208.11	--	37.15	0.00	170.96	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	4.7	No Purge
MW-9	09/22/11	208.11	--	37.25	0.00	170.86	<50	<300	<700	<0.5	<0.5	<0.5	<1.5	--	--	--	--	12.4	No Purge
MW-9	12/09/11	208.11	--	38.66	0.00	169.45	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.8	No Purge
MW-9	03/30/12	208.11	--	29.60	0.00	178.51	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**114**	No Purge
MW-9	06/20/12	208.11	--	38.00	0.00	170.11	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	3.8	No Purge
MW-9	10/05/12	208.11	--	38.44	0.00	169.67	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	10.6	No Purge
MW-9	12/27/12	208.11	--	38.50	0.00	169.61	<50	<31	<73	<0.5	<0.5	<0.5	<1.5	--	--	--	--	5.3	No Purge
MW-9	03/28/13	208.11	--	29.73	0.00	178.38	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.073	No Purge
MW-9	06/27/13	208.11	--	37.81	0.00	170.30	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	5.4	No Purge
MW-9	10/17/13	208.11	--	37.77	0.00	170.34	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.34	No Purge
MW-9	03/20/14	208.11	--	29.58	0.00	178.53	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	4.1	No Purge
MW-9	06/25/14	208.11	--	34.92	0.00	173.19	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.5	No Purge

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**
MW-9	09/24/14	208.11	--	38.56	0.00	169.55	<50	<29	<67	<0.2	<0.2	<0.2	<0.2	--	--	--	--	0.15	No Purge
MW-9	12/11/14	208.11	--	38.53	0.00	169.58	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.082	No Purge
MW-9	03/11/15	208.11	--	29.63	0.00	178.48	<50	<28	<66	<0.5	0.5	<0.5	<1.5	--	--	--	--	0.02	No Purge
MW-9	10/21/15	208.11	--	38.81	0.00	169.30	<50	<28	<66	<0.5	0.5	<0.5	<1.5	--	--	--	--	12.4	No Purge
MW-9	04/20/16	208.11	--	38.02	0.00	170.09	<50	<29	<67	<0.5	0.5	<0.5	<1.5	--	--	--	--	0.0049	No Purge
MW-9	10/17/16	208.11	--	38.32	0.00	169.79	<50	<28	<66	<0.5	0.5	<0.5	<1.5	--	--	--	--	3.2	No Purge
MW-9	05/17/17	208.11	--	37.41	0.00	170.70	<50	<28/44[4]	<66/<66[4]	<0.5	0.5	<0.5	<1.5	--	--	--	--	1.6	No Purge
MW-9	10/19/17	208.11	--	37.43	0.00	170.68	<50	<29/39[4]	<67/<67[4]	<0.5	0.5	<0.5	<1.5	--	--	--	--	3.2	No Purge
MW-9	05/17/18	208.11	--	37.18	0.00	170.93	<50	<28	<66	<0.5	0.5	<0.5	<1.5	--	--	--	--	0.9	No Purge
MW-9	05/02/19	208.11	--	37.36	0.00	170.75	<19	52 J	<67	<0.5	0.5	<0.5	<1.5	--	--	--	--	13.3	No Purge
MW-9	11/04/19	208.11	--	38.38	0.00	169.73	<19	150	<67	<0.2	<0.2	<0.4	<1	--	--	--	--	**18.2**	No Purge
MW-9	12/02/22	208.11	--	Dry	0.00	Dry	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	05/03/07	207.29	--	36.74	0.00	170.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
MW-10	06/16/09	207.29									Inaccessible								
MW-10	07/01/09	207.29	--	38.72	0.00	168.57	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	10.9	No Purge
MW-10	12/11/09	207.29	--	35.91	0.00	171.38	<50	49	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	13.4	No Purge
MW-10	06/09/10	207.29	--	37.48	0.00	169.81	<50	50	88	<0.5	<0.5	<0.5	<1.5	--	--	--	--	7.2	No Purge
MW-10	11/19/10	207.29	--	37.53	0.00	169.76	<50	<29	74	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**18.8**	No Purge
MW-10	06/21/11	207.29	--	36.46	0.00	170.83	<50	<31	180	<0.5	<0.5	<0.5	<1.5	--	--	--	--	5.7	No Purge
MW-10	09/22/11	207.29	--	36.60	0.00	170.69	<50	<300	<700	<0.5	<0.5	<0.5	<1.5	--	--	--	--	6.6	No Purge
MW-10	12/09/11	207.29	--	35.71	0.00	171.58	<50	<29	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.1	No Purge
MW-10	03/30/12	207.29	--	29.80	0.00	177.49	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**110**	No Purge
MW-10	06/20/12	207.29	--	37.35	0.00	169.94	<50	<31	<71	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.23	No Purge
MW-10	10/05/12	207.29	--	37.79	0.00	169.50	<50	45	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	3.7	No Purge
MW-10	12/27/12	207.29	--	37.84	0.00	169.45	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.2	No Purge
MW-10	03/28/13	207.29	--	27.36	0.00	179.93	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.073	No Purge
MW-10	06/27/13	207.29	--	37.16	0.00	170.13	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	1.8	No Purge
MW-10	10/17/13	207.29	--	37.78	0.00	169.51	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.34	No Purge
MW-10	03/20/14	207.29	--	29.77	0.00	177.52	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.085	No Purge
MW-10	06/25/14	207.29	--	35.03	0.00	172.26	<50	<30	<71	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.5	No Purge
MW-10	09/24/14	207.29	--	37.88	0.00	169.41	<50	<30	<70	<0.2	<0.2	<0.2	<0.2	--	--	--	--	0.00095	No Purge
MW-10	12/11/14	207.29	--	37.88	0.00	169.41	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	<0.082	No Purge
