Interim Action Work Plan

Former Coastal / Roempke Enterprises Site
3317, 3319, and 3401 Auburn Way N
Auburn, Washington

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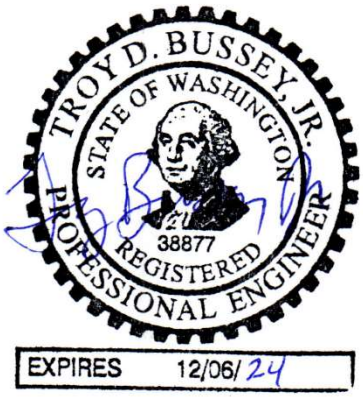
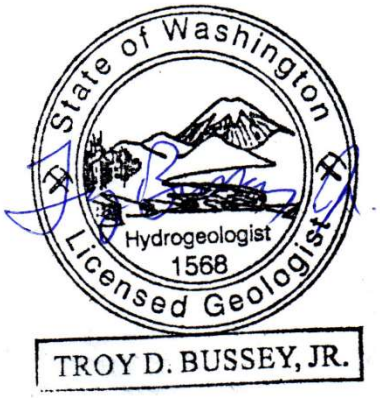
Professional Certification

This document was prepared under my direction. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that I was in responsible charge of the work performed for this document.





April 15, 2024

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List of Acronyms

Acronym	Explanation
ARARs	Applicable or Relevant and Appropriate Requirements
Bgs	Below ground surface
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes, and Naphthalenes
CAP	Cleanup Action Plan
CFR	Code of Federal Regulations
CLARC	Cleanup Levels and Risk Calculation
CMP	Compliance Monitoring Plan
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
EIM	Environmental Information Management
ESA	Environmental Site Assessment
FS	Feasibility Study
GWM	Groundwater Monitoring
HASP	Health and Safety Plan
IA	Interim Action
IAWP	Interim Action Work Plan
IDP	Inadvertent Discovery Plan
ITRC	Interstate Technology & Regulatory Council
LNAPL	Light Non-Aqueous Phase Liquid
MTCA	Model Toxics Control Act
MW	Monitoring Well
OWS	Oil-Water Separator
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PDI	Pre-Design Investigation
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PIONEER	PIONEER Technologies Corporation
PPM	Parts Per Million
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
RIWP	RI Work Plan
SAP	Sampling and Analysis Plan
Site	Former Coastal / Roempke Enterprises Site (e.g., 3317, 3319, and 3401 Auburn Way North)

Acronym	Explanation
SL	Screening Level
Sunset Auburn	Sunset Auburn, LLC
TPH	Total Petroleum Hydrocarbons
TPH-D	TPH in the Diesel Range
TPH-G	TPH in the Gasoline Range
TPH-HO	TPH in the Heating Oil Range
UIC	Underground Injection Control
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VI	Vapor Intrusion
VOCs	Volatile Organic Compounds
WAC	Washington Administrative Code
WMP	Waste Management Plan

SECTION 1: INTRODUCTION

1.1 Purpose

The purpose of this Interim Action (IA) Work Plan (IAWP) is to obtain Washington State Department of Ecology (Ecology) concurrence with a proposed IA to excavate two gasoline soil source areas at the Former Coastal / Roempke Enterprises Site (Site) by:

- Providing background context for the Site and the IA;
- Summarizing all Model Toxics Control Act (MTCA) investigation activities and results for the Site to date;
- Summarizing the conceptual IA, the IA goals, and the MTCA rationale for conducting this IA; and
- Outlining the path forward for completing the IA design.

This IA is being conducted to permanently eliminate a potential methane fire/explosion hazard and remediate two gasoline soil source areas in the southeastern portion of the Site (i.e., the 3317 Auburn Way North parcel). This IA only partially addresses the cleanup of this Property (in accordance with Washington Administrative Code [WAC] 173-340-430(1)), and is not intended to serve as the final MTCA cleanup action. The IAWP was prepared, and the IA will be conducted, with the intent to be the substantial equivalent of an Ecology-conducted or Ecology-supervised remedial action per WAC 173-340-545(2)(c).

1.2 Site Location

The Site is located within the wide and relatively flat Green River Valley (see Figure 1). Specifically, the Site is located on five parcels of land totaling approximately 4.83 acres at 3317, 3319, and 3401 Auburn Way North in Auburn, Washington (see Figure 2).[1,2] The three northernmost parcels with a 3401 Auburn Way North address contain the current Sunset Kia dealership. The southeastern parcel at 3317 Auburn Way North and the southwestern parcel at 3319 Auburn Way North are both associated with the current Sunset Mitsubishi dealership. Sunset Auburn, LLC (Sunset Auburn) purchased these five parcels from Roempke Enterprises in 2019.[3] The Site is currently surrounded by commercial and light industrial buildings (e.g., automotive service and sales operations and multi-tenant light industrial buildings) and asphalt parking lots. Tacoma Water owns a 40-feet-wide strip of vacant land (currently used as an asphalt driveway) between the Sunset Kia and Sunset Mitsubishi dealerships.

[1] The King County Assessor's parcel numbers are 0004000061 (3317 Auburn Way North), 0004000044 (3319 Auburn Way North), 0004000100 (3401 Auburn Way North), 0004000101 (3401 Auburn Way North), and 0004000058 (3401 Auburn Way North).

[2] Former addresses associated with this property include 3301, 3305, and 3321 Auburn Way North (TetraTech 2018; Green Environmental Management 2017).

[3] For the purposes of this IAWP, the term Roempke Enterprises refers to Roempke Enterprises, all predecessor/affiliated companies (e.g., Continental Cars), and the former and current Roempke Enterprises owners (e.g., Wolfgang "Tito" Roempke, Antonia Roempke, Kirk Roempke).

For the purposes of this IAWP, the Site boundary was currently assumed to be the combined 4.83-acre property boundary for the five current parcels at 3317, 3319, and 3401 Auburn Way North (see Figure 2). Although gasoline-related contamination likely extends off-property to the east and south of the 3317 Auburn Way North parcel, off-property remedial investigation (RI) activities have not been conducted yet to determine if in fact Site contamination extends beyond the property boundary. Once the RI is complete, the Site boundary will be defined based on where contamination "has been deposited, stored, disposed of, or placed, or otherwise come to be located" in accordance with WAC 173-340-200.

1.3 IAWP Organization

The remainder of this IAWP is organized as follows:

- Section 2: Background Information
- Section 3: Investigation Summary
- Section 4: IA Summary, Goals, and Rationale
- Section 5: IA Path Forward
- Section 6: References

SECTION 2: BACKGROUND INFORMATION

Background information is presented in this section to provide context for the IAWP and IA.

2.1 Overview of Environmental Setting

As shown in historical aerial photographs (see Appendix A) and described in Phase I Environmental Site Assessment (ESA) reports, the entire Site was previously used for farming from at least 1943 to 1965 (TetraTech 2018; Green Environmental Management 2017). Commercial and light industrial development of the Site began on portions of the Site in the late 1960s (see Appendix A), and continued intermittently until the entire Site was fully developed for automobile sales and service by 2002 (TetraTech 2018; Green Environmental Management 2017). Based on the boring logs in Appendix B, it appears that sand and gravel fill was added on top of native soil during Site development activities to provide geotechnical stability for buildings and pavement. While this apparent fill soil is absent in some borings and is less than two feet thick in many borings, thicker amounts of apparent sand and gravel fill are present in some borings (with a maximum thickness of eight feet in boring B42).[4]

The Site is located in Western Washington, which is typified by relatively mild temperatures and a marine-influenced climate (Western Regional Climate Center 2024). The average annual precipitation near Auburn is approximately 40 inches, with most precipitation falling between October and April (Western Regional Climate Center 2024).

The Site is relatively flat at an elevation of approximately 50 feet above mean sea level. The Site is completely covered with impervious surfaces (i.e., buildings and paved parking lots), except for a stormwater detention basin near the southwest corner of the Site. Stormwater is managed via on-site ground retention and storm drains. Surface drainage appears to be adequate and there is no evidence of standing water in vicinity of the Site.

Although the regional geology is dominated by Quaternary ice age glacial deposits, the Site is located within a former glacial trough that has been filled with Quaternary alluvium (Washington State Department of Natural Resources 2015). Based on the previous borings advanced at the Site (see Appendix B), the shallow native subsurface soil underneath the sand and gravel fill consists of discontinuous and alternating depositional layers containing various amounts of silty sand (or sandy silt), clayey silt (or silty clay), clay, fine sand, and sandy clay (or clayey sand). Based on the logging of Boring MW12 (the only documented boring to date that extended deeper than 15 feet below ground surface [bgs] except for the 20 feet bgs MW8 boring), the native soil from 18 to 40 feet bgs predominantly consists of sand with some gravel and minimal fines. The shallowest groundwater at the Site is typically encountered between 4 and 8 feet bgs. A consistent groundwater flow direction for the shallowest

[4] Fill material identified at boring B42 may also be associated with the historical excavation required to facilitate placement of the adjacent subsurface oil-water separator (OWS).

groundwater has not been established yet because shallow groundwater elevations are flat and appear easily influenced by anthropogenic factors as discussed in Section 3.3.5.1.

2.2 Current and Anticipated Future Land Use

The current and anticipated future land uses of the Site are commercial and light industrial. The Site is currently used for automotive sales and service and is expected to continue being used for automobile sales and service for the foreseeable future. The Site is zoned for "C3 Heavy Commercial District" (City of Auburn 2023). Likewise, the land use surrounding the Site is commercial and light industrial, and is expected to remain commercial and light industrial for the foreseeable future. The properties surrounding the Site are zoned "C3 Heavy Commercial District" or "M2 Heavy Industrial District" (City of Auburn 2023).

The following four buildings are currently present on the Site (see Figure 2):

- A 7,220-square-foot automobile dealership building (containing an automobile showroom, an office, a storage area, and a maintenance shop) at 3317 Auburn Way North that was constructed by Roempke Enterprises in 1986;[5]
- A 16,240-square-foot automobile dealership building (containing an automobile showroom and a maintenance shop) at 3319 Auburn Way North that was constructed by Roempke Enterprises in 2002;
- A 11,369-square-foot automobile dealership building (containing an automobile showroom and a maintenance shop) at 3401 Auburn Way North that was constructed circa 1976 (western portion) and 2004 (eastern portion) by Roempke Enterprises; and
- A 585-square-foot office building at 3401 Auburn Way North that was constructed in 1968 (TetraTech 2018; Green Environmental Management 2017).

2.3 Operational History

The operational history for the Site consists of four operational components: (1) the Coastal Gasoline Station at 3317 Auburn Way North, (2) the Roempke Enterprises Auto Dealership at 3317 Auburn Way North, (3) the Roempke Enterprises Auto Dealership at 3319 Auburn Way North, and (4) the Roempke Enterprises Auto Dealership at 3401 Auburn Way North. The Coastal Gasoline Station operations and the subsequent Roempke Enterprises gas station demolition and auto dealership construction activities at 3317 Auburn Way North caused substantial subsurface gasoline contamination and the potential methane hazard, which are the focus of this IA.

2.3.1 Coastal Gasoline Station at 3317 Auburn Way North

The Coastal Gasoline Station operated within the 3317 Auburn Way North parcel from 1969 to 1985 (TetraTech 2018; Green Environmental Management 2017; historical documents in Appendix A). Key Coastal Gasoline Station operational features included (see Figure 2):

[5] The entire building was constructed in 1986, except for the office. The original Coastal office was constructed circa 1976 to 1978, and was modified (i.e., walls and roof were added to enclose and slightly expand the original office) between 1990 and 2006 (see Appendix A).

- A gasoline station building;
- Underground storage tanks (USTs);
- Dispenser and pump piping;
- Three dispenser islands;[6]
- A canopy;
- A small bulk oil building;
- Two features of unknown use to the south/southwest of the gasoline station building; and
- An office.

One of the two Phase I ESA Reports for the Site indicated that former Coastal Gasoline Station operations included two 10,000-gallon storage tanks (TetraTech 2018). However, subsequent July 2020 and May 2021 geophysical investigations revealed that up to five former USTs may have been associated with former Coastal Gasoline Station operations (see Appendix C and Figure 2). The two largest oval shapes located immediately northeast of the current automobile showroom on Figure 2 are most likely the locations of two former 10,000-gallon USTs (and these two USTs most likely contained gasoline). The nature of the other three suspected former USTs is unknown. Test pits excavated in 2021 indicate that all USTs at 3317 Auburn Way North were previously removed (PIONEER Technologies Corporation [PIONEER] 2022b).

2.3.2 *Roempke Enterprises Auto Dealership at 3317 Auburn Way North*

Roempke Enterprises purchased the 3317 Auburn Way North parcel on July 25, 1985 (TetraTech 2018) and subsequently demolished the Coastal Gasoline Station, with the exception of the office, between August 23, 1985 and October 11, 1985 (see historical documents in Appendix A). Although there is no documentation of how or when the two suspected 10,000-gallon gasoline USTs and the three other suspected USTs were removed, 2021 PIONEER investigation activities confirmed that all former USTs were previously removed (PIONEER 2022b). The USTs were most likely removed concurrent with the Coastal Gasoline Station demolition activities since Roempke Enterprises obtained City of Auburn Permit No. 16590 on August 23, 1985 to "demo service station and underground tanks" at 3317 Auburn Way North (see Appendix A). That permit also indicated a need to "check with Auburn Fire Marshall for reqmts [sic] for removal of underground tanks" and a concluding statement that "tanks to be removed." It is unknown if dispenser and pump piping is still in the ground.

Roempke Enterprises began constructing the current automobile showroom, storage area, and automobile maintenance shop at 3317 Auburn Way North in December 1985 and received a certificate of occupancy in December 1986 (see Appendix A). Portions of the automobile showroom were constructed directly on top of or immediately adjacent to the former gasoline station building and the two westernmost dispenser islands (see Figure 2). Historical gasoline releases occurred proximate to the former gasoline station building and these two dispenser islands, which have caused a potential methane hazard at this automobile showroom as discussed in Section 3.3.2.

[6] Two islands contained four pump stands and one island contained three pump stands.

Roempke Enterprises operated the auto dealership at 3317 Auburn Way North from 1986 until they sold the dealership business (and leased the land) to Sunset Auburn in 2017. The key operational features at the 3317 Auburn Way North auto dealership (TetraTech 2018; Green Environmental Management 2017) are associated with the maintenance shop (see Figure 2):

- Six former subsurface hydraulic hoists that have been removed;
- Two existing trench drains; and
- An existing OWS.

2.3.3 Roempke Enterprises Auto Dealership at 3319 Auburn Way North

Roempke Enterprises constructed the auto dealership at 3319 Auburn Way North in 2002 and operated the auto dealership until they sold the dealership business (and leased the land) to Sunset Auburn in 2017. The key operational features at the 3319 Auburn Way North auto dealership (TetraTech 2018; Green Environmental Management 2017) are associated with the maintenance shop (see Figure 2):

- An existing trench drain;
- An existing OWS;
- A floor drain in a covered wash area adjacent to the maintenance shop; and
- A stormwater detention basin near the southwest corner of the Site.

2.3.4 Roempke Enterprises Auto Dealership at 3401 Auburn Way North

Roempke Enterprises began constructing the auto dealership at 3401 Auburn Way North circa 1976 and operated the auto dealership until they sold the dealership business (and leased the land) to Sunset Auburn in 2017. The key operational features at the 3401 Auburn Way North auto dealership (TetraTech 2018; Green Environmental Management 2017) are associated with the maintenance shop (see Figure 2):

- Six former subsurface hydraulic hoists within the maintenance shop that have been removed;
- A former subsurface hydraulic hoist or other historical feature outside the maintenance shop that has been removed;
- An apparent former pit that is filled with concrete;
- An existing trench drain;
- An existing floor drain; and
- An existing OWS.[7]

One of the two Phase I ESA Reports for the Site indicated that two 10,000-galllon storage tanks were associated with 3401 Auburn Way North based on information on the King County Assessors website (TetraTech 2018). The King County Assessors website in February 2024 still indicated the presence of two 10,000-galllon storage tanks at 3401 Auburn Way North, and that these tanks were last valued on

[7] The historical septic system mentioned in one of the two Phase I ESA Reports (TetraTech 2018) is not considered a key operational feature because, in PIONEER's opinion, a septic system used in its intended manner is unlikely to result in environmental impact to the subsurface. Further, the potential presence of a septic system was only mentioned in a 1967 building permit for the small office building at 3401 Auburn Way North.

March 10, 1998. Since (1) TetraTech and Green Environmental Management were unable to find any other information about potential storage tanks at 3401 Auburn Way North when preparing their Phase I ESA Reports, and (2) the historical operations at 3401 Auburn Way North (i.e., automobile sales and service) would not have needed large storage tanks, it is assumed that the King County Assessor's website information about these storage tanks is incorrect. PIONEER's hypothesis is that the two 10,000-gallon USTs at 3317 Auburn Way North, which were also last valued on March 10, 1998 (even though USTs had presumably already been removed in 1985) were somehow inadvertently linked to the 3401 Auburn Way North parcel by the King County Assessor circa 1998 since Roempke Enterprises owned both parcels.

2.4 Regulatory Context

The investigation and cleanup of this Site are subject to MTCA regulations. MTCA-related work at the Site to date has been conducted as independent remedial actions pursuant to WAC 173-340-515. PIONEER submitted a Site release notification to Ecology on December 8, 2020 following the discovery of the potential methane hazard at the 3317 Auburn Way North (PIONEER 2020b), and has provided subsequent investigation documentation to Ecology. PIONEER submitted a Voluntary Cleanup Program (VCP) Application, VCP Agreement Form, and VCP Eligibility Form to Ecology on June 28, 2023. Ecology responded in July 2023 that the Site could not be accepted into the VCP at that time due to the backlog and waitlist in Ecology's Northwest Regional Office. It is expected that Ecology will accept the Site into the VCP following the submittal of this IAWP. Following completion of the IA outlined in this IAWP, additional RI work will be needed to complete the RI phase, before moving onto the feasibility study (FS), cleanup action plan (CAP), and final cleanup action implementation phases.

Chapter 173-340 WAC citations in this IAWP are from the most recent version of Chapter 173-340 WAC that was adopted on August 23, 2023 and became effective on January 1, 2024.

SECTION 3: INVESTIGATION SUMMARY

The purpose of this section is to summarize Site investigation activities and results to date.

3.1 Investigation Chronology

The Site investigation activities completed by PIONEER and others include:

- Installing three monitoring wells (MWs) in May 2002 (presumably by Tacoma Water) and decommissioning one of these MWs at an unknown date (see footnote in Table 1 for more information);
- Conducting two Phase I ESAs (Green Environmental Management 2017; TetraTech 2018);[8]
- Completing initial subsurface drilling and sampling across the Site to determine the presence or absence of contamination at the Site (Robinson Noble 2019a);
- Completing additional subsurface drilling and sampling at 3317 Auburn Way North to further evaluate the extent of gasoline-related contamination on that parcel (Robinson Noble 2019b, 2020);
- Preparing a RI Work Plan (RIWP) to address key RI data gaps (PIONEER 2020a);
- Completing RI Phase 1 sampling and analysis activities in July and August 2020 pursuant to the RIWP;
- Collecting 97 soil gas, indoor air, and ambient air methane concentration measurements within and surrounding the 3317 Auburn Way North automobile showroom during a September 2020 real-time investigation (conducted in response to elevated methane concentrations in a soil gas sample and an ambient air sample collected in July 2020 for VI evaluation purposes).
- Excavating test pits in May 2021 to determine the presence or absence of five suspected USTs at 3317 Auburn Way North (PIONEER 2022b); and
- Preparing an RIWP Addendum (PIONEER 2022a) and conducting a pre-design investigation (PDI) to provide high resolution vertical and horizontal characterization of gasoline soil impacts within the predominant source area (i.e., proximate to the former gasoline station building, former dispenser islands, and the two suspected 10,000-gallon gasoline USTs) at 3317 Auburn Way North.

The investigation activities, associated media, sampling locations, and analyses for each of the above investigations are summarized in Table 1. Sample locations are shown on Figure 3. Boring logs for all subsurface borings and MW construction logs are included in Appendix B.[9] Geophysical investigation results are included in Appendix C. Analytical laboratory reports and associated data quality reviews for all analyses conducted to date are included in Appendix D. All results collected to date, including those by previous consultants, were uploaded to Ecology's Environmental Information Management (EIM) database in August 2023 for review by the EIM coordinator.

[8] Two Phase I ESAs were conducted due to a change in lenders when Sunset Auburn was conducting due diligence prior to purchasing the property.

[9] No MW construction logs are available for MW4E or MW13E.

3.2 Updated MTCA Screening Levels

The groundwater, soil, indoor air, and sub-slab soil gas screening levels (SLs) developed in the RIWP for RI screening purposes have been updated as necessary to reflect current values in Ecology's Cleanup Level and Risk Calculation (CLARC) database (Ecology 2024) and other relevant Ecology publications/guidance documents (Ecology 1994, 2001a, 2001b, 2004, 2022a, 2022b). The calculations of the updated SLs are presented in Appendix E. The SLs were developed based on the following exposure or transport pathways of potential concern: (1) the groundwater as drinking water exposure pathway (if shallow groundwater was used as a potable drinking water source), (2) the groundwater-to-indoor air (VI) transport pathway, (3) the soil-to-groundwater transport pathway, (4) the soil direct contact exposure pathway, (5) the sub-slab soil gas-to-indoor air (VI) transport pathway, and (6) the indoor air (VI) exposure pathway. The SL calculations include an unrestricted land use scenario (even though future residential or recreational land use is not planned or anticipated for this Site) and assume shallow groundwater can be used as a potable drinking water source (even though there are no current drinking water wells at the Site and a suitable drinking water well could not be installed in the shallowest Site groundwater given the regulatory requirements of Chapter 173-160 WAC and Chapter 246-190 WAC) for conservatism during the RI phase.

The conservative SLs used for preliminary RI screening purposes are:

- Groundwater SLs for an unrestricted land use scenario (see Table 1 in Appendix E). These groundwater SLs are the most stringent of (1) Standard MTCA Method B/Method A potable groundwater cleanup levels for unrestricted land use (i.e., assuming Site groundwater is used as a residential drinking water source), and (2) MTCA Method B groundwater VI SLs in CLARC.
- Soil SLs for an unrestricted land use scenario (see Table 2 in Appendix E). These soil SLs are the most stringent of (1) conservative MTCA soil-to-groundwater SLs, and (2) Standard MTCA Method B/Method A soil direct contract cleanup levels for unrestricted land use. The MTCA soil-to-groundwater SLs are the most stringent of (1) soil concentrations calculated to be protective of the aforementioned groundwater SLs using the three-phase partitioning model in WAC 173-340-747(4) and -(747)(5), and (2) soil concentrations protective of residual saturation pursuant to WAC 173-340-747(10).
- Indoor air SLs and sub-slab soil gas SLs for an unrestricted land use scenario (see Tables 3 and 4 in Appendix E). These SLs are MTCA Method B indoor air VI cleanup levels and MTCA Method B soil gas VI SLs from CLARC, with the exception that a MTCA site-specific total petroleum hydrocarbon (TPH) indoor air SL for unrestricted land use was calculated in accordance with Ecology VI guidance (Ecology 2022b) as shown in Table 5 of Appendix E.

In addition, the following SLs were calculated for possible further evaluation of unrestricted land use SL exceedances (see Appendix E):

- Groundwater VI SLs for an industrial land use scenario (i.e., MTCA Method C groundwater VI SLs in CLARC).
- Soil direct contact SLs for an industrial land use scenario (i.e., Standard MTCA Method C/Method A soil direct contract cleanup levels for industrial land use).

- Indoor air SLs and sub-slab soil gas SLs for an adult commercial worker scenario (i.e., commercial worker indoor air and soil gas VI SLs from CLARC, and MTCA site-specific TPH indoor air and sub-slab soil gas SLs for a commercial worker).
- Indoor air permissible exposure limits (PELs) on an 8-hour time weighted average from WAC 296-841-20025. These PELs would be applicable for evaluating occupational exposures if products containing these constituents are being used at the Site.

3.3 Investigation Results

Soil, groundwater, methane soil gas, and volatile organic compound (VOC) VI results for all investigation activities to date are presented in Tables 2 through 9. TPH in the gasoline range (TPH-G) and benzene, toluene, ethylbenzene, xylenes, and naphthalenes (BTEXN) soil and groundwater concentrations for all soil and groundwater samples collected across the Site are presented in Tables 2 and 3, respectively. A vertical soil characterization evaluation for the two gasoline soil source areas to be excavated during the proposed IA is presented in Table 4. Methane soil gas concentrations from the real-time September 16, 2020 investigation at 3317 Auburn Way North are presented in Table 5, and field notes from that investigation (which include various indoor air and ambient air measurements) are included as Appendix F. Sub-slab soil gas and air concentrations from the July 2020 VOC VI investigation at 3317 Auburn Way North are presented in Tables 6 and 7, respectively. Soil and groundwater constituent concentrations for all constituents other than TPH-G and BTEXN are presented in Tables 8 and 9, respectively.

The soil, groundwater, and VOC VI-related sample concentrations were compared with the conservative MTCA SLs used for preliminary RI screening purposes outlined in the previous section. The methane concentrations were evaluated in accordance with ASTM International Designation E2993-16: Standard Guide for Evaluating Potential Methane Hazards as a Result of Methane in the Vadose Zone (see Appendix G).

3.3.1 TPH-G and BTEXN Results for 3317 Auburn Way North

TPH-G and BTEXN soil and groundwater SL exceedances within 3317 Auburn Way North are relatively widespread across the parcel, with the highest magnitude of TPH-G and/or BTEXN exceedances generally collocated with former Coastal Gasoline Station operational features (see Figure 4 and Tables 2 and 3).[10] A summary of key results include:

- A total of 31 soil sampling locations at 3317 Auburn Way North had at least one sample with a TPH-G, benzene, toluene, ethylbenzene, total xylenes, naphthalene, and/or total naphthalenes concentration exceeding its soil SL for unrestricted land use (see Table 2 and Figure 4). In addition, 24 of these 31 locations had at least one constituent concentration greater than 10 times the soil SL, and 14 of the 31 locations had at least one constituent concentration greater than 100 times the soil SL.

[10] TPH-G was used as an indicator soil constituent on Figure 4 since the magnitude and extent of TPH-G soil SL exceedances were often similar to or greater than BTEXN soil SL exceedances. TPH-G was used as an indicator groundwater constituent to be consistent with the indicator soil constituent (even though the magnitude of the benzene groundwater SL exceedances were often greater than the TPH-G groundwater SL exceedances).

- TPH-G soil concentrations on the order of 1% to 3% were detected in eight soil samples at five locations (i.e., 1.0% in the B19 sample at 3 feet bgs, 1.8% in the B46 sample at 6-7 feet bgs, 2.1% in the B46 sample at 10-11 feet bgs, 3.1% in the B51 sample at 4-5 feet bgs, 1.0% in the B54 sample at 5-6 feet bgs, 0.9% in the B54 sample at 9-10 feet bgs, 1.7% in the B55 sample at 5-6 feet bgs, and 2.7% in the B55 sample at 9-10 feet bgs). The fact that soil in five different locations is still comprised of 1% to 3% gasoline is indicative that the amount of gasoline released by the historical operations and/or subsequent demolition activities was substantial, especially since bacteria in the soil would have substantially decreased gasoline concentrations since 1985.
- Gasoline soil source material remains present underneath the 3317 Auburn Way North automobile showroom. TPH-G, benzene, total xylenes, and naphthalene soil concentrations at B46 and B47 were more than 100 times higher than the soil SLs for unrestricted land use, with one benzene concentration more than 1,000 times higher than the soil SL (see Table 2 and Figure 4). Also, benzene soil concentrations in B48 and B49 were 20 to 60 times greater than the soil SL.
- A total of 13 groundwater sampling locations at 3317 Auburn Way North had at least one sample with a TPH-G, benzene, ethylbenzene, total xylenes, naphthalene, and/or total naphthalenes concentration exceeding its groundwater SL for unrestricted land use (see Table 3 and Figure 4). In addition, 7 of these 13 locations had a TPH-G and/or benzene concentration greater than 10 times the groundwater SL, and 3 of these locations (B13, B28, and MW3) had a benzene concentration greater than 100 times the groundwater SL.
- The TPH-G and benzene exceedances of groundwater SLs for unrestricted land use at the eastern and southern boundaries of the 3317 Auburn Way North parcel (B27, B28, MW9, and MW11; see Figure 4 and Table 3) are problematic due to (1) the likelihood of this gasoline contamination extending off-property, and (2) MTCA limitations on where conditional groundwater points of compliance are allowed.
- Potential light non-aqueous phase liquid (LNAPL) indicators identified in Interstate Technology & Regulatory Council (ITRC) guidance (see Table 3-2 in ITRC 2018) suggest that gasoline may still be present in the 3317 Auburn Way North subsurface as a LNAPL. Specifically, (1) TPH-G soil concentrations in many sampling locations were greater than the 250 - 500 mg/kg indicator, (2) benzene soil concentrations at B15, B46, B54, B55, B56 were greater than the 10 mg/kg indicator, (3) the TPH-G groundwater concentration at MW3 in July 2020 was greater than the 30,000 ug/L indicator, (4) sheens or stains were present in soil collected from borings B13, B14, B15, B23, B28, B46, B47, and B56, and MW6 (see Table 4), (5) photoionization detector (PID) concentrations at B19, B46, B47, B51, B52, B54, B55, B56, and MW11 were greater than 500 parts per million (ppm; see Table 4).

3.3.2 Methane Results for 3317 Auburn Way North

Methane sub-slab soil gas measurements collected on September 16, 2020 and methane downhole soil gas measurements in June 7, 2022 soil borings indicate that there is a potential methane fire/explosion hazard under the automobile showroom building slab and portions of the asphalt parking lot at 3317 Auburn Way North. Specifically, methane sub-slab soil gas concentrations exceeding 30% were detected on September 16, 2020 at sampling locations SG1, SG102, SG103, SG119, SG120, and SG126, with sustained methane concentrations ranging from 86% to 93.8% at five of these six sampling locations

(see Table 5 and Figure 4).[11] In addition, methane downhole soil gas concentrations were greater than 99% at B46 and B49 and 72% (peak) at B47 when drilling these three boreholes on June 7, 2022 (see Appendix B for methane data and Figure 4 for boring locations). The nine locations with methane concentrations greater than 30% are near the former gasoline station building, former dispenser islands, and the two suspected 10,000-gallon gasoline USTs. Based on ASTM International Designation E2993-16 (see Appendix G), these methane soil gas concentrations exceeding 30% pose a potential methane fire/explosion hazard. Fortunately, the September 16, 2020 methane indoor air and ambient air concentrations within the 3317 Auburn Way North parcel were not elevated on the day the measurements were collected (see Appendix F). However, the methane fire/explosion hazard remains. For instance, if a significant foundation slab or pavement crack were to develop near locations with elevated methane concentrations due to construction activities or an earthquake, and an ignition source was present (e.g., a spark from a lighter), a methane fire or explosion could occur.

Sunset Auburn implemented temporary controls to mitigate the potential methane hazard at 3317 Auburn Way North because of the September 16, 2020 methane investigation results. Sunset Auburn evacuated the automobile showroom at 3317 Auburn Way North as a precautionary measure prior to the September 16, 2020 methane investigation. After the September 16, 2020 investigation was completed, Sunset Auburn (1) permanently evacuated the automobile showroom, (2) put locks on the showroom doors, and (3) placed car barricades and flagging around the two paved outdoor areas where methane soil gas concentrations exceeded 30% to discourage people from entering these areas. Sunset Auburn also placed warning signs around the showroom and the two paved outdoor areas to further discourage people from entering these areas or smoking around these areas. Sunset Auburn is continuing to maintain the aforementioned controls in order to minimize the potential for workers, customers, and trespassers to enter these areas with an ignition source. In addition, during subsequent subsurface investigation activities (i.e. excavating test pits, drilling), engineering controls were implemented to minimize the potential for a methane fire or explosion during the investigation (e.g., using non-sparking tools, using fans to increase air flow, monitoring methane concentrations).

3.3.3 VOC VI Results for 3317 Auburn Way North

The subsurface gasoline contamination at 3317 Auburn Way North has caused gasoline-related SL exceedances in the soil gas under the automobile showroom and likely contributed to some of the gasoline-related SL exceedances within the automobile showroom indoor air. The TPH, benzene, cyclohexane, n-heptane, an n-hexane sub-slab soil gas SL exceedances at SG1 and the TPH sub-slab soil gas SL exceedance at SG2 (see Table 6 and Figure 5) are clearly due to subsurface gasoline contamination based on the location of, and constituent concentrations in, the SG1 and SG2 samples. While the high soil gas concentrations under the automobile showroom likely contributed to the TPH and benzene exceedances of indoor air SLs for unrestricted land use in the indoor air samples (IA1 and

[11] It is possible that these five methane concentrations (ranging from 86% to 93.8%) may be biased high since the presence of other hydrocarbons (e.g., butane, pentane, hexane) can affect the field methane measurements. However, any bias is insignificant relative to the potential methane hazard.

IA2) that were collocated with SG1 and SG2 (see Table 7 and Figure 5), indoor air and ambient air background sources of gasoline at this active auto dealership undoubtedly also contributed to the TPH and benzene SL exceedances at IA1 and IA2. For instance:

- An extremely large number of vehicles containing gasoline were in close proximity to the sampling locations, and it was not practicable to remove gasoline sources (e.g., vehicles) prior to or during VI sampling.
- Key gasoline constituents (e.g., TPH, toluene, ethylbenzene, total xylenes, and naphthalene) were detected in the ambient air (AA1) sample (see Table 7). More importantly, in retrospect, a single ambient air sample (AA1) was insufficient to capture the many indoor air and ambient air background sources of gasoline at various locations surrounding the building at 3317 Auburn Way North.
- According to Ecology's VI guidance, the 90th percentile indoor air background concentration for TPH is up to 594 ug/m^3 and the 50th percentile indoor air background concentration for benzene is up to 4.7 ug/m^3 (Ecology 2022b).[12] These TPH and benzene background values most likely underestimate TPH and benzene indoor air background concentrations at an active auto dealership.
- TPH and benzene concentrations in IA1 were similar to or less than TPH and benzene concentrations in IA2 through IA4 (see Table 7) even though IA1 was directly above the subsurface gasoline source area, IA2 was slightly beyond the edge of the subsurface gasoline source area, and IA3 and IA4 were outside known areas of gasoline soil and groundwater contamination.
- Benzene was detected in IA2 and was not detected in collocated sample SG2 (see Tables 6 and 7).

The remaining indoor air SL exceedances shown on Figure 5 (and Table 7) are most likely attributable to indoor air and ambient air background (rather than VI from subsurface contamination), with the possible exception of the slight benzene indoor air SL exceedance for unrestricted land use at IA3. Specifically, naphthalene was detected in IA1, IA2, IA3, and IA4 at similar concentrations, but was not detected in any of the collocated soil gas samples (see Tables 6 and 7). Similarly, chloroform was detected in IA3, but was not detected in the corresponding SG sample (SG3). The TPH, benzene, total xylenes, and naphthalene SL exceedances in IA4 were most certainly due to the fact that the IA4 sample was collected within the maintenance shop while gasoline-fueled vehicles were being serviced in the maintenance shop.

3.3.4 Other Constituent Results for the Entire Site

Although there are no TPH-G and BTEXN SL exceedances outside of 3317 Auburn Way North, there are a few non-gasoline constituents with relatively minor soil and groundwater SL exceedances at 3317, 3319, and 3401 Auburn Way North. Specifically, there were three soil samples (B20, B32, B38) with TPH in the diesel range (TPH-D) plus TPH in the heavy oil range (TPH-HO) concentrations that exceed the soil SL for

[12] Further, the 90th percentile indoor air background concentration for benzene in North American residences is the range of 5.2 ug/m^3 to 15 ug/m^3 (United States Environmental Protection Agency [USEPA] 2011).

unrestricted land use (see Table 8).[13] The B20 exceedance was between two of the former dispenser islands at 3317 Auburn Way North, the B32 exceedance was adjacent to operational features within the 3317 Auburn Way North maintenance shop, and the B38 exceedance was adjacent to operational features within the 3401 Auburn Way North maintenance shop (see Figure 6). There were also exceedances of groundwater SLs for unrestricted land use with (1) TPH-D plus TPH-HO in a direct-push groundwater sample (B41) adjacent to operational features within the 3401 Auburn Way North maintenance shop, (2) TPH-D plus TPH-HO in a direct-push groundwater sample (B44) adjacent to one of the suspected 10,000-gallon USTs at 3317 Auburn Way North, and (3) vinyl chloride in a direct-push groundwater sample (B30) sample adjacent to operational features within the 3317 Auburn Way North maintenance shop (see Table 9 and Figure 6).[14] Finally, dissolved arsenic groundwater concentrations slightly exceeding the groundwater SL for unrestricted land use are present sporadically across the Site at the B32, B37, MW2, MW5, MW9, and MW11 groundwater sampling locations (see Figure 6).[15] These slight dissolved arsenic exceedances are likely attributable to the gasoline and other petroleum releases at the Site, which likely altered the geochemical conditions to allow increased leaching from naturally occurring arsenic in the soil.

3.3.5 Other RI Results and Information

3.3.5.1 Field Groundwater Monitoring Results

Groundwater elevations in existing MWs have been obtained during multiple groundwater monitoring (GWM) events. Specifically, groundwater elevations were obtained on (1) October 18, 2019, (2) January 27, 2020, (3) July 21-22, 2020, (4) August 19, 2020, and (5) August 31, 2020. MW construction details for the 12 existing MWs and calculated groundwater elevations for these five groundwater gauging events are presented in Table 10. The elevation survey of the top of MW casing measuring points conducted by a Washington licensed land surveyor is included in Appendix H. Based on the groundwater elevation data to date, there is not a clear and consistent groundwater flow direction in the shallowest groundwater at the Site. For instance, the highest groundwater elevation in the January 2020 event was at MW5, with lower groundwater elevations to the west, north, and east of MW5 (see Table 10 and Figure 7). Likewise, the highest groundwater elevations in the July 2020 and August 19, 2020 events were at MW3 and MW6, respectively, with decreasing groundwater elevations in all directions. During the August 31, 2020 event, the highest groundwater elevation was at MW9, with groundwater flow

[13] The 1,2,4-trimethylbenzene and/or 1,3,5-trimethylbenzene soil SL exceedances in B2 and MW11 samples (see Table 8) are not discussed in this text or included on Figure 6 because 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene are constituents in gasoline.

[14] The 1,2,4-trimethylbenzene and/or 1,3,5-trimethylbenzene groundwater SL exceedances in a MW3 sample (see Table 9) are not discussed in this text or included on Figure 6 because 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene are constituents in gasoline.