MW-10	03/11/15	207.29	--	29.71	0.00	177.58	<50	<29	<69	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.0002	No Purge
MW-10	10/21/15	207.29	--	38.14	0.00	169.15	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	**20.1**	No Purge
MW-10	04/20/16	207.29	--	37.39	0.00	169.90	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	--	--	--	--	0.0113	No Purge
MW-10	10/17/16	207.29	--	37.69	0.00	169.60	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	--	--	--	--	12	No Purge
MW-10	05/17/17	207.29	--	36.78	0.00	170.51	<50	<28/<28[4]	<66/<66[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	3.6	No Purge
MW-10	10/19/17	207.29	--	36.80	0.00	170.49	<50	<29/<29[4]	<67/<67[4]	<0.5	<0.5	<0.5	<1.5	--	--	--	--	7.6	No Purge
MW-10	05/17/18	207.29	--	36.52	0.00	170.77	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.2	No Purge
MW-10	05/02/19	207.29	--	36.72	0.00	170.57	<19	160	<70	<0.5	<0.5	<0.5	<1.5	--	--	--	--	2.0 J	No Purge
MW-10	11/04/19	207.29	--	37.70	0.00	169.59	<19	86 J	<66	<0.2	<0.2	<0.4	<1	--	--	--	--	1.3	No Purge
MW-10	12/02/22	207.29	--	Dry	0.00	Dry	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	12/02/22	218.07	--	38.31	0.00	179.76	35.9 J	115 J	<250	0.482 J	0.281 J	<1.00	2.32 J	**<0.0222**	<1.00	--	0.898	3.79 J	
MW-12	12/02/22	218.37	--	38.50	0.00	179.87	<100	86.4 J	<250	0.153 J	<1.00	<1.00	0.820 J	**<0.0210**	<1.00	--	0.171 J	<6.00	
MW-13	12/02/22	217.59	--	38.10	0.00	179.49	<100	<200	<250	0.124 J	<1.00	<1.00	0.623 J	**<0.0204**	<1.00	--	<0.250	4.10 J	
MW-14	12/02/22	217.07	--	37.84	0.00	179.23	<100	283	<250	0.115 J	<1.00	<1.00	0.508 J	**<0.0222**	<1.00	--	<0.250	3.99 J	
FB-1	10/24/16	--	--	--	--	--	< 100	< 290	< 460	< 0.20	< 1.0	< 0.20	< 0.60	--	--	--	--	--	--
FB-2	10/24/16	--	--	--	--	--	< 100	< 280	< 440	< 0.20	< 1.0	< 0.20	< 0.60	--	--	--	--	--	--
QA	12/16/00	--	--	--	--	--	ND	--	--	ND	ND	ND	ND	--	--	ND	--	--	
QA	03/26/01	--	--	--	--	--	ND	--	--	ND	ND	ND	ND	--	--	ND	--	--	
QA	06/25/01	--	--	--	--	--	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
QA	09/24/01	--	--	--	--	--	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
QA	12/13/01	--	--	--	--	--	<80.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
QA	03/08/02	--	--	--	--	--	<50	--	--	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	
QA	05/29/02	--	--	--	--	--	<50	--	--	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	
QA	09/16/02	--	--	--	--	--	<50	--	--	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	
QA	12/05/02	--	--	--	--	--	<50	--	--	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	
QA	03/04/03	--	--	--	--	--	<50	--	--	<0.50	<0.50	<0.50	<1.5	--	--	--	--	--	
QA	10/27/03	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	03/31/04	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/28/04	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	--
QA	09/29/04	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	01/04/05	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/16/09	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	07/01/09	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	12/11/09	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/09/10	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	11/19/10	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/21/11	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	09/22/11	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	12/09/11	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	03/30/12	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/20/12	QA Vials Not Received by the Laboratory																	
QA	10/05/12	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	12/27/12	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	03/28/13	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/27/13	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	10/17/13	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	03/20/14	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	06/25/14	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	09/24/14	--	--	--	--	--	<50	--	--	<0.2	<0.2	<0.2	<0.2	--	--	--	--	--	
QA	12/11/14	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	03/11/15	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	10/23/15	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	04/20/16	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	10/17/16	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	05/17/17	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	10/19/17	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
QA	05/17/18	--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	

Table 3
Groundwater Gauging and Select Analytical Results
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

Well	Date	TOC	DTP	DTW	NAPL	GWE[1]	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	MTBE	Naphthalene	Total Lead	Comments
		ft	ft btoc	ft btoc	ft	ft	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	--
Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) in µg/L							**800/1,000[2]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.01**	**5**	**20**	**160**	**15**	**--**

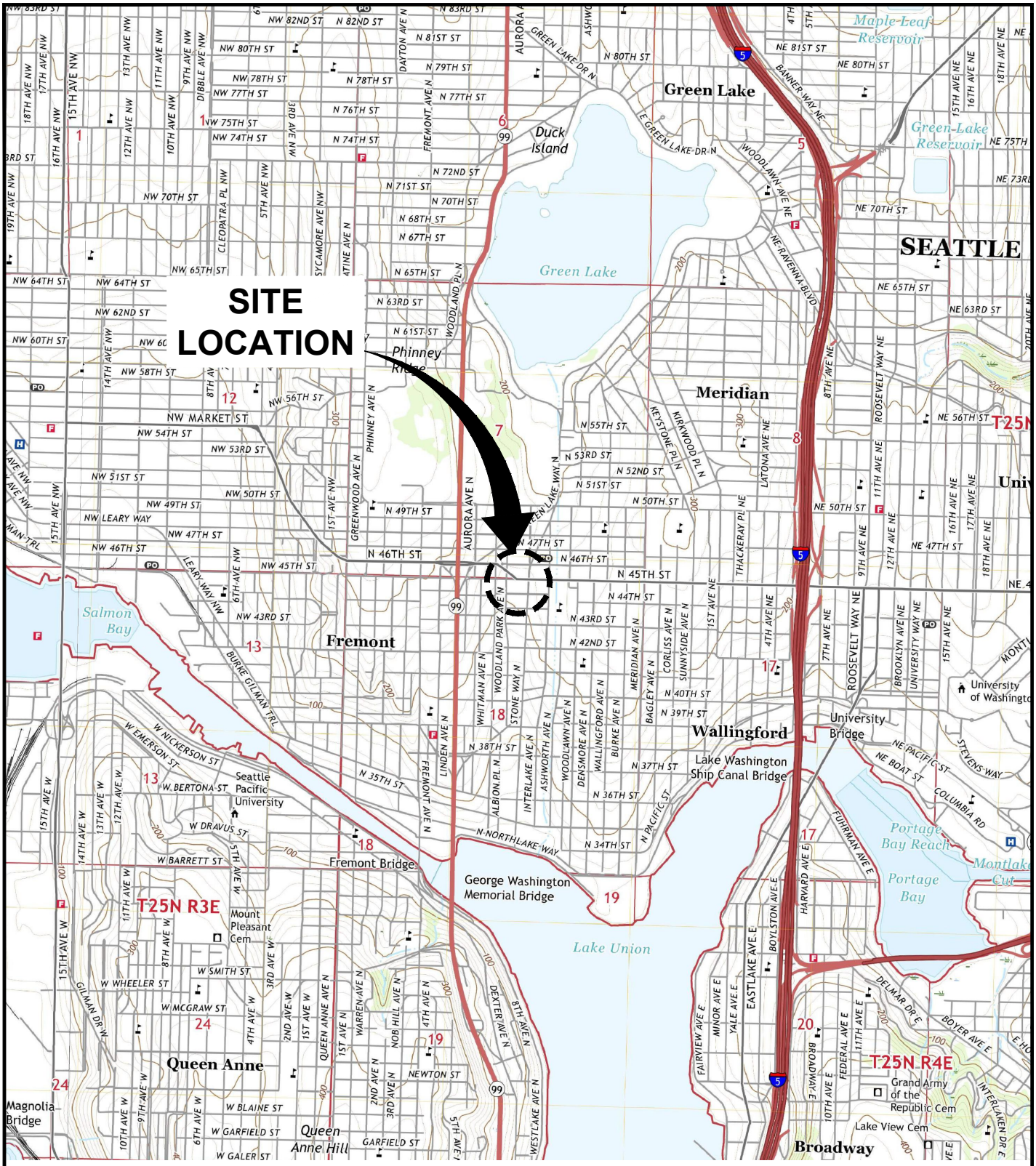
Notes

1 When LNAPL is present, GWE has been corrected using the following formula: GWE = [(TOC - DTW) + (LNAPL x 0.80)].
2 The Cleanup level of 800 µg/L is used when benzene is present, when benzene is not present the cleanup klevel of 1,000 µg/L is used
3 Interface probe could not detect LNAPL/Groundwater Interface, unable to gauge hydrocarbon thickness and calculate corrected GWE.
4 Analyzed with silica-gel cleanup.
BOLD and highlighted values are greater than their respective MTCA Method A cleanup level
BOLD values are non-detect below the laboratory method detection limit (MDL), but the MDL is higher than the MTCA Method A cleanup level
Groundwater samples collected in 2022 were also analyzed for cPAHs; however only naphthalene was detected above laboratory reporting limits; additional cPAH results are not included in this table
Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, WAC Chapter 173-340-900, Table 720-1
All results in micrograms per liter (µg/L).

Abbreviations:
TOC = Top of Casing. MW-6 through MW-9 TOC elevations are in feet above North American Vertical Datum of 1988 (NAVD 88). MW-1 through MW-5 TOC elevations are reference to an arbitrary benchmark of 100 feet.
DTW = Depth to water in feet below TOC
NAPL = Non-aqueous phase liquid thickness in feet
LNAPL= Light Non-aqueous phase liquid
GWE = Groundwater elevation in feet relative to datumn NAVD88
No Purge = Non purge sample, collected with a bailer
GRO = TPH- gasoline range organics (C4-C12), analyzed by Method NWTPH-Gx
DRO = TPH - diesel range organics (C10-C28) by Method NWTPH-Dx + Extended
HO = TPH - heavy oil range organics (C16-C36) by Method NWTPH-Dx + Extended
BTEX = benzene, toluene, ethylbenzene and total xylenes - collectively analyzed by USEPA (United States Environmental Protection Act) Method 8260B; before March 27, 2006, analyzed by USEPA 8021B.
EDB = 1,2-Dibromoethane
EDC= 1,2-dichloroethane
MTBE = Methyl tertiary butyl ether, analyzed by USEPA Method 8260B; before March 27, 2006, analyzed by USEPA 8021B unless otherwise noted.
Total lead analyzed by USEPA Method 6000/7000 series
-- = Not applicable, not available, or not analyzed
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(1), as amended February 2001]
µg/L = Micrograms per Liter
btoc = below top of casing

Laboratory Qualifiers
<n = Below laboratory detection limit of n µg/L
J = estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
UJ = The compound was not detected above the reported sample quantitation limit. However, thereported limit is approximate and may or may not represent the actual limit of quantitation.

Figures



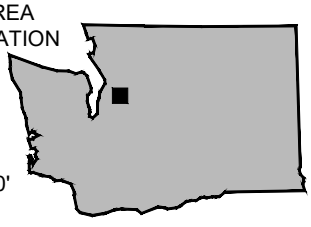
MAP SOURCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., SEATTLE NORTH AND SHISHOLE BAY, WASHINGTON, 2020.