[15] Total arsenic and total lead groundwater exceedances in 2019 groundwater samples collected by Robinson Noble (see Table 9) are not included as SL exceedances in this text or on Figure 6 because these sample results appear to be artifacts of 2019 development and/or sampling issues (rather than actual groundwater conditions). For instance, (1) the April 2019 groundwater samples were grab samples collected from direct-push borings with no development and limited purging, (2) the turbidity in the October 2019 MW1 through MW3 samples were elevated, and (3) the arsenic and turbidity concentrations in MWs have decreased over time due to PIONEER's development of all Site MWs in July 2020 and additional MW development via sampling.

radiating outward to the north, west, and south. It is currently hypothesized that the variable groundwater flow patterns in the shallowest Site groundwater are affected by irrigation of two thin strips of grass along the eastern and southern boundary of the 3317 Auburn Way North parcel, leakage from one or more stormwater utility lines, and/or a potential subsurface obstruction in the 3317 Auburn Way North parcel.

LNAPL thickness measurements were obtained with an interface probe during the August 31, 2020 groundwater gauging event. No measurable thickness of LNAPL was present in any MW (see Table 10).

Field water quality parameters were obtained from existing MWs at the end of low-flow purging during the October 2019 and July 2020 GWM events (see Table 11). Key groundwater quality observations are (1) the groundwater pH is neutral, (2) the groundwater is generally anoxic (e.g., dissolved oxygen less than 0.5 mg/L) and slightly reducing, and (3) turbidity was elevated in the October 2019 groundwater samples collected by Robinson Noble.

3.3.5.2 RIWP Deviations

POINEER's investigation activities from July 2020 to current were completed in general conformance with the RIWP (PIONEER 2020a) and RIWP Addendum (PIONEER 2022a). No deviations from the RIWP Addendum were noted for the 2022 PDI activities. Deviations from the RIWP are summarized in Appendix I.

3.3.5.3 Overview of Remaining RI Data Gaps

RI data gaps remain and will need to be addressed following completion of the IA described in this IAWP. Additional RI activities will include fully defining the nature and extent of contamination at the Site.

RI data gaps identified at this time for 3317 Auburn Way North include:

- Delineating the eastern extent of gasoline-related soil and shallowest groundwater impacts emanating from the predominant soil source area (i.e., proximate to the former gasoline station building, former dispenser islands, and the two suspected 10,000-gallon gasoline USTs), including any off-property impacts to the east of the property.
- Determining the nature and extent of the gasoline-related soil and shallowest groundwater impacts emanating from the former Coastal feature of unknown use located near the southern boundary of 3317 Auburn Way North and/or the adjacent former Coastal Bulk Oil Building, including any off-property impacts to the south of the property.
- Determining the nature and extent of gasoline-related soil and shallowest groundwater impacts emanating from the former Coastal feature of unknown use located immediately south/southeast of the former gasoline station building, including any off-property impacts to the east and/or south of the property.
- Determining the nature and extent of gasoline-related soil and shallowest groundwater impacts near the former Coastal office (e.g., near MW6).
- Delineating the depth of gasoline-related impacts in groundwater deeper than the shallowest groundwater unit.

- Adding TPH-D, TPH-HO, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) analyses per Table 830-1 in MTCA regulations for some soil and groundwater samples based on the suspected nature of the former Coastal Bulk Oil Building, the potential that the easternmost former dispenser island could have been used for diesel fuel, and TPH-D plus TPH-HO soil or groundwater SL exceedances in B20, B32, and B44 samples (see Figure 6).
- Collecting sub-slab methane measurements after the IA is completed.
- Conducting one or more VI investigation events to further assess potential VI exposures, including collecting VI samples during worst-case conditions (e.g., in the winter with the heating on), and collecting more ambient air background samples.
- Improving the understanding of the groundwater flow direction(s) in the shallowest groundwater, and obtaining additional LNAPL thickness measurements in existing and new MWs.
- Improving (as necessary) the delineation of (1) the dissolved arsenic groundwater SL exceedances, (2) the B30 vinyl chloride groundwater SL exceedance, (3) the B44 TPH-D plus TPH-HO groundwater SL exceedance, and (4) the B32 TPH-D plus TPH-HO soil SL exceedance.
- Ensuring sufficient data has been collected to support MTCA FS evaluations (e.g., reasonable restoration timeframe evaluation, treatability studies) as necessary.

RI data gaps identified at this time for 3319 and 3401 Auburn Way North include:

- Improving (as necessary) the delineation of (1) the dissolved arsenic groundwater SL exceedances, (2) the B41 TPH-D plus TPH-HO groundwater SL exceedance, and (3) the B38 TPH-D plus TPH-HO soil SL exceedance.
- Ensuring sufficient data has been collected to support MTCA FS evaluations (e.g., reasonable restoration timeframe evaluation, treatability studies) as necessary.

3.4 Conceptual Site Model Summary

Historical Coastal Gasoline Station operations and the 1985 demolition of the gasoline station facilities by Roempke Enterprises caused substantial releases of gasoline and associated impacts at 3317 Auburn Way North. The predominant gasoline soil source area is located proximate to the former gasoline station building, the former dispenser islands, and the two suspected 10,000-gallon gasoline USTs, and includes borings B2, B13, B14, B15, B19, B20, B46 through B49, B51 through B56 (see Figure 4). TPH-G and benzene soil concentrations in several 2022 soil samples collected within the predominant soil source area remained three orders of magnitude higher than the corresponding MTCA soil SLs 37 years after the gasoline station was demolished. To make matters worse, the construction of an automobile showroom on top of this gasoline source area by Roempke Enterprises combined with the ongoing methanogenic degradation of gasoline in this source area by naturally occurring bacteria has caused a potential methane hazard for the automobile showroom. Seven sampling locations within the automobile showroom (and two sampling locations outside of the showroom) had sub-slab methane concentrations greater than 30% (see Section 3.3.2), which poses a potential methane fire/explosion hazard according to ASTM International Designation E2993-16 (see Appendix G). Fortunately, the September 16, 2020 methane indoor air and ambient air concentrations within the 3317 Auburn Way North parcel were not elevated. However, the potential methane hazard will continue to exist as long as the underlying gasoline source area remains, and a methane fire and/or explosion could occur in the

future if the building foundation slab conditions changed and an ignition source was present. In addition, the volatilization and VI transport of gasoline-related constituents from this predominant source area has caused gasoline-related SL exceedances in the soil gas under the automobile showroom and likely contributed to some of the gasoline-related SL exceedances within the automobile showroom indoor air. Based on PIONEER's interpretation of existing data, the 3317 Auburn Way North parcel appears to also contain three additional and separate gasoline soil source areas (see Figure 4): (1) an area abutting the southern parcel boundary proximate to a former Coastal feature of unknown use (e.g., at/near MW11), (2) an area containing another former Coastal feature of unknown use (e.g., at/near B57), and (3) an area adjacent to the former Coastal office (e.g., at/near MW6). Groundwater transport from the predominant source area and/or the three other suspected source areas has caused gasoline-related groundwater SL exceedances along the eastern and southern boundaries of the parcel.[16]

Operation of automobile maintenance shops at 3317 and 3401 Auburn Way North has resulted in a few relatively minor and isolated non-gasoline releases and associated impacts proximate to these shops. For instance, the TPH-D plus TPH-HO soil SL exceedances at B32 and B38 are likely attributable to adjacent former hoists in the maintenance shops. Likewise, the vinyl chloride groundwater SL exceedance at B30 and the chloroform soil gas SL exceedance at SG4 may be attributable to minor releases in the adjacent trench drain at 3317 Auburn Way North. Regardless of which specific historical operation is responsible for the few non-gasoline exceedances, the source magnitudes for all non-gasoline exceedances are relatively low. In addition, the extent of transport via groundwater or VI for these non-gasoline constituents appears to be very limited.

The contaminant sources and transport mechanisms summarized in the two previous paragraphs pose a potential threat to human health and the environment. The biggest and most consequential threat is the potential methane fire/explosion hazard for current and future commercial workers, customers, construction/utility workers, and trespassers within or near the automobile showroom at 3317 Auburn Way North. Inhalation of gasoline-related vapors by any current and future commercial workers and customers within the 3317 Auburn Way North automobile showroom appear to be potentially important complete exposure pathways. Incidental ingestion of and dermal contact with soil and shallow groundwater by current and future construction/utility workers are also complete exposure pathways. Several potentially complete exposure pathways exist for the Site, including (1) ingestion of groundwater by a variety of receptors if a future drinking water well was installed within Site-impacted groundwater, and (2) incidental ingestion of and dermal contact with soil by a variety of potential human and terrestrial ecological receptors if land use changed in the future and the existing asphalt was removed. Although these potential exposure pathways are unlikely to ever be complete at this Site, it is necessary to contemplate these potential pathways throughout the RI process to satisfy MTCA regulations and ensure the RI is substantially equivalent to an Ecology-conducted or Ecology-supervised RI.

[16] Releases and groundwater transport of gasoline and other petroleum products at the Site are likely also responsible for the slight arsenic groundwater SL exceedances (see Section 3.3.4).

3.5 IA Excavation Dimensions Based on RI Results

Based on existing RI results, IA excavations are proposed at this time to permanently remove two gasoline soil source areas. The location of these two proposed IA excavations (i.e., Excavations 1 and 2) are shown on Figure 8.[17] Excavation 1 will remove the predominant gasoline soil source described in the previous section (i.e., includes borings B2, B13, B14, B15, B19, B20, B46 through B49, B51 through B56), which will in turn permanently address the potential methane hazard. Excavation 2 is for the smaller source area abutting the southern property boundary that includes a former Coastal feature of unknown use with known impacts at MW11, and may include the adjacent former Coastal Bulk Oil Building, which has an elevated potential of being a release/source location.[18] This second source area is being excavated during the IA to expedite natural attenuation along the southern property boundary, minimize the future extent of any off-property impacts emanating to the south from this source area, and facilitate the potential use of a conditional groundwater point of compliance at the property boundary. Design investigation activities will be conducted as outlined in Section 5.1 to refine the Excavation 2 area.

Based on an evaluation of existing vertical soil characterization data, the excavation design depth for Excavations 1 and 2 will be 12 feet bgs. The excavation design depth was determined based on the relative magnitudes of TPH-G soil concentrations, PID concentrations, and field observations in soil borings, the thoroughness of vertical characterization data in each boring, the typical depths to shallowest groundwater (i.e., 4-8 feet bgs), the fact that gasoline is a LNAPL, and professional judgment (see Table 4). The 12 feet bgs excavation depth is expected to remove all soil source material in both excavation areas. Specifically, this excavation design depth will remove all soil within the excavation areas that has (1) a TPH-G soil concentration exceeding 300 mg/kg (except for the 1,500 mg/kg result in a B55 sample collected at 14-15 feet bgs), (2) a PID concentration exceeding 100 ppm (except for the 344 ppm result in a B46 measurement at 13 feet bgs), and (5) an odor, sheen, and/or stain observation (except for the odor observations in B13, B14, B15, B19, and B46 and the oil sheen observations in B14 and B15 that extend deeper).[19,20] Excavating deeper than 12 feet does not make sense given the negligible or diminishing gasoline impacts deeper than 12 feet bgs in existing borings. Further, if deeper

[17] The other two suspected source areas discussed in Section 3.4 (i.e., the former Coastal feature of unknown use near boring B57 and the area near the former Coastal office and MW6) are not included in the IA because additional investigation and evaluation activities need to be completed before determining what type of remedial action should be applied to these areas.

[18] The former Coastal Bulk Oil Building has not been investigated yet because Sunset Auburn and PIONEER were not aware of the former Bulk Oil Building until May 2023, when Roempke Enterprises discovered and provided Sunset Auburn with historical drawings showing the former Bulk Oil Building.

[19] Per Tables 12.1 and 12.2 in Ecology's Guidance for Remediation of Petroleum Contaminated Sites (Ecology 2016a), Category 2 soil, which can be reused as "backfill at cleanup sites above the water table", may have a slight petroleum odor, staining, or sheen.

[20] Robinson Noble's reported oil sheen observations at the bottom of the B14 and B15 borings are questionable. For instance, the B14 boring log indicates an oil sheen was continuously present from 0.5 feet bgs to the bottom of the boring at 15 feet bgs. At B15, an oil sheen was only noted at the very bottom of the boring (13.5-15 feet bgs). Given the depth to groundwater and the properties of LNAPL, Robinson Noble's oil sheen observations at the bottom of B14 and B15 were more likely than not due to drilling or sampling carry down effect and/or inattentive logging.

remediation is deemed necessary in the future following completion of the FS, a non-excavation remedial approach could easily be employed for any residual gasoline impacts deeper than 12 feet bgs.

SECTION 4: IA SUMMARY, GOALS, AND RATIONALE

4.1 Summary Description of the Conceptual IA

The IA design process outlined in Section 5 will dictate key IA excavation details (e.g., final Excavation 2 dimensions, addressing existing utilities, temporary shoring and dewatering, waste management, extent of in-situ groundwater treatment associated with the excavations). However, in general terms, the IA is expected to consist of:

1. Demolishing the 3317 Auburn Way North automobile showroom (following the abatement and disposal of any hazardous building materials);
2. Removing and capping utilities within Excavation 1 and Excavation 2 (see Figure 8 for current understanding of underground utilities);
3. Installing temporary shoring (e.g., temporary sheet pile wall) and dewatering groundwater within Excavation 1 and Excavation 2;
4. Excavating gasoline-impacted soil within Excavation 1 and Excavation 2 to a depth of 12 feet bgs (see Section 3.5);
5. Disposing of excavated gasoline-impacted soil at an off-site facility permitted to accept the waste;
6. Containerizing, treating (as necessary), and disposing of gasoline-impacted water generated during dewatering at an off-site facility/utility permitted to accept the waste;
7. Spraying PetroFix™ within the excavation bottoms to facilitate further in-situ groundwater treatment (a PetroFix technology overview document and a PetroFix excavation application guidance document are included in Appendix J);[21]
8. Backfilling and compacting the excavated areas with clean soil; and
9. Restoring the excavated areas to their original condition (e.g., reinstalling necessary utilities, repaving areas that were excavated).

The IA is a partial cleanup of gasoline impacts at 3317 Auburn Way North, and is not intended to be the final cleanup action. While the IA will not remove or address all TPH-G or BTEXN soil SL exceedances at the Site, it is expected that this IA will enhance and expedite natural source zone depletion, bioremediation, and natural attenuation of the remaining gasoline contamination surrounding the IA excavation areas.

4.2 IA Goals

The goals of this IA are to:

- Permanently address the potential methane fire/explosion hazard in order to safely use the areas within the 3317 Auburn Way North parcel where methane soil gas concentrations exceed 30%;

[21] PetroFix™ is a trademarked product. However, for the purposes of this IAWP, the trademark symbol is only added on the first use and is assumed thereafter.

- Remove gasoline source material in the predominant gasoline soil source area and the smaller source area along the southern 3317 Auburn Way North parcel boundary in order to accelerate progress towards eventually obtaining a no further action opinion from Ecology;
- Decrease risks to human health and the environment that are associated with the existing gasoline contamination;
- Reduce the restoration time frame for the Site;
- Not preclude reasonable alternatives for a final cleanup action;
- Comply with applicable federal, state, and local laws and regulations;
- Consider public concerns;
- Utilize sustainable remediation principles (e.g., reuse of clean soil) to the extent practicable; and
- Be cost-effective.

4.3 IA Cleanup Standards

In accordance with WAC 173-340-700(3), MTCA cleanup standards "consist of the following: (a) cleanup levels for hazardous substances present at the site; (b) the location where these cleanup levels must be met (point of compliance); and (c) other regulatory requirements that apply to the site because of the type of action and/or location of the site ('applicable state and federal laws')."

Site-specific cleanup levels for constituents of concern and points of compliance for applicable media have not been established for the Site, and IA-specific cleanup levels or points of compliance were not established for this IA. More to the point, cleanup levels and points of compliance are not necessary at this juncture since the IA is only a partial cleanup of the Site. In accordance with WAC 173-340-430(2)(b), this IA provides "a partial cleanup, that is, clean up hazardous substances from all or part of the site, but not achieve cleanup standards." For this IA, RI results and the magnitude of SL exceedances were used to define the IA excavation areas and depths (see Section 3.5). It is understood that additional active remediation may be needed at the Site in the future.

Potentially applicable or relevant and appropriate requirements (ARARs; i.e., federal, state, and local laws and regulations) were identified and evaluated to determine requirements that apply to IA design and implementation (see Appendix K). Based on this evaluation, none of the laws and regulations prevent or preclude IA components from being implemented. However, the IA design will include and require measures to address the ARARs for IA implementation as preliminarily outlined in Appendix K (e.g., waste management requirements, health and safety requirements, implementing an Inadvertent Discovery Plan, obtaining applicable permits, implementing dust and noise controls).

4.4 Regulatory Rationale for IA

This section provides the demonstration that the proposed IA satisfies MTCA requirements and expectations in WAC 173-340-430(1) through (5) for conducting an IA.

4.4.1 IA Purpose

The proposed IA meets the MTCA IA purpose in WAC 173-340-430(1) of only partially cleaning up the releases from the Property. More specifically, the proposed IA "is technically necessary to reduce a

threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance at a facility" (WAC 173-340-430(1)(a)). The primary threat to human health and the environmental that is being eliminated is the potential methane fire/explosion hazard (by permanently removing the underlying gasoline source that is causing the high methane concentrations). Further, the proposed IA "corrects a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed" (WAC 173-340-430(1)(b)). The "problem that may become substantially worse" is the potential methane fire/explosion hazard.

4.4.2 General Requirements

The proposed IA satisfies the IA general requirements pursuant to WAC 173-340-430(2)(b) since the proposed IA will "provide a partial cleanup, that is, clean up hazardous substances from all or part of the site, but not achieve cleanup standards."

4.4.3 Relationship to the Cleanup Action

The IA satisfies the requirement in WAC 173-340-430(3) via WAC 173-340-430(3)(b) since none of the IA remedial components will "foreclose" reasonable alternatives for the unknown final clean action.

4.4.4 Timing

The proposed IA satisfies the IA timing requirement in WAC 173-340-430(4) because (1) an IA "may occur anytime during the cleanup process" per WAC 173-340-430(4)(a), (2) the IA will not be used to delay or supplant the cleanup process, and (3) the IA will be followed by additional remedial actions (e.g., addressing remaining RI data gaps as outlined in Section 3.3.5.3).

4.4.5 Administrative Options

In accordance with WAC 173-340-430(5), an IA can be conducted under any of the MTCA administrative options. Thus, the proposed IA can be completed utilizing technical consultations and written opinions from Ecology's VCP (the expected path forward) or as a completely independent remedial action. Regardless of the MTCA administrative option, the IA will be conducted with the intent to be the substantial equivalent of an Ecology-conducted or Ecology-supervised IA per WAC 173-340-545(2)(c).