N

0 2,000' 4,000'

Approximate Scale: 1 in. = 2,000 ft.

AREA LOCATION



WASHINGTON

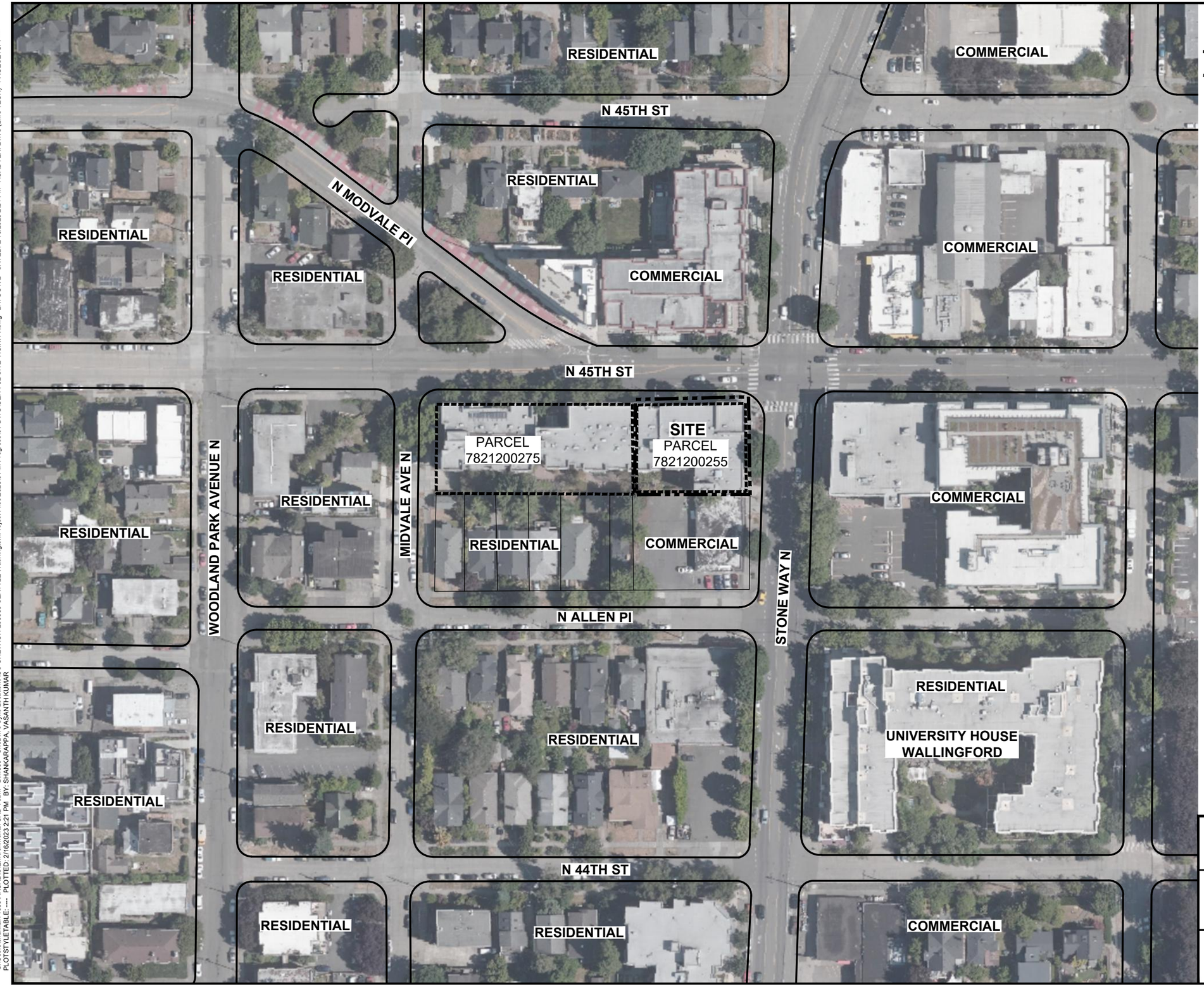
FORMER CHEVRON SERVICE STATION 209335
1225 NORTH 45TH STREET
SEATTLE, WASHINGTON.

SITE LOCATION MAP

ARCADIS

FIGURE 1

CITY: SAN RAFAEL, CA (PETALUMA) DIV/GROUP: ENVCAD DB: J. HARRIS
C:\Users\shankarv4688\ARCADIS\Environmental CAD Team - BIM360 - OneDrive Sync Location\AUS-CHEVRON-209335-SEATTLE Washington\Project Files\2023\01-In Progress\01-DWG\GEN-F01-SITE LOCATION.dwg LAYOUT: 1 SAVED: 2/16/2023 2:21 PM ACADVER: 24.1S (LMS TECH) PAGESETUP: ----
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/16/2023 2:21 PM BY: SHANKARAPPA, VASANTH KUMAR



LEGEND:

APPROXIMATE SITE BOUNDARY

TAX PARCEL BOUNDARY

N

NOTE:

1. BASEMAP DIGITIZED FROM DIGITAL GLOBE @ CNES DISTRIBUTION AIRBUS DS

0 100' 200'

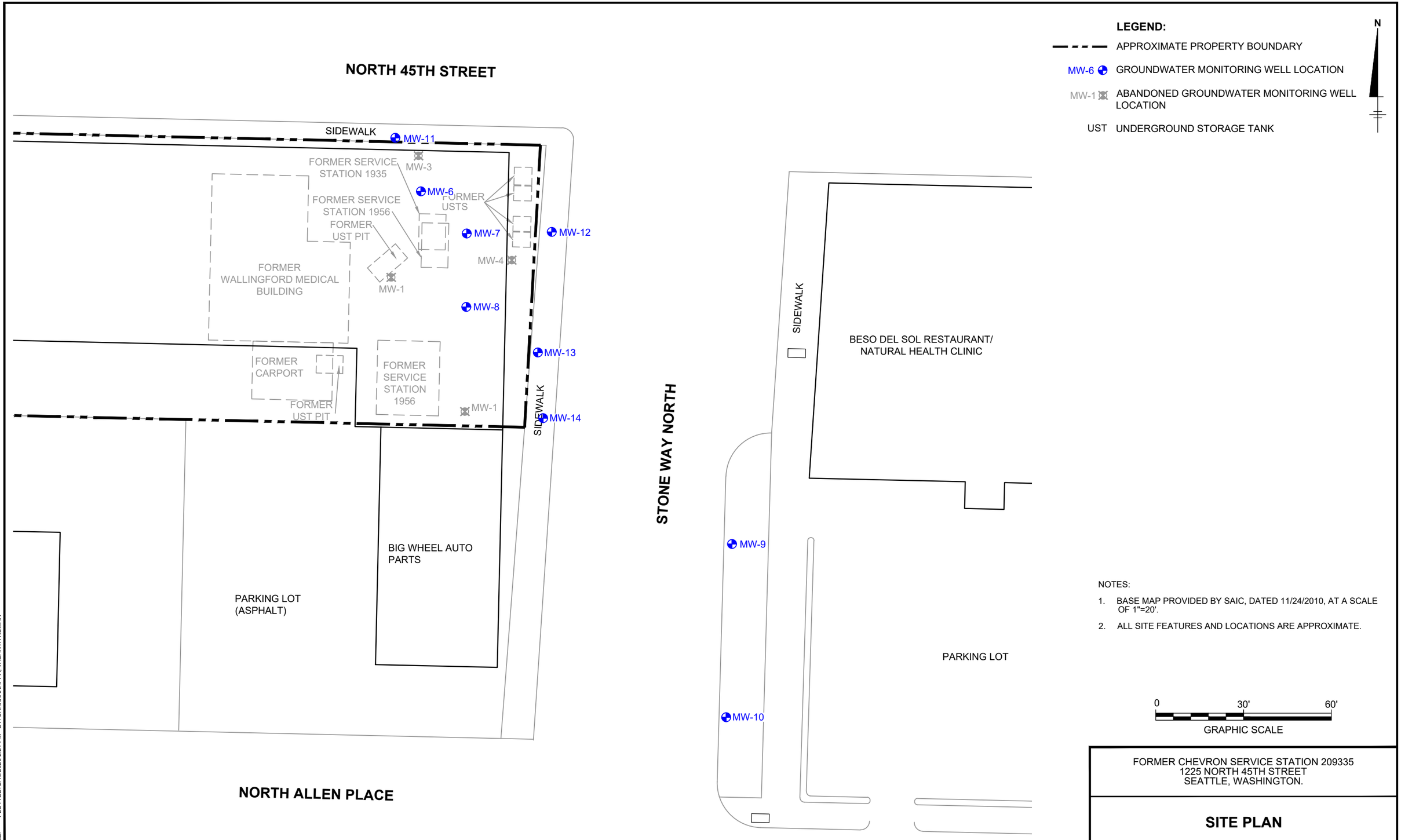
APPROXIMATE SCALE 1 in. = 100 ft.

FORMER CHEVRON SERVICE STATION 209335
1225 NORTH 45TH STREET
SEATTLE, WASHINGTON.

SITE VICINITY MAP

ARCADIS

FIGURE 2



FORMER CHEVRON SERVICE STATION 209335
1225 NORTH 45TH STREET
SEATTLE, WASHINGTON.

SITE PLAN

ARCADIS

FIGURE
3

NORTH 45TH STREET

SIDEWALK

SITE WIDE EXCAVATION TO 13 FT BGS

2005 NE CORNER SITE EXCAVATION TO 18 FT BGS

FORMER SERVICE STATION 1935

FORMER SERVICE STATION 1956

FORMER UST PIT

FORMER WALLINGFORD MEDICAL BUILDING

PARCEL 7821200275

PARCEL 7821200255

FORMER CARPORT

FORMER SERVICE STATION 1956

FORMER UST PIT

SIDEWALK

STONE WAY NORTH

RESIDENCE

FORMER PARKING LOT

FORMER BIG WHEEL AUTO PARTS

MW-11 EX-W9 EX-W8 EX-W11 EX-W10 MW-3 SB-1 B-6 SB-2 MW-6 SB-15 B-2 BA-20 BA-9 BA-2 EX-W7 MW-5 EX-W3 BA-14 BA-11 BA-6 SB-11 BA-16 BA-10 SB-3 BA-1 BA-4 BA-18 BA-13 SB-8 BA-7 MW-7 B-3 EX-W6 MW-12 SB-5 BA-15 BA-19 SB-14 SS2-13.5 MW-4 BA-12 BA-8 BA-3 BA-5 BA-1 MW-2 B-1 EX-W2 B-5 SB-12 SB-13 MW-8 EX-W5 SB-6 SB-9 SB-16 B-4 SB-4 MW-13 EX-W1 EX-W4 SB-10 FORMER UST PIT EX-W12 SB-7 EX-W13 MW-1 EX-W14 MW-14 FB-1 FB-2 MW-9 MW-10

LEGEND:

- APPROXIMATE SITE BOUNDARY
- MW-6 GROUNDWATER MONITORING WELL
- MW-1 DECOMMISSIONED GROUNDWATER MONITORING WELL LOCATION
- FB-1 GROUNDWATER AND SOIL GRAB SAMPLE
- SB-1 EXCAVATED SAIC SOIL BORING LOCATION
- B-1 EXCAVATED EA SOIL BORING LOCATION
- BA-1 BUCKET AUGER LOCATION (GREEN INDICATES BELOW MTCA METHOD A SOIL CULs)
- EX-W13 EXCAVATION SAMPLE LOCATION
- UST UNDERGROUND STORAGE TANK
- 2005 EXCAVATION BOUNDARY (ENTIRE SITE EXCAVATED TO 13 FEET BGS)
- 2005 NE CORNER EXCAVATION TO 18 FT BGS
- MTCA SITE BOUNDARY MAP FOR SOIL (DASHED WHERE INFERRED)