4.5 IA Alternatives Considered to Address the Methane Hazard

The proposed IA is the best remedial approach to permanently eliminate the ongoing potential methane hazard since it is the most robust, reliable, and certain method to permanently remove the underlying gasoline source material that is causing the high methane concentrations. In addition, the proposed IA provides valuable Site benefits such as (1) enhancing and expediting natural source zone depletion, bioremediation, and natural attenuation of the remaining gasoline contamination surrounding the IA excavation areas, (2) accelerating progress towards eventually achieving a no further action opinion from Ecology, (3) reducing the restoration time frame for the Site, (4) minimizing the need for long-term

remedial actions, and (5) being compatible with any final cleanup action.[22] Although other remedial technologies that do not include demolition of the automobile showroom or excavation of the gasoline soil source could potentially be conducted as an IA, none of the other remedial technologies would be as effective, permanent, or reliable as the proposed IA. For instance, installing a sub-slab depressurization system might seem like a reasonable IA at first glance since these systems are often relatively cheap to install, operate, and maintain for mitigating VI from VOCs (other than methane). However, multiple methane sub-slab depressurization systems would be necessary for this Site, and the systems would be significantly more complicated and costly compared to a typical non-methane system due to the associated permitting, gas treatment, special equipment (e.g., explosion-resistant blowers, methane flaring), and the scope and duration of necessary operation, maintenance, and monitoring activities. More importantly, installing sub-slab depressurization systems would be a superficial action that would not address the actual source or provide any of the valuable benefits that the proposed IA would provide. Likewise, soil vapor extraction would be substantially less effective (and not provide the valuable benefits associated with the proposed IA) based on the depth of gasoline soil source material, the shallow depth to groundwater, and the low-permeability soil where gasoline soil source material is located (e.g., sandy silt, clayey silt, clay, sandy clay). Finally, in-situ groundwater treatment by itself would be insufficient to address the potential methane hazard because it would not reduce the source strength of the gasoline soil source material. Thus, given the totality of the circumstances, the proposed IA is the best approach for addressing the potential methane fire/explosion hazard at this Site.

[22] Excavation 2 is not necessary for eliminating the potential methane hazard; however, Excavation 2 is necessary to achieve these valuable Site-wide benefits for the Site.

SECTION 5: IA PATH FORWARD

The purpose of this section is to outline the path forward for developing and documenting the IA design and completing other key pre-implementation tasks. It is currently envisioned that the IA design elements in this section will begin once Ecology indicates it does not object to the conceptual IA presented in this IAWP. Key IA design tasks to be completed in the future include:

- Completing a design investigation (see Section 5.1);
- Developing the IA design (see Section 5.2);
- Developing engineer-prepared plans (see Section 5.3); and
- Developing the engineering design report (EDR) and Remediation Contractor specifications (see Section 5.4).

Following the design, implementation, and reporting of the IA, remaining RI data gaps (see Section 3.3.5.3) will need to be addressed before preparing a RI/FS report and CAP for the final cleanup action.

5.1 Design Investigation

PIONEER will prepare a work plan for conducting a design investigation. The work plan will include a sampling and analysis plan (SAP) and Quality Assurance Project Plan (QAPP) in accordance with WAC 173-340-820 and applicable components of Ecology guidance (Ecology 1995, 2016b). The work plan will likely be prepared as an addendum to the RIWP (PIONEER 2020a). Design investigation activities will likely include:

- Conducting a hazardous building materials assessment of the 3317 Auburn Way North automobile showroom;
- Collecting soil samples from direct-push borings within and surrounding the conceptual Excavation 2 boundary (see Figure 8), analyzing all samples for TPH-G and BTEXN, and analyzing select samples for TPH-D, TPH-HO, PAHs, and PCBs;
- Collecting representative soil and water samples from within Excavation 1 and Excavation 2 for waste characterization purposes and analyzing the samples for constituents required by candidate disposable facilities who might accept the excavated gasoline-impacted soil and the gasoline-impacted water generated during dewatering;
- Collecting supplemental soil samples within Excavation 1 and Excavation 2 for further vertical characterization of TPH-G impacts near the top and bottom of the proposed excavations;
- Collecting geotechnical data (e.g., standard penetration tests or cone penetration testing) in at least one representative boring within/near Excavation 1 or Excavation 2 to a depth of at least 30 feet bgs; and
- Obtaining hydraulic conductivity data (e.g., slug test(s), aquifer pump test) if necessary to support an evaluation of groundwater dewatering expectations.

After the design investigation is completed, PIONEER will prepare a design investigation technical memorandum that will be included in the EDR.

5.2 Developing the IA Design

Key inputs and considerations that will likely inform the IA design include:

- Results obtained from the design investigation (see Section 5.1);
- An understanding of any future land use or development changes contemplated by Sunset Auburn;
- An improved understanding of existing underground utilities and overhead utilities within and adjacent to the IA excavation areas as well as future automobile dealership utility needs;
- Information about the nature and condition of the City of Auburn sewer main near the western edge of Auburn Way North (see Figure 8);
- The acceptance or rejection of submitted waste profiles by candidate disposal facilities who might accept the excavated gasoline-impacted soil and the gasoline-impacted water generated during dewatering;
- Practical considerations such as the operating needs of the active auto dealership (e.g., customer traffic), heavy equipment access, space limitations for material/stockpile storage and dump truck queuing and loading, and proximity of earthwork to buildings;
- Identifying local permits and associated permit requirements that are applicable to the IA; and
- Further evaluation of ARARs that may apply to IA implementation (see Appendix K).

Key design decisions will likely include:

- The temporary shoring and dewatering approach (e.g., sloping the excavation sidewalls versus installing a temporary sheet pile wall to provide shoring and decrease dewatering);[23]
- Treatment, monitoring, and/or disposal requirements for water generated during dewatering;
- The measures that may be needed to protect and/or monitor the Auburn Way North road, the sewer main near the western edge of Auburn Way North, and the portion of the 3317 Auburn Way North building that will remain;
- The extent and dosing for in-situ groundwater treatment with PetroFix (e.g., spraying PetroFix in each excavation);
- The backfill that will be used and the associated compaction requirements;
- The extent to which some excavated surface soil may be stockpiled, tested, and reused as backfill, if appropriate; [24]
- Approaches to address the practical considerations mentioned in the previous paragraph (e.g., construction sequencing, minimizing stockpiling of import material and excavated soil, traffic control plan);
- Roles and responsibilities for Sunset Auburn, the Remediation Contractor, PIONEER, and others;
- The applicable and appropriate specifications to be applied to the Remediation Contractor (see Section 5.4); and
- The construction quality control provisions needed to ensure that the IA construction activities conducted by the Remediation Contractor are completed correctly, efficiently, and safely.

[23] Although a temporary sheet pile wall provides potential advantages, downsides include higher costs and the potential for a vibration damage risk to nearby infrastructure (e.g., sewer main).

[24] Reuse of soil with limited contamination is a common sustainable remediation practice and consistent with MTCA's preference for reuse and recycling (e.g., WAC 173-340-360(5)(d)(iii)(B)(I)).

5.3 Engineer-Prepared Plans

A Waste Management Plan (WMP), a Compliance Monitoring Plan (CMP), and site-specific Health and Safety Plans (HASPs) will be prepared, and an Inadvertent Discovery Plan (IDP) has been prepared, as outlined below. These documents will be included in the EDR and Remediation Contractor Specifications document outlined in Section 5.4.

5.3.1 Waste Management Plan

A WMP will be prepared during IA design and all IA wastes will be managed and disposed of or recycled in accordance with the WMP. The WMP will:

- Identify all anticipated waste streams (e.g., hazardous building materials, excavated soil designated as a waste that will be disposed of off-site, groundwater generated during dewatering, water generated from equipment and personnel decontamination, asphalt, concrete, and miscellaneous construction debris);
- Identify the expected temporary storage, labeling, and disposition for each anticipated waste stream;
- Provide approved waste profiles and applicable information about the proposed disposal facilities;
- Specify requirements for temporary stockpiles of excavated soil (e.g., approved locations for creating stockpiles, stockpile covering requirements, maintenance, tracking, and recordkeeping requirements); and
- Specify requirements for storage of temporary waste containers (e.g., approved locations for containers, type of containers to be used, tracking and recordkeeping requirements).

5.3.2 Compliance Monitoring Plan

An IA CMP will be prepared during IA design in accordance with the requirements of WAC 173-340-410. The CMP will be supported as necessary by a SAP/QAPP prepared in accordance with WAC 173-340-820 and applicable components of Ecology guidance (Ecology 1995, 2016b). There are three types of compliance monitoring defined in WAC 173-340-410: protection monitoring, performance monitoring, and confirmation monitoring. The anticipated elements for each type of IA compliance monitoring are summarized in the following sub-sections.

5.3.2.1 Protection Monitoring

Per WAC 173-340-410(1)(a), the purpose of protection monitoring is to "confirm that human health and the environment are adequately protected during construction and the operation and maintenance period of an interim action or cleanup action as described in the health and safety plan." Protection monitoring for this IA will likely consist of development and implementation of a Remediation Contractor HASP and an updated PIONEER HASP (see Section 5.3.3), employee adherence to the applicable HASP, vapor monitoring, dust monitoring, and air sampling of worker breathing zones.

5.3.2.2 Performance Monitoring

Per WAC 173-340-410(1)(b), the purpose of performance monitoring is to "confirm that the interim action or cleanup action has attained cleanup standards and, if appropriate, remediation levels or other

performance standards such as construction quality control measurements or monitoring necessary to demonstrate compliance with a permit or, where a permit exemption applies, the substantive requirements of other laws." Performance monitoring for this IA will likely consist of Sunset Auburn Site Representative (i.e., PIONEER) oversight of the Remediation Contractor to ensure:

- The WMP, CMP, Remediation Contractor HASP, and IDP are implemented appropriately;
- Compliance with the Remediation Contractor specifications; and
- Compliance with all IA permit requirements.

5.3.2.3 Confirmation Monitoring

Per WAC 173-340-410(1)(c), the purpose of confirmation monitoring is to "confirm the long-term effectiveness of the interim action or cleanup action once cleanup standards and, if appropriate, remediation levels or other performance standards have been attained." Because (1) cleanup standards and remediation levels have not yet been established for the Site, (2) achieving cleanup standards or remediation levels is not a goal for this IA, (3) the RI is still on-going, and (4) a final cleanup action is not known, it is premature and unnecessary to propose confirmation monitoring as part of the IA. However, soil samples may be opportunistically collected during the IA for RI characterization purposes from the sidewalls and bottoms of Excavations 1 and 2. In addition, methane concentrations will be measured in post-IA sub-slab soil gas samples during subsequent RI activities to ensure sub-slab methane concentrations have decreased below 30%.[25]

5.3.3 Health and Safety Plans

It is anticipated that PIONEER employees and subcontractors will conduct design investigation field activities and provide IA field oversight of the Remediation Contractor. PIONEER's most recent site-specific HASP (from May 2021) is included in Appendix L. This HASP will be updated prior to the design investigation to incorporate design investigation and IA field oversight field activities.

IA specifications will require the Remediation Contractor to prepare and implement its own HASP for all IA activities conducted by Remediation Contractor employees and subcontractors. IA specifications will also require the Remediation Contractor to (1) submit its HASP to Sunset Auburn and PIONEER for approval, and (2) utilize 40-hour hazardous waste operations and emergency response-trained personnel with current refresher certifications for all IA fieldwork.

5.3.4 Inadvertent Discovery Plan

Although the potential for encountering cultural resources (e.g., human remains, tribal artifacts, historical resources, archaeological resources) during the IA is low, an IDP was developed and will be implemented in the event that a cultural resource is inadvertently discovered during excavation activities (see Appendix M).[26] If anyone involved with IA implementation suspects the inadvertent

[25] In other words, post-IA sub-slab soil gas samples would not be collected until sometime after the building is demolished, IA excavation activities are completed, and new asphalt pavement is installed over the IA excavation areas.

[26] Ecology consultation with the Department of Archaeology and Historic Preservation and affected tribes prior to IA implementation is not applicable per WAC 173-340-815(3)(a) because Ecology is not conducting, supervising, or funding the IA.

discovery of a cultural resource during excavation activities, all ground disturbing activities, and other activities proximate to the discovery, shall immediately cease and the IDP in Appendix M shall be implemented. The Remediation Contractor and the Sunset Auburn Site Representative shall ensure that all field personnel follow the IDP procedures and treat all cultural resources with respect.

5.4 EDR and Remediation Contractor Specifications

A Washington-licensed professional engineer will be in responsible charge for the preparation of an EDR and Remediation Contractor Specifications document that will communicate the IA design, facilitate bidding by potential Remediation Contractors, and specify the IA requirements for the selected Remediation Contractor. Given the routine scope of the IA, the necessary EDR components and plan/specification components will be combined in a single document to avoid unnecessary duplication as allowed by WAC 173-340-400(4). However, the EDR and Remediation Contractor Specifications document will meet the substantial equivalent requirements for a similar Ecology-conducted or Ecology-supervised site. The EDR and Remediation Contractor Specifications document will include:

- Applicable EDR components per WAC 173-340-400(4)(a);
- The design investigation technical memorandum;
- Applicable plan/specification components per WAC 173-340-400(4)(b);
- The WMP, CMP, and the updated PIONEER HASP outlined in Section 5.3;
- The IDP included in Appendix M;
- Remediation Contractor specifications for all IA implementation elements;
- The IA implementation tasks to be completed by Sunset Auburn or its retained professionals;
- A bid sheet; and
- Measurement and payment terms and expectations.

5.5 Other Key Pre-Implementation Tasks

5.5.1 Public Notification

Pursuant to WAC 173-340-430(6)(b), WAC 173-340-545(3), WAC 173-340-600(20)(a)(iv), and WAC 173-340-600(20)(b)(i), the following actions will be taken to notify the public about the this IAWP, the future EDR and Remediation Contractor Specifications document, and the future IA Report:

- Ecology will create a site-specific webpage on Ecology's website and provide site-specific information on that webpage (e.g., previous technical documents, this IAWP, the future EDR and Remediation Contractor Specifications document, the future IA Report) per WAC 173-340-600(5).
- Ecology will provide site-specific electronic alerts to anyone who requests such an alert per WAC 173-340-600(6).
- Ecology will publish a notice about this IAWP in the Contaminated Sites Register per WAC 173-340-600(7)(b)(xii)(A).

In addition, prior consultation is not warranted given the low probability of inadvertently discovering a cultural resource during this IA.

- Sunset Auburn or PIONEER will submit written notification to Ecology, Seattle and King County Public Health, City of Auburn, Sunset Auburn, and potentially liable persons (e.g., Roempke Enterprises) more than 15 days before the start of IA construction activities per WAC 173-340-545(3)(a) and -545(3)(b).
- Sunset Auburn or PIONEER will post a sign at the Site at a location visible to the general public for the entire duration of IA construction activities that indicates the IA being conducted and identifies a contact person per WAC 173-340-545(3)(c).

5.5.2 Remediation Contractor Bidding and Contracting

Sunset Auburn and PIONEER will discuss bidding and contracting objectives and requirements during the IA design phase. It is currently expected that Sunset Auburn will competitively bid the IA implementation work with several Remediation Contractor candidates. The bidding solicitation will include this IAWP and the future EDR and Remediation Contractor Specifications document as attachments. It is envisioned that the bidding process will include opportunities for bidders to ask questions and attend a Site visit with Sunset Auburn and PIONEER. The specifications and the bid sheet in the future EDR and Remediation Contractor Specifications document will be the basis for bidding. It is envisioned that Sunset Auburn will contract with the Remediation Contractor selected by Sunset Auburn at the end of the bidding process.

5.5.3 Obtaining Permits

City of Auburn permits will need to be obtained prior to the start of IA construction activities. City of Auburn permits and associated permit requirements that are applicable to the IA will be identified in the IA design phase. The EDR and Remediation Contractor Specifications document will determine which permits will be obtained and paid for by Sunset Auburn and which permits will be obtained and paid for by the Remediation Contractor. Sunset Auburn and/or the Remediation Contractor may need to submit documentation to obtain exceptions for some permits.

Prior to IA implementation, PIONEER will submit the technical concurrence documentation to Ecology's Underground Injection Control (UIC) Program to support the satisfaction of the nonendangerment standard in WAC 173-218-080 (as applicable) and WAC 173-218-090(3)(a), and will register the two proposed UIC wells (i.e., the two IA excavations where PetroFix will be sprayed) in accordance with WAC 173-218-070(1) to enable the excavations to become rule authorized UIC wells. If spraying PetroFix into the excavations cannot be rule authorized for some reason, then the application of PetroFix will most likely be eliminated from the IA (rather than trying to pursue and obtain a state waste discharge permit).

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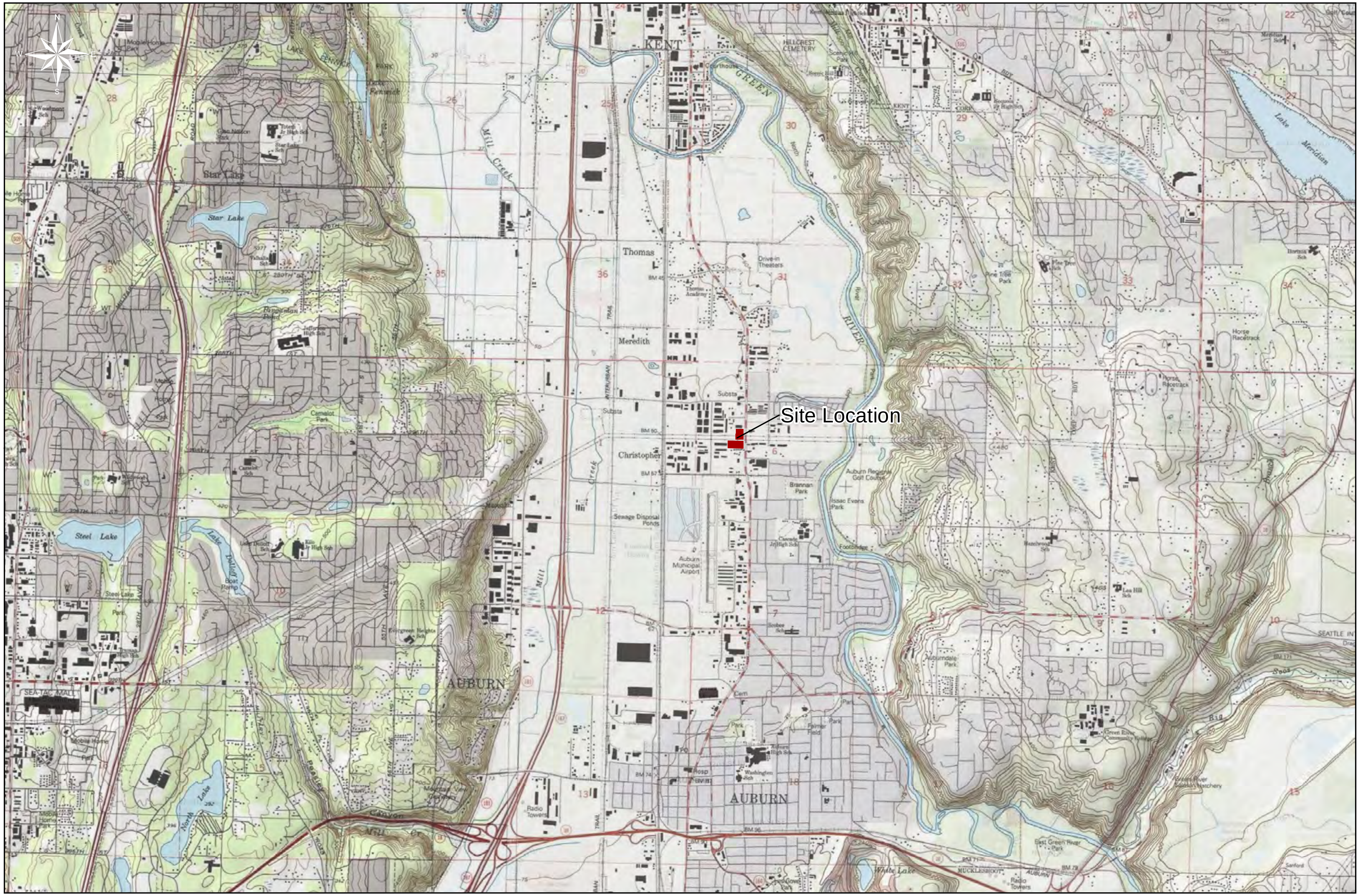
Figures