STATUS OF SOIL CONCENTRATIONS IN THE SAMPLE(S) COLLECTED ABOVE DEEPEST SAMPLE:

- BELOW MTCA METHOD A SOIL CULs
- ABOVE MTCA METHOD A SOIL CULs

STATUS OF SOIL CONCENTRATIONS IN THE DEEPEST SAMPLE(S):

- BELOW MTCA METHOD A SOIL CULs
- ABOVE MTCA METHOD A SOIL CULs
- BELOW MTCA METHOD A SOIL CULs
- ABOVE MTCA METHOD A SOIL CULs

CULs CLEANUP LEVELS

FT BGS FEET BELOW GROUND SURFACE

MTCA MODEL TOXICS CONTROL ACT

UST UNDERGROUND STORAGE TANK

N

0 20' 40'

GRAPHIC SCALE

NOTES:

1. BASE MAP PROVIDED BY SAIC, DATED 11/24/2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

FORMER CHEVRON SERVICE STATION 209335
1225 NORTH 45TH STREET
SEATTLE, WASHINGTON

SOIL MTCA BOUNDARY MAP

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FIGURE 4

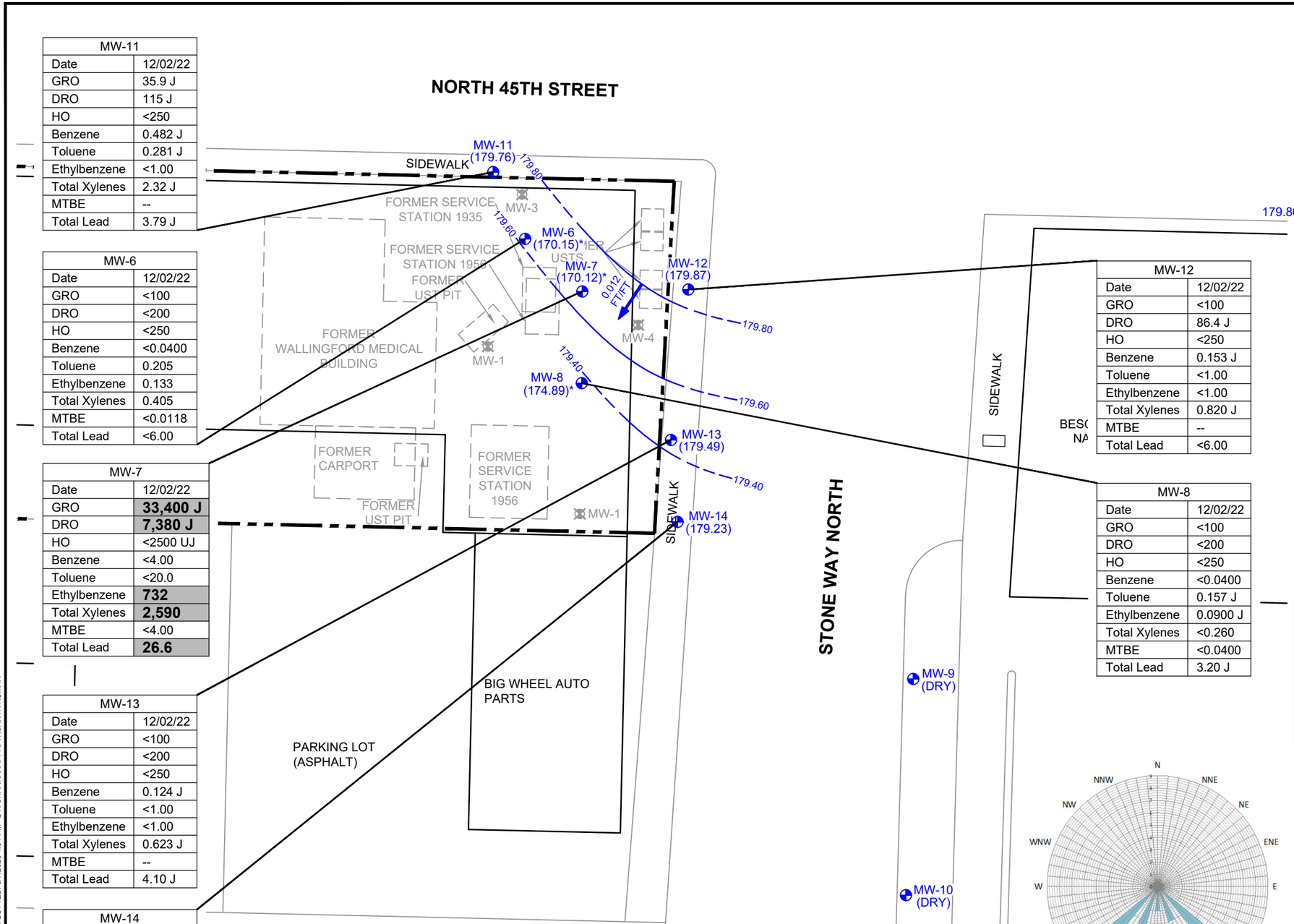
MW-11	
Date	12/02/22
GRO	35.9 J
DRO	115 J
HO	<250
Benzene	0.482 J
Toluene	0.281 J
Ethylbenzene	<1.00
Total Xylenes	2.32 J
MTBE	--
Total Lead	3.79 J