Legend

Site Location

0 0.5 1 1.5 Miles

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Vicinity Map
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 1

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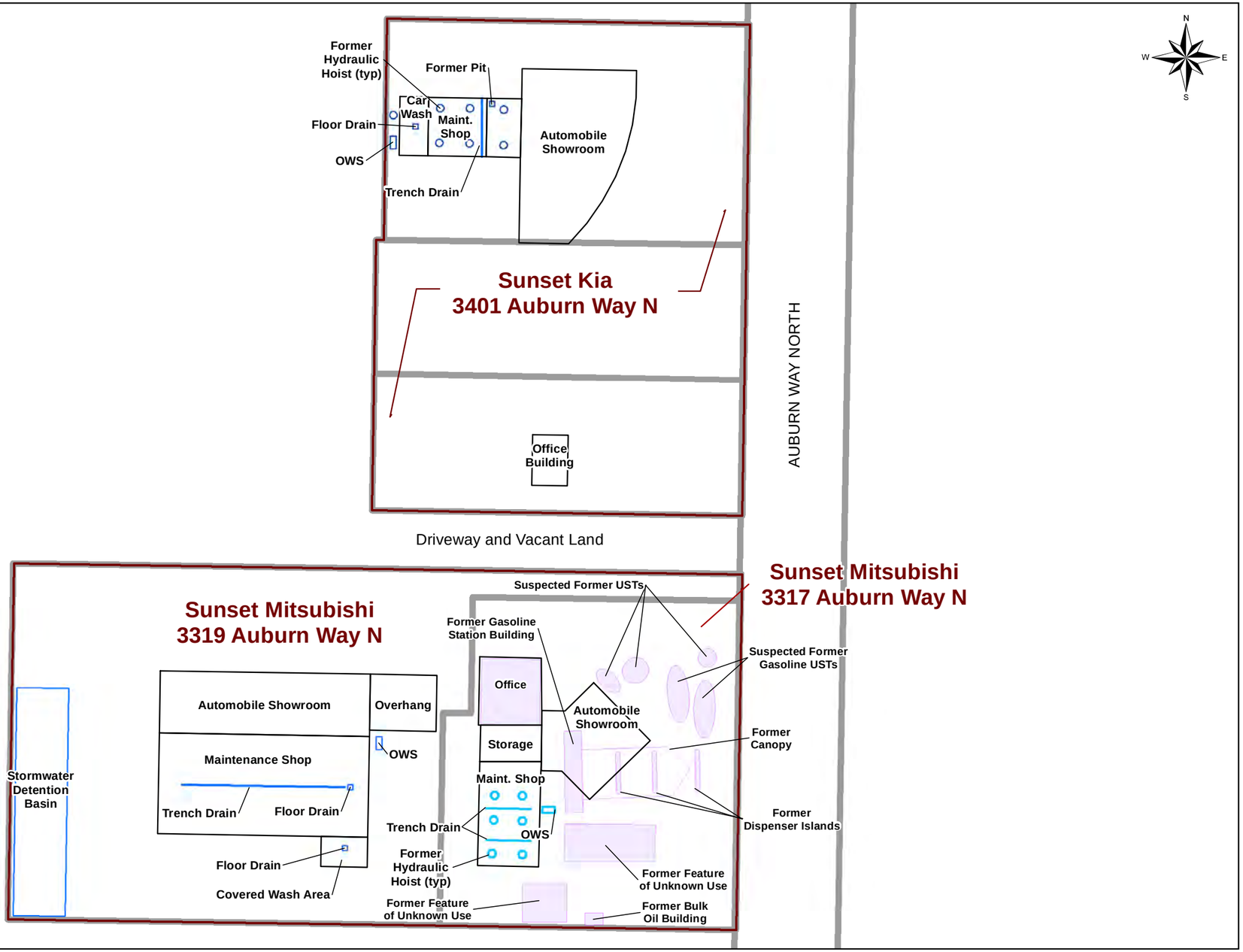

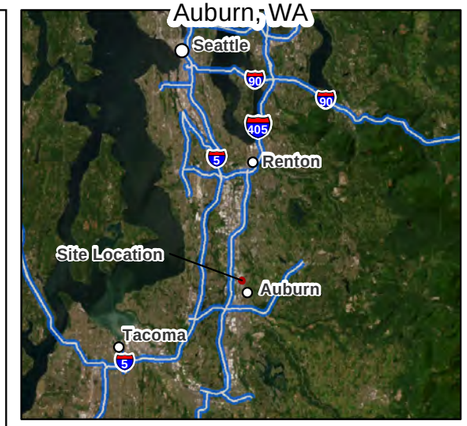

Legend

- Property Boundary
- King County Tax Parcels

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features
- 3319 Auburn Way North Auto Dealership Features
- 3401 Auburn Way North Auto Dealership Features

Other Features

- Current Buildings

Notes:
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.

0 50 100 150 Feet

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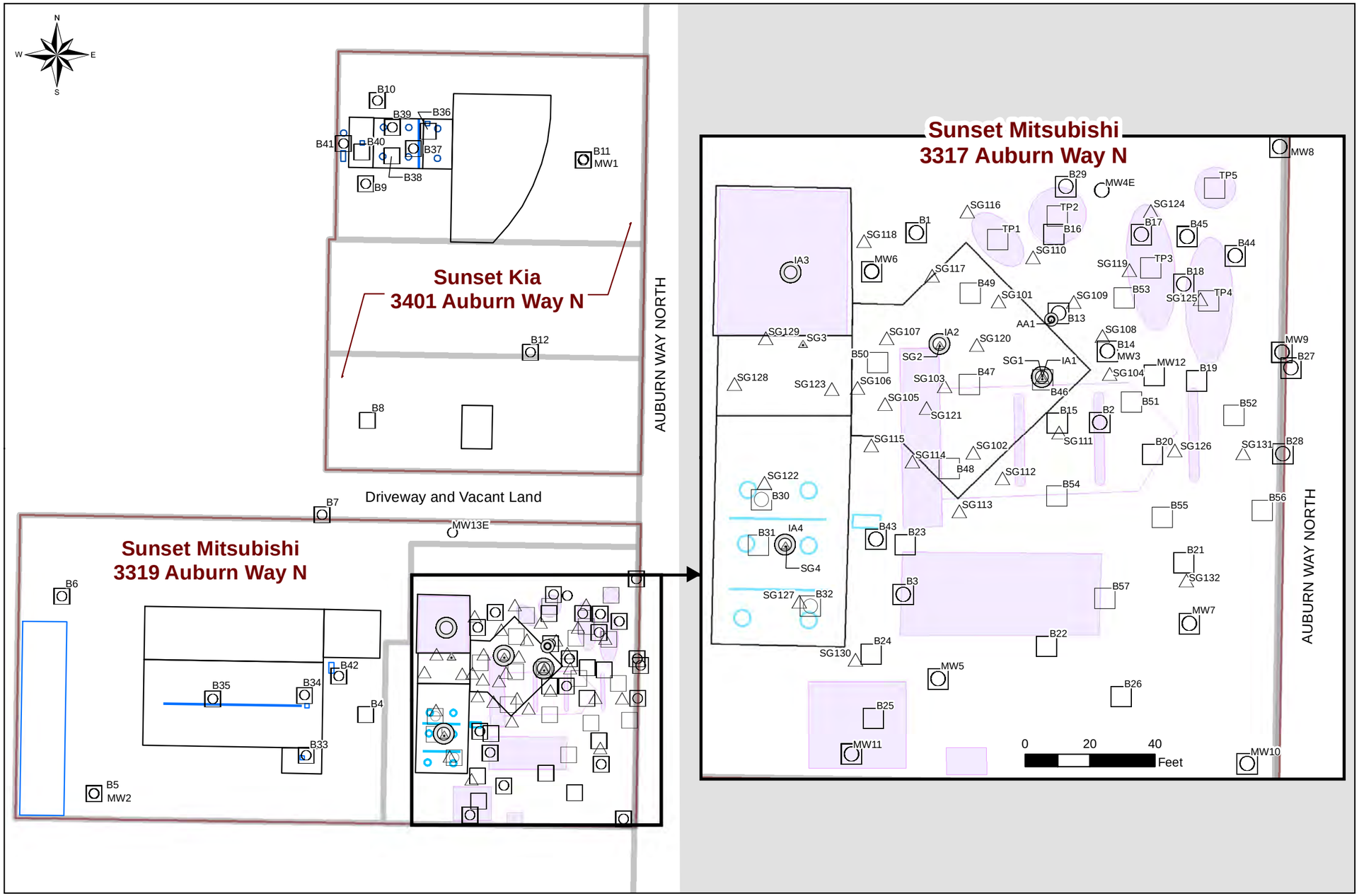
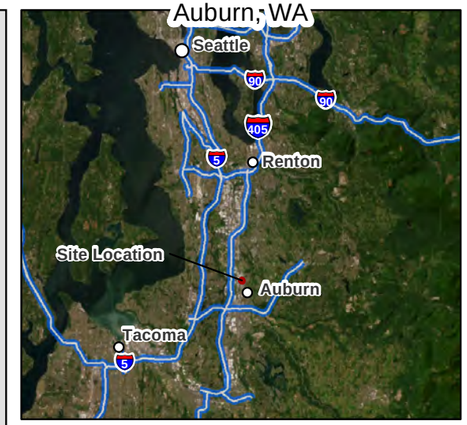
Property Boundary and Key Operational Features
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 2





Legend

Sampling Locations

- Soil Sampling Location
- Groundwater Sampling Location
- September 2020 Methane Soil Gas Sampling Location

July 2020 Vapor Intrusion Sampling Locations

- Sub-Slab Soil Gas Sampling Location
- Indoor Air Sampling Location
- Ambient Air Sampling Location

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features
- 3319 Auburn Way North Auto Dealership Features
- 3401 Auburn Way North Auto Dealership Features

Other Features

- Current Buildings
- King County Tax Parcels
- Property Boundary

Notes:
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.
- The September 2020 indoor air and ambient air sampling locations and the sediment SD1 sampling location are not shown on this figure.

0 75 150 225 Feet

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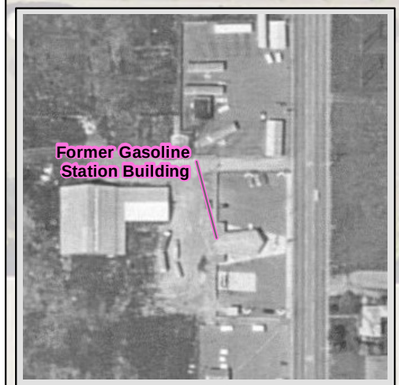
Previous Sampling Locations
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 3



1970

1981

August 14, 1985

MW13E
MW8
B29
MW4E
TP5
SG116
TP2
SG124
B1
TP1
B16
B17
B45
SG118
SG110
B44
MW6
SG117
TP3
SG119
B18
B49
SG101
B53
TP4
B13
SG109
SG125
SG129
SG107
SG108
B14
MW9
SG120
B50
MW3
B27
SG1
B46
MW12
SG128
SG123
SG106
SG103
B47
SG104
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SG121
B51
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B48
SG122
SG112
B54
B30
SG113
B56
B55
B31
B43
B23
B21
SG132
B3
B57
SG127
B32
MW7
B22
B24
SG130
MW5
B26
B25
MW11
MW10

Legend

TPH-G Soil Results[1]

- TPH-G Soil ≤ 30 mg/kg
- 30 mg/kg < TPH-G Soil ≤ 300 mg/kg
- 300 mg/kg < TPH-G Soil ≤ 3,000 mg/kg
- TPH-G Soil > 3,000 mg/kg

TPH-G Groundwater Results[2]

- TPH-G GW ≤ 800 ug/L
- 800 ug/L < TPH-G GW ≤ 8,000 ug/L
- 8,000 ug/L < TPH-G GW ≤ 80,000 ug/L
- TPH-G GW > 80,000 ug/L

Sustained Methane Soil Gas Results from September 2020 Samples

- Sustained Methane SG ≤ 1.25%
- 1.25% < Sustained Methane SG ≤ 5%
- 5% < Sustained Methane SG ≤ 30%
- Sustained Methane SG > 30%

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features

Other Features

- King County Tax Parcels
- Property Boundary

Notes:
GW: groundwater
SG: soil gas
- TPH-G Soil SL: 30 mg/kg
- TPH-G GW SL: 800 ug/L
- The methane SG concentration bins were based on Table 1 of ASTM International Designation E2993-16
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.

[1]The maximum concentration is shown if multiple samples were collected from a given boring.
[2]The maximum concentration is shown for monitoring wells sampled more than once.

0 25 50 75 Feet

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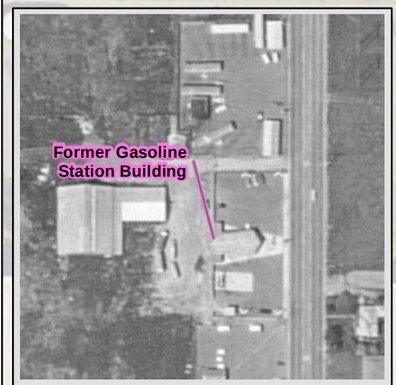
Summary of Gasoline and Methane Impacts in 3317 Auburn Way North Parcel Interim Action Work Plan Former Coastal / Roempke Enterprises Site

Figure 4



1970

1981

August 14, 1985

IA3 SL exceedances:
Benzene
Naphthalene
Chloroform

IA2 SL exceedances:
TPH
Benzene
Naphthalene

SG2 SL exceedance:
TPH

SG3 SL exceedance:
Benzene

IA1 SL exceedances:
TPH
Benzene
Naphthalene

SG1 SL exceedances:
TPH
Benzene
Cyclohexane
n-Heptane
n-Hexane

IA4 SL exceedances:
TPH
Benzene
Total Xylenes
Naphthalene

SG4 SL exceedance:
Chloroform

Legend

July 2020 Vapor Intrusion Sampling Locations

- Sub-Slab Soil Gas Sampling Location
- Indoor Air Sampling Location

Sampling Results

- Concentrations for all detected constituents were < unrestricted land use SLs
- Concentration for at least one detected constituent was > unrestricted land use SL and ≤ adult commercial worker SL
- Concentration for at least one detected constituent was > adult commercial worker SL and ≤ 10 times the adult commercial worker SL
- Concentration for at least one detected constituent was >10 times the adult commercial worker SL

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features

Other Features

- King County Tax Parcels
- Property Boundary

Notes:
- IA: Indoor Air
- SG: Soil Gas
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.

0 25 50 75 Feet

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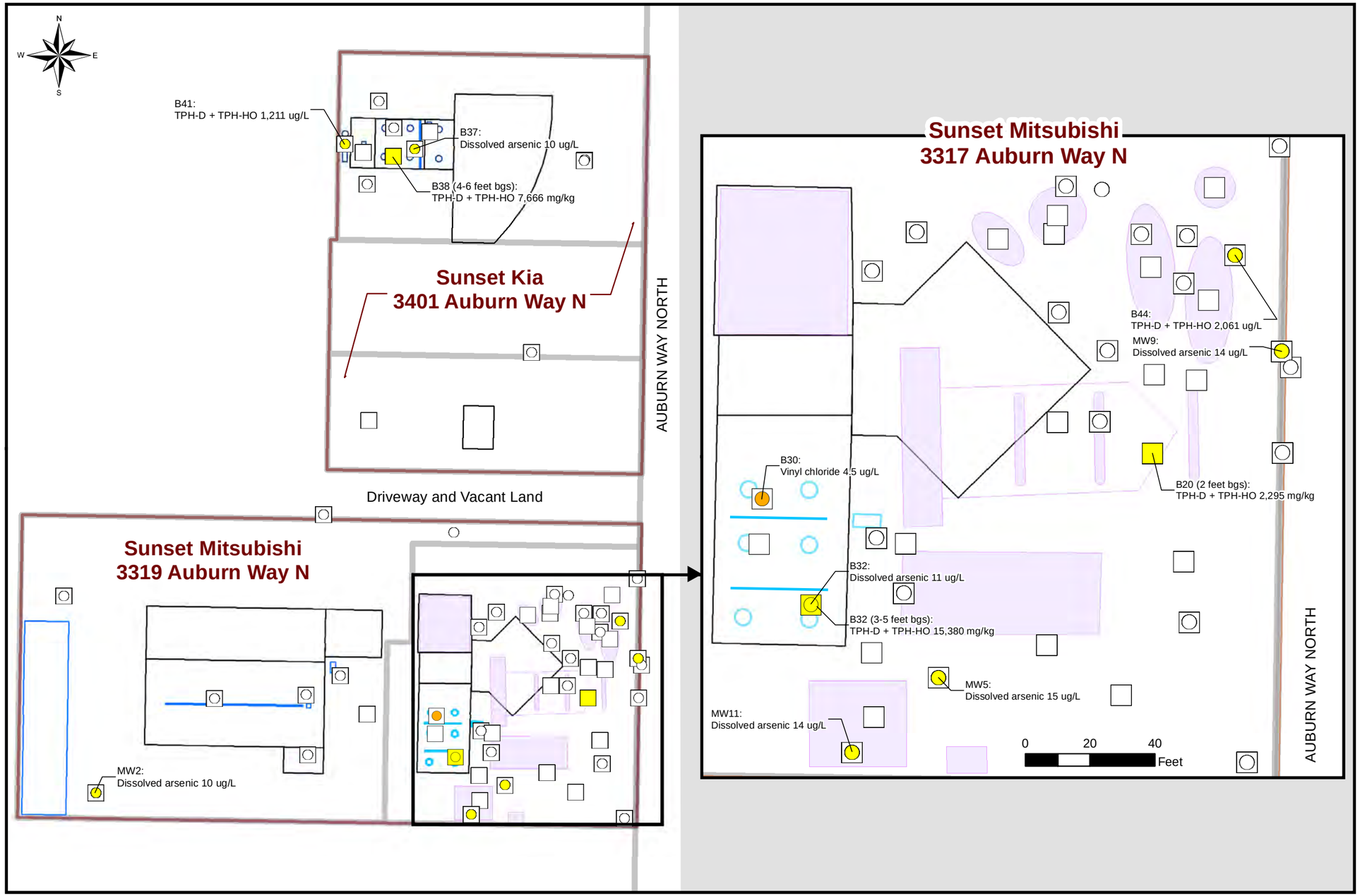
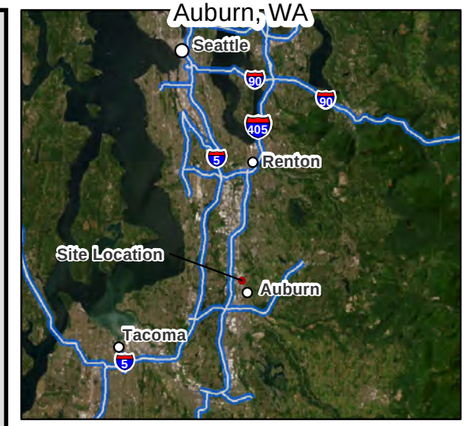
Summary of July 2020 Vapor Intrusion Sampling Results
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 5





Legend

Sampling Locations
- Soil Sampling Location
- Groundwater Sampling Location

Sampling Results
- Concentrations for all detected constituents were less than most stringent SLs
- Concentration for at least one detected constituent exceeded most stringent SL
- Concentration for at least one detected constituent exceeded ten times the most stringent SL

Key Operational Features
- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features
- 3319 Auburn Way North Auto Dealership Features
- 3401 Auburn Way North Auto Dealership Features

Other Features
- Current Buildings
- King County Tax Parcels
- Property Boundary

Notes:
- GW: Groundwater
- TPH-D + TPH-HO Soil SL: 2,000 mg/kg
- Arsenic GW SL: 8 ug/L
- TPH-D + TPH-HO GW SL: 500 ug/L
- Vinyl chloride GW SL: 0.29 ug/L
-Total arsenic and total lead GW exceedances in 2019 GW samples are not included on this figure for the reason stated in the text.
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.

0 75 150 225 Feet

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Summary of Soil and Groundwater SL Exceedances for Non-Gasoline Chemicals
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 6

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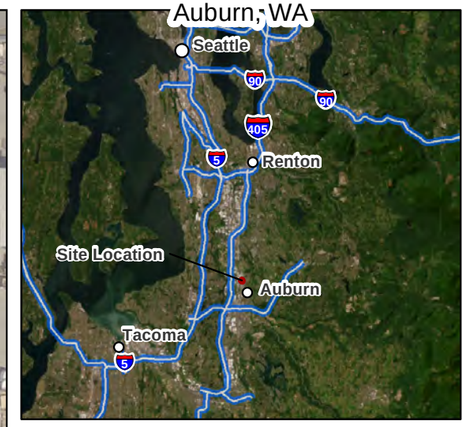

Legend

- Shallow MW
- Deeper MW [1]

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features
- 3319 Auburn Way North Auto Dealership Features
- 3401 Auburn Way North Auto Dealership Features

Other Features

- King County Tax Parcels
- Property Boundary

Notes:

[1] MW4E and MW13E were not included since these two MWs are notably deeper than the rest of the MWs and the screen intervals are unknown.

- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.

0 50 100 150 Feet

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2020 Groundwater Elevations
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 7

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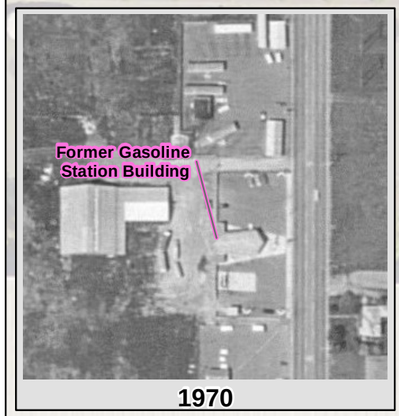

1970

1981

August 14, 1985

MW13E
MW8
B29
MW4E
TP5
SG116
TP2
SG124
B1
TP1
B16
B17
B45
SG118
B44
SG110
TP3
MW6
SG117
SG119
B18
B49
B53
SG101
B13
SG109
TP4
SG125
SG129
SG107
SG108
MW9
B50
SG120
B14
B27
MW3
SG1
SG128
SG123
SG106
SG103
B47
B46
MW12
SG104
B19
SG105
SG121
B51
B52
B15
B2
SG111
SG115
SG102
B20
SG126
SG131
B28
SG114
B48
SG122
SG112
B54
B30
B56
SG113
B55
B31
B43
B23
B21
Excavation 1
B3
SG132
B57
SG127
B32
MW7
B22
B24
SG130
MW5
B26
B25
MW11
MW10
Excavation 2

Legend

IA Excavation Areas

TPH-G Soil Results[1]

- TPH-G Soil ≤ 30 mg/kg
- 30 mg/kg < TPH-G Soil ≤ 300 mg/kg
- 300 mg/kg < TPH-G Soil ≤ 3,000 mg/kg
- TPH-G Soil > 3,000 mg/kg

TPH-G Groundwater Results[2]

- TPH-G GW ≤ 800 ug/L
- 800 ug/L < TPH-G GW ≤ 8,000 ug/L
- 8,000 ug/L < TPH-G GW ≤ 80,000 ug/L
- TPH-G GW > 80,000 ug/L

Sustained Methane Soil Gas Results from September 2020 Samples

- Sustained Methane SG ≤ 1.25%
- 1.25% < Sustained Methane SG ≤ 5%
- 5% < Sustained Methane SG ≤ 30%
- Sustained Methane SG > 30%

Underground Utilities (Near 3317 Auburn Way N)

- Sewer
- Sewer Manhole
- Stormwater
- Catch Basin
- Water
- Electric
- Communication
- Natural Gas

Key Operational Features

- Former Coastal Gasoline Station Features (1969-1985)
- 3317 Auburn Way North Auto Dealership Features

Other Features

- King County Tax Parcels
- Property Boundary

Notes:
GW: groundwater
SG: soil gas
- TPH-G Soil SL: 30 mg/kg
- TPH-G GW SL: 800 ug/L
- The methane SG concentration bins were based on Table 1 of ASTM International Designation E2993-16
- Geospatial data were provided by other consultants or georeferenced from reports by others or were estimated based on field observations. All locations are approximate.
[1]The maximum concentration is shown if multiple samples were collected from a given boring.
[2]The maximum concentration is shown for monitoring wells sampled more than once.

0 25 50 75 Feet

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IA Excavation Areas
Interim Action Work Plan
Former Coastal / Roempke Enterprises Site

Figure 8

Document Path: G:\Projects\Coastline Law\Sunset Auburn\Maps\2023\IAWP\12 Dec\Fig 8_IA Remediation Areas.mxd; Author: VN; Date Saved: 2/26/2024

Tables

Table 1: Investigation Chronology

Date	Document/Phase	Activity	Media	Locations	Primary Analytes [1,2,3]
May 2002	N/A	Install MWs [4]	GW	MW4E, MW13E, AGL-063	N/A
Unknown	N/A	Decommision MW [4]	GW	AGL-063	N/A
April 2017	Phase I ESA Report (Green Environmental Management 2017)	Complete Phase I ESA	N/A	N/A	N/A
December 2018	Phase I ESA Report (TetraTech 2018)	Complete Phase I ESA	N/A	N/A	N/A
April 2019	Subsurface investigation report (Robinson Noble 2019a)	Complete subsurface drilling and sampling	Soil	B1 through B12	TPH-G, TPH-D, TPH-HO, VOCs, arsenic, cadmium, chromium, lead, and mercury
			GW	B1 through B3, B5 through B7, and B9 through B12	
November 2019	Subsurface investigation report (Robinson Noble 2019b)	Complete subsurface drilling and sampling	Soil	B13 through B24	TPH-G, TPH-D, TPH-HO, gasoline-related VOCs, arsenic, cadmium, chromium, lead, and mercury
			GW	B13, B17, and B18	TPH-G, TPH-D, TPH-HO, and gasoline-related VOCs
			Soil	MW1 and MW2	TPH-G, TPH-D, TPH-HO, and gasoline-related VOCs
		Install MWs	GW	MW1 through MW3	N/A
		Develop and survey MWs	GW	MW1 through MW4E	N/A
		Conduct October 2019 GWM event	GW	MW1 through MW4E	TPH-G, TPH-D, TPH-HO, gasoline-related VOCs, arsenic, cadmium, chromium, lead, and mercury
March 2020	Subsurface investigation report (Robinson Noble 2020)	Complete subsurface drilling and sampling	Soil	B25 through B29	TPH-G, TPH-D, TPH-HO, gasoline-related VOCs, chromium, and lead
			GW	B27 through B29	TPH-G, TPH-D, TPH-HO, and gasoline-related VOCs
			Soil	MW5 through MW7	TPH-G, TPH-D, TPH-HO, gasoline-related VOCs, chromium, and lead
		Install MWs	GW	MW5 through MW7	N/A
		Develop and survey MWs	GW	MW5 through MW7	N/A
		Conduct December 2019 GWM event	GW	MW1 through MW7	TPH-G, TPH-D, TPH-HO, gasoline-related VOCs, arsenic, cadmium, chromium, lead, and mercury
July 2020	RIWP (PIONEER 2020a)	Prepare RIWP	N/A	N/A	N/A

Table 1: Investigation Chronology

Date	Document/Phase	Activity	Media	Locations	Primary Analytes [1,2,3]
July 2020	RI Phase 1 sampling and analysis	Complete geophysical investigation (GPRS 2020)	N/A	N/A	N/A
		Complete subsurface drilling and sampling	Soil	B30 through B45	TPH-G, TPH-D, TPH-HO, VOCs, PAHs, and RCRA metals
			GW	B30, B32 through B35, B37, B39, and B41 through B45	
			Sediment	SD1	
			Soil	MW8 through MW12 [5]	TPH-G, VOCs, arsenic, and lead
		Install MWs	GW	MW8 through MW11 [5]	N/A
		Develop and survey MWs	GW	MW1 through MW11 and MW13E	N/A
		Conduct July 2020 GWM event	GW	MW1 through MW11 and MW13E	TPH-G, VOCs, arsenic, and lead
		Complete vapor intrusion sampling	Soil gas	SG1 through SG4	TPH (i.e., C5-C8 aliphatics, C9-C12 aliphatics and C9-C10 aromatics), VOCs, methane, oxygen, carbon dioxide
			Indoor air	IA1 through IA4	
			Ambient air	AA1	
August 2020		Conduct two additional GW gauging events	GW	MW1 through MW11 and MW13E	N/A
September 2020	Methane field sampling and analysis	Obtain methane field measurements	Soil gas	SG1 and SG101 through SG132	Methane, oxygen, carbon dioxide
			Indoor air	IA101 through IA135	Methane
			Ambient air	AA101 through AA129	Methane
May 2021	Test pit sampling and analysis (PIONEER 2022b)	Complete subsurface excavations and sampling	Soil	TP1 through TP5	TPH-G, TPH-D, TPH-HO, and gasoline-related VOCs
May 2022	RIWP Addendum (PIONEER 2022a)	Prepare RIWP for PDI activities	N/A	N/A	N/A
June 2022	PDI (PIONEER 2022b)	Complete subsurface drilling and sampling	Soil	B46 through B57	TPH-G, benzene, toluene, ethylbenzene, xylenes, and naphthalenes

Notes:

GW: groundwater; GWM: groundwater monitoring MW: monitoring well; N/A: not applicable; PAHs: polycyclic aromatic hydrocarbons; PDI: pre-design investigation; RCRA: Resource Conservation and Recovery Act; RIWP: remedial investigation work plan; VOCs: volatile organic compounds

[1] Select samples were analyzed for additional analytes (e.g., total organic carbon, volatile petroleum hydrocarbons, extractable petroleum hydrocarbons, hexavalent chromium).

[2] Gasoline-related VOCs include benzene, toluene, ethylbenzene, xylenes, total naphthalenes, 1,2-dichloroethane, ethylene dibromide, and methyl-tert-butyl-ether.

[3] Metal analyses for Robinson Noble groundwater samples were for total metals. Metal analyses for PIONEER groundwater samples were for dissolved metals.

[4] An intact historical MW (dubbed MW4E by Robinson Noble) was discovered by Robinson Noble in 2019. Another intact historical MW (dubbed MW13E by PIONEER) and a decommissioned MW (which has a surface monument remaining and the 1-inch-diameter MW casing filled with bentonite) were discovered by PIONEER in 2020. Based on the location of these MWs plus a MW construction log for the 1-inch-diameter MW AGL-063 in the 2017 Green Environmental Management Phase I ESA Report, it is assumed that these three MWs were installed by Tacoma Water in May 2002. MW AGL-063 was subsequently decommissioned at an unknown date.

[5] A monitoring well was not installed within the MW12 soil boring as originally planned. Thus, only soil samples were collected from the MW12 soil boring.

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Table 2: TPH-G and BTEXN Soil Concentrations

Sample Date	Sample Location	Sample Depth (feet bgs)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes [3] (mg/kg)	Naphthalene [4] (mg/kg)	Total Naphthalenes [3,4] (mg/kg)
		Soil SL [1]	30	0.023	10	15	7.6	0.92	17
April 5, 2019	B1	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B2	9	**1,830**	**0.50**	**0.18**	**7.3**	**4.6**	--	**3.8**
	B3	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B4	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B5	5 [2]	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B6	15	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B7	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B8	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B9	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B10	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B11	10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B12	10 [2]	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
Septemeber 17-18, 2019	B13	8 [2]	**1,222**	**8.6**	**13**	**25**	**121**	--	**7.4**
	B14	2	**7,050 E**	**3.6**	**52**	**202 E**	**972 E**	--	**86**
	B15	8	**5,200 E**	**12**	**1.6**	**108**	**565 E**	--	**13**
	B16	8	**17**	**0.18**	0.10 U	0.050 U	0.15 U	--	**0.84**
	B17	8	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B18	8	**35**	**0.13**	0.10 U	0.050 U	0.15 U	--	**0.42**
	B19	3	**10,200**	**7.3**	**17**	**165**	**760**	--	2.0 U
	B20	2	**6,630**	**6.5**	**39**	**165**	**778**	--	2.0 U
	B21	1.5	**33**	**0.27**	0.10 U	**0.28**	**0.27**	--	**2.1**
	B22	2	**368**	0.020 U	0.10 U	0.050 U	0.15 U	--	**0.26**
	B23	2	**17**	**0.039**	0.10 U	0.050 U	0.15 U	--	0.10 U
		8	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	B24	5 [2]	**78**	0.020 U	0.10 U	0.050 U	0.15 U	--	**0.86**
	MW1	7 [2]	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	MW2	8	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
December 16, 2019	B25	2	**340**	0.020 U	0.10 U	0.050 U	0.15 U	--	**0.23**
	B26	5	**210**	**0.052**	0.10 U	0.050 U	0.15 U	--	**0.15**
	B27	5.5	**13**	0.020 U	0.10 U	0.050 U	0.15 U	--	**0.12**
	B28	6 [2]	**211**	**0.26**	0.10 U	**0.088**	0.15 U	--	0.10 U
	B29	5	**11**	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	MW5	5	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	--	0.10 U
	MW6	9	**3,600**	**0.11**	0.10 U	**7.7**	**0.17**	--	**12**
	MW7	5.5 [2]	**1,220**	**0.40**	0.10 U	**1.4**	**0.21**	--	**1.6**
July 14-15, 2020	B30	2-4	16 U	0.020 U	0.020 U	**0.023**	**0.059**	0.012 U	**0.048**
	B31	3-5	14 U	0.017 U	0.017 U	0.017 U	0.035 U	0.011 U	0.033 U
	B32	3-5	16 U	0.020 U	0.020 U	0.020 U	0.039 U	0.020 U	0.26 U
	B33	2-4	16 U	0.019 U	0.019 U	0.019 U	0.039 U	0.012 U	0.035 U
	B34	2-4	14 U	0.017 U	0.017 U	0.017 U	0.034 U	0.011 U	0.032 U
	B35	2-4	15 U	0.019 U	0.019 U	0.019 U	0.038 U	**0.18**	**0.30**
	B36	5-7	19 U	0.024 U	0.024 U	0.024 U	0.048 U	0.014 U	0.042 U
	B37	5-7	18 U	0.023 U	0.023 U	0.023 U	0.046 U	0.014 U	0.043 U
	B38	4-6	19 U	0.023 U	0.023 U	0.023 U	0.047 U	**0.029**	**0.11**
	B39	5-7	16 U	0.020 U	0.020 U	0.020 U	0.039 U	0.012 U	0.036 U
	B40	5-7	16 U	0.020 U	0.020 U	0.020 U	0.039 U	0.012 U	0.036 U
	B41	3-5	18 U	0.023 U	0.023 U	0.023 U	0.045 U	0.015 U	0.045 U
	B42	4-6	15 U	0.019 U	0.019 U	0.019 U	0.038 U	0.012 U	0.035 U
	B43	2-4	**19**	0.018 U	0.018 U	**0.039**	**0.16**	**0.18**	**0.26**
	B44	6-11	17 U	0.022 U	0.022 U	0.022 U	0.043 U	0.013 U	0.038 U
	B45	8-10	18 U	0.022 U	0.022 U	0.022 U	0.044 U	0.015 U	0.044 U
	MW8	6-8	18 U	0.023 U	0.023 U	0.023 U	0.046 U	0.023 U	--
	MW9	11-13 [2]	15 U	0.019 U	0.019 U	0.019 U	0.038 U	0.019 U	--
	MW10	6-8	18 U	0.022 U	0.022 U	0.022 U	0.044 U	0.022 U	--
	MW11	3-5	**3,250**	0.19 U	0.19 U	**25**	**123**	**36**	--
		9-11	**1,860**	0.19 U	0.19 U	**9.3**	**32**	**25**	--
	MW12	18-20	15 U	0.019 U	0.019 U	0.019 U	0.039 U	0.019 U	--
May 21, 2021	TP1	2-4 [2]	**30**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	TP2	2-4	**13**	--	--	--	--	--	--
	TP3	2-4	**64**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	TP4	2-4	**50**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	TP5	3-5 [2]	10.0 U	--	--	--	--	--	--

Table 2: TPH-G and BTEXN Soil Concentrations

Sample Date	Sample Location	Sample Depth (feet bgs)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes [3] (mg/kg)	Naphthalene [4] (mg/kg)	Total Naphthalenes [3,4] (mg/kg)
		Soil SL [1]	30	0.023	10	15	7.6	0.92	17
June 7, 2022	B46	1-2	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		6-7	**18,000**	**22**	**8.9**	**300**	**1,400**	**96**	**168**
		10-11	**21,000**	**32**	**0.82**	**330**	**1,200**	**120**	**202**
		14-15	**87**	**0.58**	0.10 U	**11**	**46**	**6.3**	**20**
	B47	2-3	**110**	**0.26**	0.10 U	**0.48**	**1.3**	**0.24**	**0.64**
		6-7	**4,800**	**5.0**	**0.22**	**0.33**	**72**	**49**	**59**
		11-12	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B48	2-3	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		6-7	**31**	**0.11**	0.10 U	0.050 U	0.15 U	**0.53**	**1.4**
		9-10 [2]	**125**	**0.46**	0.10 U	**2.3**	**0.81**	**2.4**	**4.7**
		11.5-12	**120**	**0.13**	0.10 U	**0.39**	**0.15**	**1.0**	**1.9**
	B49	2-3	**94**	**0.58**	0.10 U	**1.0**	**10.0**	0.15 U	0.95 U
		6-7	**190**	**1.4**	0.10 U	**3.8**	**0.32**	**4.6**	**11**
		10-11	**12**	**0.033**	0.10 U	0.050 U	0.15 U	**1.5**	**1.9**
		14-15 [2]	**23**	**0.078**	0.10 U	**0.067**	**0.19**	**2.2**	**2.6**
	B50	2-3 [2]	**12**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		5-6	**11**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		9-10	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		12-13	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B51	1-2	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		4-5	**31,000 E**	**1.7**	**14**	**130**	**670**	**120**	**390**
		7-8 [2]	**1,685**	**0.31**	**0.49**	**26**	**7.1**	**13**	**44**
		12-13	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B52	1-2	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		5-6	**750**	**0.14**	0.10 U	**0.24**	0.15 U	**0.50**	**0.90**
		7-8 [2]	**1,450**	**0.31**	0.10 U	**13**	0.15 U	**9.6**	**20**
		11-12 [2]	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B53	2-3	**100**	**0.32**	0.10 U	**0.68**	**1.7**	**0.33**	**0.73**
		4-5	10.0 U	**0.10**	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		7-8	**1,400**	**0.44**	0.10 U	**19**	**29**	**9.6**	**22**
		10-11	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B54	2-3	**44**	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		5-6	**10,000**	**33**	**47**	**130**	**800**	**52**	**120**
		9-10	**9,300 E**	**20**	**8.2**	**11**	**580 E**	**48**	**98**
		14-15	10.0 U	**0.37**	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B55	1-2 [2]	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		5-6	**17,000**	**23**	**120**	**120**	**650**	**55**	**1,485**
		9-10	**27,000 E**	**13**	**5.9**	**200**	**1,000**	**86**	**283**
		14-15	**1,500**	**0.27**	**0.13**	**4.0**	**20**	**1.6**	**4.4**
	B56	2-3	**16**	**0.11**	0.10 U	**0.16**	0.15 U	0.15 U	0.95 U
		5-6	**1,600**	**15**	0.10 U	**7.6**	**0.37**	**7.7**	**89**
		8-9	**560**	**2.2**	0.10 U	**6.4**	**1.9**	**1.5**	**29**
		10-11 [2]	**10.0**	**0.026**	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
	B57	1-2	10.0 U	0.020 U	0.10 U	0.050 U	0.15 U	0.15 U	0.95 U
		3-4	**3,900**	**0.060**	0.10 U	**0.48**	**0.50**	**1.1**	**11**

Notes:

--: not analyzed; E: concentration is estimated because it exceeds the calibration range of the laboratory equipment; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rounded to a whole number.