MW-6	
Date	12/02/22
GRO	<100
DRO	<200
HO	<250
Benzene	<0.0400
Toluene	0.205
Ethylbenzene	0.133
Total Xylenes	0.405
MTBE	<0.0118
Total Lead	<6.00

MW-7	
Date	12/02/22
GRO	**33,400 J**
DRO	**7,380 J**
HO	<2500 UJ
Benzene	<4.00
Toluene	<20.0
Ethylbenzene	**732**
Total Xylenes	**2,590**
MTBE	<4.00
Total Lead	**26.6**

MW-13	
Date	12/02/22
GRO	<100
DRO	<200
HO	<250
Benzene	0.124 J
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	0.623 J
MTBE	--
Total Lead	4.10 J

MW-14	
Date	12/02/22
GRO	<100
DRO	283
HO	<250
Benzene	0.115 J
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	0.508 J
MTBE	--
Total Lead	3.99 J



MW-12	
Date	12/02/22
GRO	<100
DRO	86.4 J
HO	<250
Benzene	0.153 J
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	0.820 J
MTBE	--
Total Lead	<6.00

MW-8	
Date	12/02/22
GRO	<100
DRO	<200
HO	<250
Benzene	<0.0400
Toluene	0.157 J
Ethylbenzene	0.0900 J
Total Xylenes	<0.260
MTBE	<0.0400
Total Lead	3.20 J

Legend
Concentric Circles represent Quarterly/Semi-Annual Montoring Events.

Figure represents data on December 2, 2022.

23 Events shown.

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- MW-6 — GROUNDWATER MONITORING WELL LOCATION
- MW-1 — ABANDONED GROUNDWATER MONITORING WELL LOCATION
- UST — UNDERGROUND STORAGE TANK
- (179.87) — GROUNDWATER ELEVATION (FEET)
- 179.80 — GROUNDWATER ELEVATION CONTOUR; DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 0.012 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)
- <100 — NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT
- **BOLD** — BOLD AND HIGHLIGHTED VALUES ARE GREATER THAN THEIR RESPECTIVE MTCA METHOD A CLEANUP LEVEL
- UJ — THE COMPOUND WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTITATION LIMIT. HOWEVER, THE REPORTED LIMIT IS APPROXIMATE AND MAY OR MAY NOT REPRESENT THE ACTUAL LIMIT OF QUANTITATION
- MTCA — MODEL TOXICS CONTROL ACT
- CULs — CLEAN-UP LEVELS
- -- — NOT ANALYZED
- (DRY) — WELL IS DRY
- * — WELLS NOT USED FOR CONTOURING

PARAMETER		MTCA METHOD A CULs
GRO	Total Petroleum Hydrocarbons as Gasoline Range Organics	**800 /1,000**
DRO	Total Petroleum Hydrocarbons as diesel-range organics	**500**
HO	Total Petroleum Hydrocarbons as heavy oil-range organics	**500**
Benzene		**5**
Toluene		**1,000**
Ethylbenzene		**700**
Total Xylenes		**1,000**
MTBE	Methyl tertiary butyl ether	**20**
Total Lead		**15**

NOTES:

1. BASE MAP PROVIDED BY SAIC, DATED 11/24/2010, AT A SCALE OF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 30' 60'
GRAPHIC SCALE

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SEATTLE, WASHINGTON.

GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL RESULTS MAP - DECEMBER 2, 2022