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > the SL and ≤ 10X the SL

Orange highlighted cell indicates constituent was detected at a concentration > 10X the SL and ≤ 100X the SL

Red highlighted cell indicates constituent was detected at a concentration > 100X the SL

[1] See Appendix E for the soil SLs used for RI screening purposes.

[2] Duplicate sample collected for one or more constituents in this table. The data reduction rules for duplicate samples were: (a) if both samples had a detected result, then the average concentration was used, (b) if neither sample had a detected result, then the lower reporting limit was used, and (c) if only one of the two samples had a detected result, then the detected concentration was used.

[3] The data reduction rules for non-detect results when compound totaling this constituent were: (a) if one or more individual constituent was detected in a sample, the non-detect constituents were assumed to equal one-half of the reporting limit, and (b) if no individual constituents were detected in a sample, the sum of the reporting limits for the individual constituents was used.

[4] The data reduction rules for naphthalene results from different analytical methods on the same sample (i.e., USEPA Methods SW846-8260 and SW846-8270) were: (a) if naphthalene was detected by one or both methods, then the highest detection was used, and (b) if naphthalene was not detected by either method, then the lower reporting limit was used. The 2019 sample results were only reported as total naphthalenes.

Table 3: TPH-G and BTEXN Groundwater Concentrations

Sample Type	Sample Date	Sample Location	TPH-G (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes [3] (ug/L)	Naphthalene [4] (ug/L)	Total Naphthalenes [3,4] (ug/L)
Groundwater SL [1]			800	2.4	640	700	320	8.8	160
Groundwater Samples from Soil Borings	April 5, 2019	B1	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B2	**3,940**	**36**	**2.9**	**77**	**30**	--	**13**
		B3	**725**	**4.2**	1.0 U	1.0 U	**3.9**	--	5.0 U
		B5	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B6	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B7	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B9	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B10	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B11	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		B12 [2]	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
	September 17, 2019	B13 [2]	**2,605**	**451**	**21**	**78**	**194**	--	**40**
		B17	**189**	1.0 U	2.0 U	1.0 U	**3.1**	--	**5.6**
		B18	**1,420**	**2.8**	2.0 U	**1.5**	**7.5**	--	5.0 U
	December 16, 2019	B27	**2,560**	**2.2**	**1.2**	1.0 U	**2.8**	--	5.0 U
		B28	**3,090**	**490**	**4.1**	**22**	**12**	--	5.0 U
		B29 [2]	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
	July 14-15, 2020	B30	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.050 U	0.15 U
		B32 [2]	200 U	**0.51 J**	0.50 U	0.50 U	1.0 U	0.050 U	0.15 U
		B33	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.050 U	**0.24 J**
		B34	200 U	0.50 U	**0.77**	0.50 U	1.0 U	**0.035**	**0.070**
		B35	200 U	0.50 U	0.50 U	0.50 U	1.0 U	**0.033**	**0.068**
		B37	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.050 U	0.15 U
		B39	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.050 U	0.15 U
		B41	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.050 U	0.15 U
		B42	200 U	0.50 U	0.50 U	0.50 U	1.0 U	**0.014**	**0.024**
		B43	200 U	**3.4**	**0.58**	0.50 U	1.0 U	**0.10**	**0.25**
		B44	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.010 U	0.030 U
		B45	200 U	0.50 U	0.50 U	0.50 U	1.0 U	0.010 U	0.030 U
Groundwater Samples from Monitoring Wells	October 18, 2019	MW1	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW2	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW3	**14,300**	**265**	**37**	**670**	**2,850**	--	**77**
		MW4E	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
	December 23, 2019	MW1 [2]	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW2	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW3 [2]	**25,700**	**221**	**70**	**1,110**	**5,160**	--	**171**
		MW4E	100 U	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW5	**960**	1.0 U	1.0 U	1.0 U	2.0 U	--	5.0 U
		MW6	**140**	**0.80 J**	1.0 U	**3.5**	2.0 U	--	5.0 U
		MW7	**230**	**8.1**	1.0 U	1.0 U	2.0 U	--	5.0 U
	July 21-22, 2020	MW1	200 U	0.50 U	**5.3**	**1.1**	**6.6**	**1.5**	--
		MW2	200 U	0.50 U	**3.2**	**0.92**	**4.2**	**0.98**	--
		MW3	**30,500**	**314**	**201**	**2,280**	**6,673**	**385**	--
		MW4E	200 U	0.50 U	**3.3**	**0.78**	**3.9**	**2.3**	--
		MW5	**550**	0.50 U	**3.5**	**1.0**	**5.5**	**1.7**	--
		MW6	**6,300**	**44**	5.0 U	**160**	**74**	**222**	--
		MW7	**440**	**25**	**5.1**	**2.3**	**10**	**10**	--
		MW8	200 U	0.50 U	**4.2**	**1.2**	**5.2**	**3.7**	--
		MW9	**2,100**	**85**	**3.9**	**9.8**	**9.3**	**4.5**	--
		MW10 [2]	200 U	0.50 U	**3.2**	**0.81**	**2.8**	**2.0**	--
		MW11	**1,770**	**3.8**	**3.8**	**23**	**56**	**61**	--
		MW13E	200 U	**0.53**	**5.7**	**1.2**	**5.4**	**3.5**	--

Notes:

-- not analyzed; J: Concentration is an estimate; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rounded to a whole number.

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > the SL and ≤ 10X the SL

Orange highlighted cell indicates constituent was detected at a concentration > 10X the SL and ≤ 100X the SL

Red highlighted cell indicates constituent was detected at a concentration > 100X the SL

[1] See Appendix E for the groundwater SLs used for RI screening purposes.

[2] Duplicate sample collected for one or more constituents in this table. The data reduction rules for duplicate samples were: (a) if both samples had a detected result, then the average concentration was used, (b) if neither sample had a detected result, then the lower reporting limit was used, and (c) if only one of the two samples had a detected result, then the detected concentration was used.

[3] The data reduction rules for non-detect results when compound totaling this constituent were: (a) if one or more individual constituent was detected in a sample, the non-detect constituents were assumed to equal one-half of the reporting limit, and (b) if no individual constituents were detected in a sample, the sum of the reporting limits for the individual constituents was used.

[4] The data reduction rules for naphthalene results from different analytical methods on the same sample (i.e., USEPA Methods SW846-8260 and SW846-8270) were: (a) if naphthalene was detected by one or both methods, then the highest detection was used, and (b) if naphthalene was not detected by either method, then the lower reporting limit was used. The 2019 sample results were only reported as total naphthalenes.

Table 4: Vertical Soil Characterization Evaluation and IA Excavation Depths at 3317 Auburn Way North

Inside Excavation 1

Depth (ft bgs)	B2			B13		B14/MW3		B15		B19			B20		B46			B47			B48			B49			B51			B52			B53			B54			B55			B56			TP3[1]		
	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID
0-0.5																																															
0.5-1																		Odor[2]			Odor[2]																										
1-1.5																10 U	22			1.7						0.0		10 U	0.0		10 U	7.2			11			3.5		10 U	27			12			
1.5-2										Odor																																					
2-2.5							7,050							6,630									25																								
2.5-3								Strong odor					Odor						110			10 U			94									100			44									64	
3-3.5											10,200	1,600+					63			124			37			46			49			25			56			109			1,078			99			44
3.5-4																																															
4-4.5																												31,000						10 U													
4.5-5																																															
5-5.5																	1,747			1,179			66			75			1,382		750	28	HC odor		18		10,000	1,802		17,000	1,958	HC odor 2-8 ft bgs and heavy sheen on soil 5-8 ft bgs	1,600	1,241	Petroleum odor		
5.5-6																											HC odor			HC odor																	
6-6.5				Odor 0-15 ft bgs and staining at 8 ft bgs		Oil sheen and odor									HC odor 1-13 ft bgs and strong sheen on soil 9-12 ft bgs	18,000		HC odor 2-10 ft bgs and black staining 2-2.5 ft bgs	4,800			31		HC odor	190														HC odor								
6.5-7										Odor											HC odor																										
7-7.5													Oil				1,935			1,384			103			194		1,685	1,471		1,450	637		1,400	143	HC odor		1,516			1,640			760	Test pit bottom		
7.5-8																																															
8-8.5					1,222				5,200																																777		560				
8.5-9								Odor																																							
9-9.5	Odor	1,830	136														3,057			34		125	328			133			233			395			0.4		9,300	1,470		27,000	1,151			377			
9.5-10																																															
10-10.5	Boring bottom															21,000									12									10 U									10				
10.5-11										Odor			Odor																																		
11-11.5																	3,160		10 U	10			173			41			7.5		10 U	0.0			1.1			24			187			2.0			
11.5-12																						120																									
12-12.5															HC odor								26					10 U																			
12.5-13								Odor																																							
13-13.5				Odor		Oil sheen & odor				Odor							344			1.1						0.3			2.4			0.0			0.0			42			90			2.5			
13.5-14																																															
14-14.5								Oil sheen								87									23												10 U			1,500							
14.5-15												1.1					5.6			0.7						4.1			0.9			0.0			0.0			8.0			9.1			0.9			
				Boring bottom		Boring bottom		Boring bottom		Boring bottom			Boring bottom		Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom			Boring bottom					

Notes:

ft bgs: feet below ground surface; HC: hydrocarbon; ppm: parts per million

Columns for observed odors, sheens, and stains are only included for locations in which a sheen, stain, and/or odor was noted (i.e., odors, sheens, and/or stains were observed for all locations in this table except B1, B45, and MW9).

TPH-G soil concentrations are in mg/kg.

PID concentrations are in parts per million (ppm). PID columns are only included for locations where PID measurements were obtained (i.e., PID measurements were obtained at all locations in this table except B1, B13, B14/MW3, B15, B20, B21, B25, B26, B27, and MW5).

Since some TPH-G and PID results were at a discrete depth (e.g., 3 ft bgs) rather than an interval (e.g., 2.5-3 or 3-3.5 ft bgs), these results were placed in the deeper interval (e.g., 3-3.5 ft bgs) for the purposes this table, with the exception that results at the bottom of the boring (e.g., 15 ft bgs) were placed in the shallower interval (e.g., 14.5-15 ft bgs).

Although MW12 was located within the Excavation 1 footprint, the deep MW12 boring is not included in this table for formatting reasons.

Observations of hydrocarbon/petroleum odors, sheens, and/or stains are shaded gray.

TPH-G soil concentrations > 30 mg/kg and ≤ 300 mg/kg and PID concentrations > 20 ppm and ≤ 100 ppm are in yellow bolded font.

TPH-G soil concentrations > 300 mg/kg and ≤ 3,000 mg/kg and PID concentrations > 100 ppm and ≤ 500 ppm are in orange bolded font.

TPH-G soil concentrations > 3,000 mg/kg and PID concentrations > 500 ppm are in red bolded font.

Locations and design depth (e.g., 12 ft bgs) for excavation and off-site disposal, with the caveats that (1) some shallow overburden soil may be reused on-site, and (2) the excavation depth might be slightly shallower or slightly deeper in some locations.

[1] For health and safety reasons, the PID measurements from the test pits were obtained from stockpiled material after the excavator placed excavated material onto the stockpile. For the purpose of this table, the maximum PID concentration from all stockpile measurements was assumed to be at depth of approximately 3 ft bgs.

[2] A petroleum odor was observed at the base of the concrete cores during concrete coring activities on May 31, 2022.

Table 4: Vertical Soil Characterization Evaluation and IA Excavation Depths at 3317 Auburn Way North

Depth (ft bgs)	Outside Excavation 1																																					Inside Excavation 2					Outside Excavation 2						
	B1	B16			B17			B18			B21		B23			B27		B28			B45		B50			B57			MW6			MW9		TP1 (1)			TP2 (1)			TP4 (1)			B25		MW11			B24		B26		MW5	
	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil	PID	Odor/Sheen/Stain	TPH-G Soil
0-0.5																																																	
0.5-1					Some odor						Odor																														Gasoline odor					Odor						
1-1.5								Odor													10			0.0	HC odor	10 U	2.0				0.0						Petroleum odor				84									
1.5-2		Odor										33			14																																				
2-2.5										16				17									12		HC odor		72		Faint gas odor																						
2.5-3											Odor																																							
3-3.5																		Gasoline odor 3-9 ft bgs and oil sheen 8 ft bgs			8.8		Slight HC odor		10		3,900	177					0.0	Strong petroleum odor	30	46	HC odor	13	54		50	15						373	Odor						
3.5-4																Gasoline odor																												HC odor									
4-4.5																											497																	3,250								
4.5-5																																																		
5-5.5																					2.9		11		11		6.4		Gasoline odor 3-13 ft bgs and sheen 9.5 ft bgs				0.0	Test pit bottom			Test pit bottom			Test pit bottom					34	Refusal at 5 ft bgs during drilling			Gasoline odor	210		10 U
5.5-6																13	Refusal at 5.5 ft bgs during drilling																																			
6-6.5										36	Odor								211	70																																	
6.5-7													Stained																																						
7-7.5																Gasoline odor		Gasoline odor 3-9 ft bgs and oil sheen 8 ft bgs			3.6				8.7							0.0																						
7.5-8																																																	
8-8.5			17			10 U			35																																									
8.5-9														10 U	5.9																																			
9-9.5																					0.0		10 U		0.1				3,600	177		0.0												HC odor		530						
9.5-10	10 U																			18 U																										1,860						
10-10.5	Boring bottom					1.3												Faint gasoline odor																																		
10.5-11																																																		
11-11.5					Little odor																0.0				2.3							4.0																			
11.5-12																															15 U																			
12-12.5																							10 U																											
12.5-13																																																		
13-13.5																					0.0				0.0							0.0																			
13.5-14																																																		
14-14.5				0.0																																													
14.5-15						1.3															0.0				0.0							0.0												63						
		Boring bottom			Boring bottom			Boring bottom			Boring bottom		Boring bottom			Boring bottom		Boring bottom			Boring bottom		Boring bottom						Boring bottom			Boring bottom											Boring bottom					Boring bottom		Boring bottom		Boring bottom	

Notes:

ft bgs: feet below ground surface; HC: hydrocarbon; ppm: parts per million

Columns for observed odors, sheens, and stains are only included for locations in which a sheen, stain, and/or odor was noted (i.e., odors, sheens, and/or stains were observed for all locations in this table except B1, B45, and MW9).

TPH-G soil concentrations are in mg/kg.

PID concentrations are in parts per million (ppm). PID columns are only included for locations where PID measurements were obtained (i.e., PID measurements were obtained at all locations in this table except B1, B13, B14/MW3, B15, B20, B21, B25, B26, B27, and MW5).

Since some TPH-G and PID results were at a discrete depth (e.g., 3 ft bgs) rather than an interval (e.g., 2.5-3 or 3-3.5 ft bgs), these results were placed in the deeper interval (e.g., 3-3.5 ft bgs) for the purposes this table, with the exception that results at the bottom of the boring (e.g., 15 ft bgs) were placed in the shallower interval (e.g., 14.5-15 ft bgs).

Although MW12 was located within the Excavation 1 footprint, the deep MW12 boring is not included in this table for formatting reasons.

Observations of hydrocarbon/petroleum odors, sheens, and/or stains are shaded gray.

TPH-G soil concentrations > 30 mg/kg and ≤ 300 mg/kg and PID concentrations > 20 ppm and ≤ 100 ppm are in yellow bolded font.

TPH-G soil concentrations > 300 mg/kg and ≤ 3,000 mg/kg and PID concentrations > 100 ppm and ≤ 500 ppm are in orange bolded font.

TPH-G soil concentrations > 3,000 mg/kg and PID concentrations > 500 ppm are in red bolded font.

Locations and design depth (e.g., 12 ft bgs) for excavation and off-site disposal, with the caveats that (1) some shallow overburden soil may be reused on-site, and (2) the excavation depth might be slightly shallower or slightly deeper in some locations.

(1) For health and safety reasons, the PID measurements from the test pits were obtained from stockpiled material after the excavator placed excavated material onto the stockpile. For the purpose of this table, the maximum PID concentration from all stockpile measurements was assumed to be at depth of approximately 3 ft bgs.

(2) A petroleum odor was observed at the base of the concrete cores during concrete coring activities on May 31, 2022.

Table 5: September 16, 2020 Methane Soil Gas Concentrations at 3317 Auburn Way North

Sample Location	Peak Methane Soil Gas Concentration [1] (% by volume)	Sustained Methane Soil Gas Concentration [1] (% by volume)
SG1	> 98	86
SG101	0.3	< 0.1
SG102	> 98	89
SG103	> 98	87
SG104	< 0.1	< 0.1
SG105	< 0.1	< 0.1
SG106	0.3	< 0.1
SG107	< 0.1	< 0.1
SG108	< 0.1	< 0.1
SG109	< 0.1	< 0.1
SG110	< 0.1	< 0.1
SG111	< 0.1	< 0.1
SG112	< 0.1	< 0.1
SG113	< 0.1	< 0.1
SG114	< 0.1	< 0.1
SG115	< 0.1	< 0.1
SG116	< 0.1	< 0.1
SG117	< 0.1	< 0.1
SG118	< 0.1	< 0.1
SG119	> 99	91.0
SG120	39.1	32.2
SG121	< 0.1	< 0.1
SG122	< 0.1	< 0.1
SG123	7.1	6.8
SG124	< 0.1	< 0.1
SG125	< 0.1	< 0.1
SG126	> 98	93.8
SG127	2.8	2.7
SG128	< 0.1	< 0.1
SG129	< 0.1	< 0.1
SG130	< 0.1	< 0.1
SG131	< 0.1	< 0.1
SG132	< 0.1	< 0.1

Notes:

<: Methane was not detected at the shown reporting limit; >: Methane concentration exceeded the upper range of the GEM2000

[1] All data were collected on September 16, 2020 using a GEM2000 landfill gas analyzer. The "peak" concentration was the highest concentration detected at any time during purging. For SG1, SG102, SG103, SG119, SG120, SG123, SG126, and SG127, the "sustained" concentration was the stabilized concentration (i.e., concentrations in the continuous measurements fluctuated less than 10% for more than one minute after purging began).