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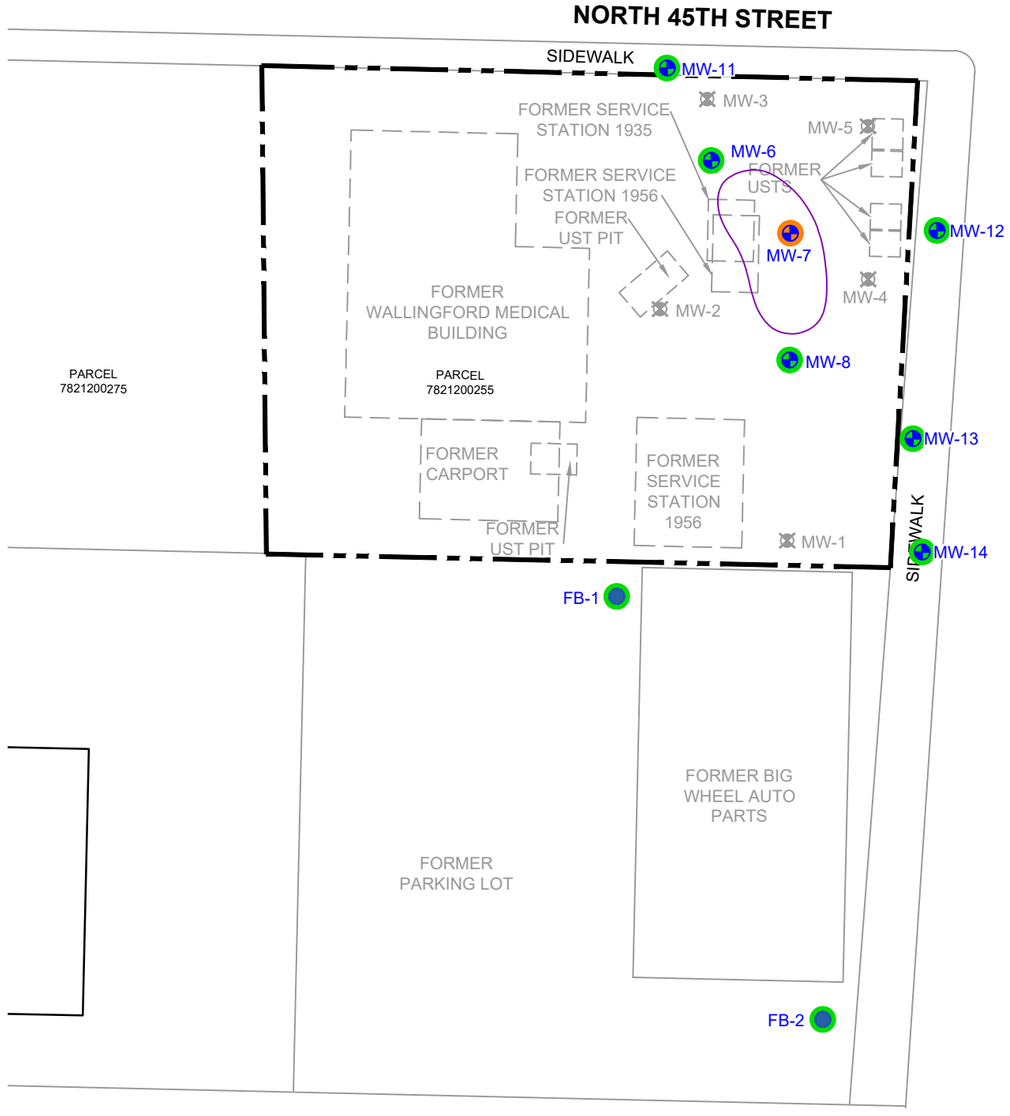
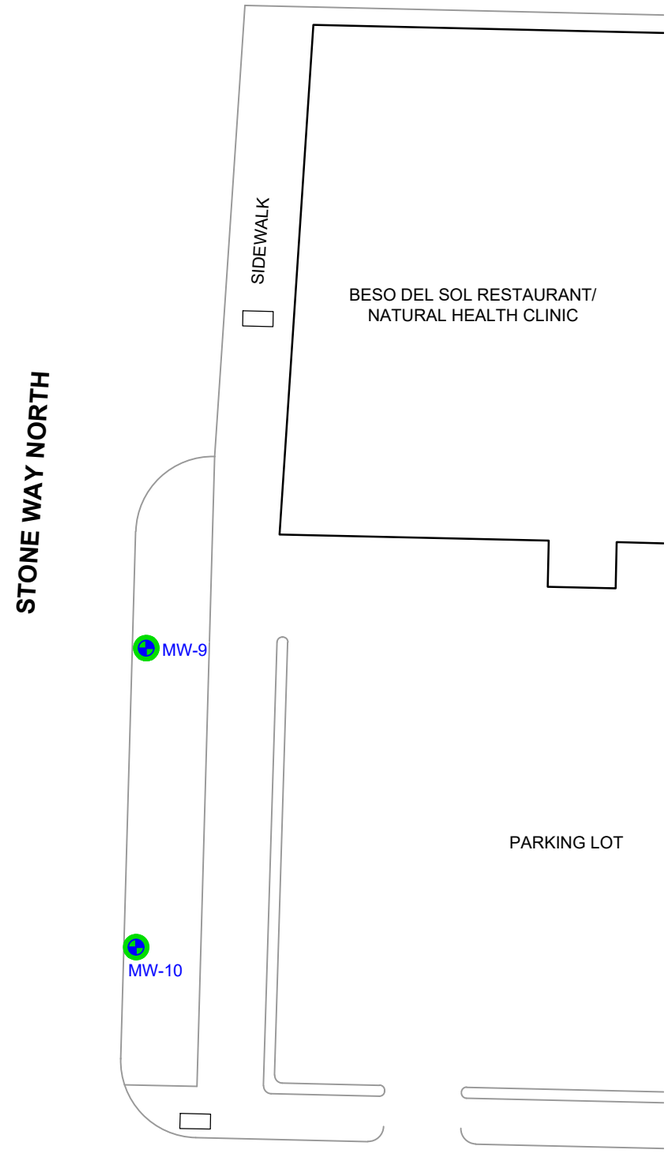
FIGURE 5



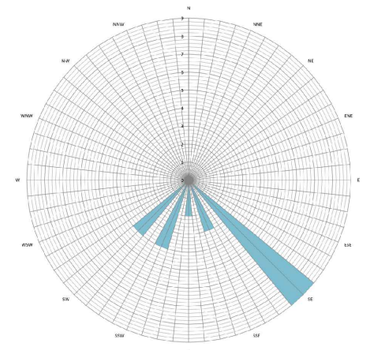


LEGEND:

- APPROXIMATE SITE BOUNDARY
- MW-6 GROUNDWATER MONITORING WELL LOCATION
- MW-1 DECOMMISSIONED GROUNDWATER MONITORING WELL LOCATION
- FB-1 GROUNDWATER GRAB SAMPLE
- HISTORICAL GROUNDWATER CONCENTRATIONS OBSERVED AT LEAST ONCE ABOVE MTCA METHOD A CULs FOR PETROLEUM
- HISTORICAL GROUNDWATER CONCENTRATIONS OBSERVED BELOW MTCA METHOD A CULs FOR PETROLEUM
- CURRENT MTCA SITE BOUNDARY MAP FOR GROUNDWATER (DASHED WHERE INFERRED)
- CULs CLEANUP LEVELS
- MTCA MODEL TOXICS CONTROL ACT
- UST UNDERGROUND STORAGE TANK

N

GROUNDWATER ROSE



NOTES:

1. BASE MAP PROVIDED BY SAIC, DATED 11/24/2010, AT A SCALEOF 1"=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. LAST FOUR SAMPLING EVENTS OCCURED FROM OCTOBER 2016 THROUGH MAY 2018.
4. GROUNDWATER ROSE IS BASED OFF OF DATA FROM 2004 UNTIL 2017.

0 30' 60'

GRAPHIC SCALE

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1225 NORTH 45TH STREET
SEATTLE, WASHINGTON

GROUNDWATER MTCA BOUNDARY MAP

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FIGURE 6