Table 6: Sub-Slab Soil Gas Concentrations from July 2020 VOC VI Investigation at 3317 Auburn Way North

Type	Constituent	Sub-Slab Soil Gas SL for an Unrestricted Land Use Scenario [1] (ug/m3)	Sub-Slab Soil Gas SL for an Adult Commercial Worker Scenario [1] (ug/m3)	SG1 [2] (ug/m3)		SG2 (ug/m3)		SG3 (ug/m3)		SG4 (ug/m3)	
TPH [1]		12,000	100,000	**3,409,300**	**E**	**18,000**		**8,313**		**5,347**	
BTEXN	Benzene	11	50	**4,600**	**E**	13	U	**13**		13	U
	Toluene	76,000	650,000	720	U	750	U	750	U	790	U
	Ethylbenzene	15,000	130,000	17	U	17	U	17	U	18	U
	Total Xylenes [3]	1,500	13,000	50	U	52	U	52	U	**47**	
	Naphthalene [4]	2.5	11	2.2	UJ	2.2	UJ	2.2	UJ	2.4	UJ
Other VOCs	1,1,1-Trichloroethane	76,000	650,000	21	U	22	U	22	U	23	U
	1,1,2,2-Tetrachloroethane	1.4	6.7	5.2	U	5.5	U	5.5	U	5.8	U
	1,1,2-Trichloro-1,2,2-trifluoroethane	76,000	650,000	29	U	31	U	31	U	32	U
	1,1,2-Trichloroethane	3.0	24	4.1	U	4.4	U	4.4	U	4.6	U
	1,1-Dichloroethane	52	240	15	U	16	U	16	U	17	U
	1,1-Dichloroethylene	3,000	26,000	15	U	16	U	16	U	17	U
	1,2,4-Trichlorobenzene	30	260	28	U	30	U	30	U	31	U
	1,2,4-Trimethylbenzene	910	7,800	93	U	98	U	98	U	100	U
	1,2-cis-Dichloroethylene	610	5,200	15	U	16	U	16	U	17	U
	1,2-Dibromoethane (Ethylene Dibromide)	0.14	0.65	2.9	U	3.1	U	3.1	U	3.2	U
	1,2-Dichlorobenzene	3,000	26,000	23	U	24	U	24	U	25	U
	1,2-Dichloroethane	3.2	15	1.5	U	1.6	U	1.6	U	1.7	U
	1,2-Dichloropropane	23	110	8.8	U	9.2	U	9.2	U	9.7	U
	1,2-trans-Dichloroethylene	610	5,200	15	U	16	U	16	U	17	U
	1,3,5-Trimethylbenzene	910	7,800	93	U	98	U	98	U	100	U
	1,3-Butadiene	2.8	13	0.84	U	0.88	U	0.88	U	0.93	U
	1,3-Dichlorobenzene	No Value	No Value	23	U	24	U	24	U	25	U
	1,4-Dichlorobenzene	7.6	35	9.1	U	9.6	U	9.6	U	10.0	U
	1,4-Dioxane	17	78	14	U	14	U	14	U	15	U
	2,2,4-Trimethylpentane	No Value	No Value	**330,000**	**E**	**220**		**1,100**		200	U
	2-Hexanone	460	3,900	160	U	160	U	160	U	170	U
	4-Ethyltoluene	No Value	No Value	93	U	98	U	98	U	100	U
	Acetone	No Value	No Value	180	U	190	U	190	U	**5,200**	**E**
	Acrolein	0.30	2.6	78	U	83	U	83	U	87	U
	Allyl Chloride (3-Chloropropene)	14	65	59	U	63	U	63	U	66	U
	Benzyl Chloride	1.7	7.9	2.0	U	2.1	U	2.1	U	2.2	U
	Bromodichloromethane	2.3	11	2.5	U	2.7	U	2.7	U	2.8	U
	Bromoform	76	350	79	U	83	U	83	U	87	U
	Bromomethane	76	650	59	U	62	U	62	U	65	U
	Butane	No Value	No Value	**290,000**	**E**	**1,300**		**150**		**1,700**	
	Carbon Disulfide	11,000	91,000	240	U	250	U	250	U	260	U
	Carbon Tetrachloride	14	65	24	U	25	U	25	U	26	U
	Chlorobenzene	760	6,500	17	U	18	U	18	U	19	U
	Chloroform	3.6	17	0.57	UJ	0.60	UJ	0.60	UJ	**42**	
	Chloromethane	1,400	12,000	140	U	150	U	150	U	160	U
	cis-1,3-Dichloropropene	No Value	No Value	17	U	18	U	18	U	19	U
	Cumene	6,100	52,000	93	U	98	U	98	U	100	U
	Cyclohexane	91,000	780,000	**305,000**	**E**	280	U	280	U	290	U
	Dibromochloromethane	No Value	No Value	3.2	U	3.4	U	3.4	U	3.6	U
	Dichlorodifluoromethane	1,500	13,000	19	U	20	U	20	U	21	U
	Ethanol	No Value	No Value	**510**		**600**		**640**		**730**	
	Ethyl Acetate	1,100	9,100	270	U	290	U	290	U	300	U
	Ethyl Chloride (Chloroethane)	150,000	1,300,000	100	U	110	U	110	U	110	U
	Freon 114	No Value	No Value	27	U	28	U	28	U	29	U
	Heptane, N-	6,100	52,000	**88,500**	**E**	160	U	160	U	170	U
	Hexachlorobutadiene	3.8	18	8.1	U	8.5	U	8.5	U	9.0	U
	Isopropanol (2-Propanol)	No Value	No Value	330	U	340	U	340	U	360	U
	Methyl Ethyl Ketone	76,000	650,000	110	U	120	U	120	U	120	U
	Methyl Isobutyl Ketone	46,000	390,000	160	U	160	U	160	U	170	U
	Methyl Methacrylate	11,000	91,000	160	U	160	U	160	U	170	U
	Methyl tert-Butyl Ether	320	1,500	69	U	72	U	72	U	76	U
	Methylene Chloride	2,200	39,000	3,300	U	3,500	U	3,500	U	3,600	U
	n-Hexane	11,000	91,000	**2,250,000**	**E**	**500**		140	U	150	U
	n-Nonane	No Value	No Value	200	U	210	U	210	U	220	U
	n-Pentane	No Value	No Value	**1,850,000**	**E**	**2,000**		120	U	**460**	
	o-Chlorotoluene (2-Chlorotoluene)	No Value	No Value	200	U	210	U	210	U	220	U
	Propyl benzene (n-Propylbenzene)	15,000	130,000	93	U	98	U	98	U	100	U
	Propylene (Propene)	No Value	No Value	**1,900**	**E**	**51**		**150**		**5,100**	**E**
	Styrene	15,000	130,000	32	U	34	U	34	U	36	U
	Tert-Butyl Alcohol	No Value	No Value	460	U	490	U	490	U	510	U
	Tetrachloroethylene	320	1,500	260	U	270	U	270	U	280	U
	Tetrahydrofuran	30,000	260,000	11	U	12	U	12	U	12	U
	trans-1,3-Dichloropropene	No Value	No Value	17	U	18	U	18	U	19	U
	Trichloroethylene	11	95	10.0	U	11	U	11	U	11	U
	Trichlorofluoromethane	11,000	91,000	85	U	90	U	90	U	94	U
	Vinyl Acetate	3,000	26,000	270	U	280	U	280	U	300	U
	Vinyl Bromide	5.6	26	17	U	17	U	17	U	18	U
	Vinyl Chloride	9.5	44	9.7	U	10.0	U	10.0	U	11	U
Other (%)	Oxygen	N/A	N/A	**24%**		**18%**		**0.081%**	**U**	**23%**	
	Carbon Dioxide	N/A	N/A	**7.9%**		**13%**		**28%**		**10%**	
	Methane (further evaluated during September 16, 2020 investigation)			**42%**		**0.081%**	**U**	**0.081%**	**U**	**0.084%**	**U**

Notes:

E: concentration is estimated because it exceeds the calibration range of the laboratory equipment; J: concentration is an estimate; N/A: not applicable; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rounded to a whole number.

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > SL for an Unrestricted Land Use Scenario and ≤ SL for an Adult Commercial Worker Scenario

Orange highlighted cell indicates constituent was detected at a concentration > SL for an Adult Commercial Worker Scenario and ≤ 10X the SL for an Adult Commercial Worker Scenario

Red highlighted cell indicates constituent was detected at a concentration > 10X the SL for an Adult Commercial Worker Scenario

[1] See Appendix E for the SLs used for RI screening purposes. See Table 5 in Appendix E for calculation of total TPH concentration for each soil gas sample.

[2] Duplicate sample collected for one or more constituents in this table. The data reduction rules for duplicate samples were: (a) if both samples had a detected result, then the average concentration was used, (b) if neither sample had a detected result, then the lower reporting limit was used, and (c) if only one of the two samples had a detected result, then the detected concentration was used.

[3] The data reduction rules for non-detect results when compound totaling this constituent were: (a) if one or more individual constituent was detected in a sample, the non-detect constituents were assumed to equal one-half of the reporting limit, and (b) if no individual constituents were detected in a sample, the sum of the reporting limits for the individual constituents was used.

[4] The data reduction rules for naphthalene results from different analytical methods on the same sample (i.e., USEPA Methods SW846-8260 and SW846-8270) were: (a) if naphthalene was detected by one or both methods, then the highest detection was used, and (b) if naphthalene was not detected by either method, then the lower reporting limit was used.

Table 7: Air Concentrations from July 2020 VOC VI Investigation at 3317 Auburn Way North

Type	Constituent	Indoor Air SL for an Unrestricted Land Use Scenario [1] (ug/m3)	Indoor Air SL for an Adult Commercial Worker Scenario [1] (ug/m3)	Indoor Air				Ambient Air	
				IA1 [2] (ug/m3)	IA2 (ug/m3)	IA3 (ug/m3)	IA4 (ug/m3)	AA1 (ug/m3)	
TPH [1,3]		367	3,090	**785**	**1,540**	**303**	**2,049**	**98**	
BTEXN	Benzene	0.32	1.5	**0.71**	**0.73**	**0.60**	**1.3**	0.32	U
	Toluene	2,286	19,467	19	U	19	U	19	U	19	U	19	U
	Ethylbenzene [3]	457	3,893	**0.60**	**0.50**	**1.0**	**8.4**	**0.50**	
	Total Xylenes [3,4]	46	389	**3.5**	**3.2**	**5.7**	**51**	**2.4**	
	Naphthalene [3,5]	0.074	0.34	**0.37**	**0.29**	**0.18**	**0.42**	**0.22**	
Other VOCs	1,1,1-Trichloroethane	2,286	19,467	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
	1,1,2,2-Tetrachloroethane	0.043	0.20	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
	1,1,2-Trichloro-1,2,2-trifluoroethane	2,286	19,467	0.77	U	0.77	U	0.77	U	0.77	U	0.77	U
	1,1,2-Trichloroethane	0.091	0.73	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
	1,1-Dichloroethane	1.6	7.3	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
	1,1-Dichloroethylene	91	779	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
	1,2,4-Trichlorobenzene	0.91	7.8	0.74	U	0.74	U	0.74	U	0.74	U	0.74	U
	1,2,4-Trimethylbenzene	27	234	2.5	U	2.5	U	2.5	U	**9.2**		2.5	U
	1,2-cis-Dichloroethylene	18	156	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
	1,2-Dibromoethane (Ethylene Dibromide)	0.0042	0.019	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U
	1,2-Dichlorobenzene	91	779	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	1,2-Dichloroethane	0.096	0.45	**0.055**		**0.053**		**0.089**		**0.057**		**0.057**	
	1,2-Dichloropropane	0.68	3.2	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U
	1,2-trans-Dichloroethylene	18	156	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
	1,3,5-Trimethylbenzene	27	234	2.5	U	2.5	U	2.5	U	**2.5**		2.5	U
	1,3-Butadiene	0.083	0.39	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U
	1,3-Dichlorobenzene	No Value	No Value	0.60	U	0.60	U	0.60	U	0.60	U	0.60	U
	1,4-Dichlorobenzene	0.23	1.1	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U
	1,4-Dioxane	0.50	2.3	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U
	2,2,4-Trimethylpentane	No Value	No Value	**12**		**9.0**		4.7	U	4.7	U	4.7	U
	2-Hexanone	14	117	4.1	U	4.1	U	4.1	U	4.1	U	4.1	U
	4-Ethyltoluene	No Value	No Value	2.5	U	2.5	U	2.5	U	**2.7**		2.5	U
	Acetone	No Value	No Value	**95**	**E**	**93**	**E**	**170**	**E**	**1,800**	**E**	**17**	
	Acrolein	0.0091	0.078	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
	Allyl Chloride (3-Chloropropene)	0.42	1.9	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
	Benzyl Chloride	0.051	0.24	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U
	Bromodichloromethane	0.068	0.32	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
	Bromoform	2.3	11	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
	Bromomethane	2.3	19	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
	Butane	No Value	No Value	**11**		**11**		**11**		**40**		**6.8**	
	Carbon Disulfide	320	2,725	6.2	U	6.2	U	6.2	U	6.2	U	6.2	U
	Carbon Tetrachloride	0.42	1.9	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U
	Chlorobenzene	23	195	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U
	Chloroform [3]	0.11	0.51	**0.077**		**0.097**		**0.15**		**0.0**		**0.093**	
	Chloromethane	41	350	3.7	U	3.7	U	3.7	U	3.7	U	3.7	U
	cis-1,3-Dichloropropene	No Value	No Value	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
	Cumene	183	1,557	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
	Cyclohexane	2,743	23,360	6.9	U	6.9	U	6.9	U	**120**	**E**	6.9	U
	Dibromochloromethane	No Value	No Value	0.085	U	0.085	U	0.085	U	0.085	U	0.085	U
	Dichlorodifluoromethane	46	389	**2.4**		**2.5**		**2.6**		**2.4**		**2.1**	
	Ethanol	No Value	No Value	**175**	**E**	**160**	**E**	**320**	**E**	**46**		**11**	
	Ethyl Acetate	32	273	7.2	U	7.2	U	7.2	U	7.2	U	7.2	U
	Ethyl Chloride (Chloroethane)	4,571	38,933	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U
	Freon 114	No Value	No Value	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
	Heptane, N-	183	1,557	**6.9**		**6.3**		**8.1**		**63**		4.1	U
	Hexachlorobutadiene	0.11	0.53	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
	Isopropanol (2-Propanol)	No Value	No Value	**105**	**E**	**96**	**E**	**1,300**	**E**	**24**		8.6	U
	Methyl Ethyl Ketone	2,286	19,467	**3.0**		**3.1**		2.9	U	**7.3**		2.9	U
	Methyl Isobutyl Ketone	1,371	11,680	4.1	U	4.1	U	4.1	U	4.1	U	4.1	U
	Methyl Methacrylate	320	2,725	4.1	U	4.1	U	4.1	U	4.1	U	4.1	U
	Methyl tert-Butyl Ether	9.6	45	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
	Methylene Chloride	66	1,168	87	U	87	U	87	U	87	U	87	U
	n-Hexane	320	2,725	**14**		**11**		3.5	U	**9.9**		3.5	U
	n-Nonane	No Value	No Value	5.2	U	5.2	U	5.2	U	**51**		5.2	U
	n-Pentane	No Value	No Value	**10**		**8.9**		3.0	U	**23**		3.0	U
	o-Chlorotoluene (2-Chlorotoluene)	No Value	No Value	5.2	U	5.2	U	5.2	U	5.2	U	5.2	U
	Propyl benzene (n-Propylbenzene)	457	3,893	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
	Propylene (Propene)	No Value	No Value	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
	Styrene	457	3,893	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
	Tert-Butyl Alcohol	No Value	No Value	12	U	12	U	12	U	12	U	12	U
	Tetrachloroethylene	9.6	45	6.8	U	6.8	U	6.8	U	6.8	U	6.8	U
	Tetrahydrofuran	914	7,787	0.29	U	0.29	U	0.29	U	0.29	U	0.29	U
	trans-1,3-Dichloropropene	No Value	No Value	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
	Trichloroethylene	0.33	2.8	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U
	Trichlorofluoromethane	320	2,725	2.2	U	2.2	U	2.2	U	2.2	U	2.2	U
	Vinyl Acetate	91	779	7.0	U	7.0	U	7.0	U	7.0	U	7.0	U
	Vinyl Bromide	0.17	0.78	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
	Vinyl Chloride	0.28	1.3	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Other (%)	Oxygen	N/A	N/A	**0.22%**		**0.36%**		**0.63%**		**0.082%**	**U**	**1.3%**	
	Carbon Dioxide	N/A	N/A	**33%**		**28%**		**30%**		**28%**		**31%**	
	Methane (further evaluated during September 16, 2020 investigation)			**0.079%**	**U**	**0.080%**	**U**	**0.081%**	**U**	**0.082%**	**U**	**2.4%**	

Notes:

E: concentration is estimated because it exceeds the calibration range of the laboratory equipment; J: concentration is an estimate; N/A: not applicable; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rounded to a whole number.

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > SL for an Unrestricted Land Use Scenario and ≤ SL for an Adult Commercial Worker Scenario

Orange highlighted cell indicates constituent was detected at a concentration > SL for an Adult Commercial Worker Scenario and ≤ 10X the SL for an Adult Commercial Worker Scenario

Red highlighted cell indicates constituent was detected at a concentration > 10X the SL for an Adult Commercial Worker Scenario

[1] See Appendix E for the SLs used for RI screening purposes. See Table 5 in Appendix E for calculation of total TPH concentration for each air sample.

[2] Duplicate sample collected for one or more constituents in this table. See Table 6 for the data reduction rules for duplicate samples.

[3] Pursuant to Ecology VI guidance (Ecology 2022b) the indoor air concentration potentially attributable to VI shown in this table is the measured indoor concentration for this constituent minus the AA1 ambient air concentration for this constituent. Accepted indoor air background concentrations (i.e., indoor air background values of 116-594 ug/m3, non-detect to 4.7 ug/m3, and 0.18-1.7 ug/m3 for TPH, benzene, and naphthalene, respectively, in Table E-1 of Ecology 2022b; 90th percentile indoor air background values of 5.2-15 ug/m3, 25-77 ug/m3, 4.8-13 ug/m3, 17.5-72 ug/m3, non-detect to 6.2 ug/m3 for benzene, toluene, ethylbenzene, total xylenes, and chloroform, respectively, in North American residences [USEPA 2011]) were not subtracted at this time for RI screening conservatism even though the lines of evidence indicate that the many gasoline sources at this active auto dealership site contributed to indoor air concentrations above and beyond what was measured in AA1.

[4] The data reduction rules for non-detect results when compound totaling this constituent were the same as total xylenes in Table 6.

[5] The data reduction rules for naphthalene results from different analytical methods on the same sample were the same as Table 6.

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)									
			4/5/2019									
			B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
			10 [1]	9	10	10	15 [2]	15	10 [2]	10	10	10
TPH-D and TPH-HO	TPH-D	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
	TPH-HO	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
	TPH-D + TPH-HO combined [3]	2,000	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
	1,2-Dichloroethane	0.025	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Methyl tert-Butyl Ether	0.12	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,1,1-Trichloroethane	3.2	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	1,1,2,2-Tetrachloroethane	0.0023	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,1,2-Trichloroethane	0.052	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,1-Dichloroethane	0.067	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,1-Dichloroethylene	0.075	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	1,1-Dichloropropene	No Value	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	1,2,3-Trichlorobenzene	0.77	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
	1,2,3-Trichloropropane	0.0000052	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	1,2,4-Trichlorobenzene	2.2	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	1,2,4-Trimethylbenzene	4.5	0.030 U	**5.5**	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,2-cis-Dichloroethylene	0.12	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	1,2-Dibromo-3-chloropropane	0.00058	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	1,2-Dichlorobenzene	22	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,2-Dichloropropane	0.040	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	1,2-trans-Dichloroethylene	0.59	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	1,3,5-Trimethylbenzene	4.4	0.030 U	**1.9**	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,3-Dichlorobenzene	223	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	1,3-Dichloropropane	1.6	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	1,4-Dichlorobenzene	0.28	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	2,2-Dichloropropane	No Value	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	2-Hexanone	0.21	--	--	--	--	--	--	--	--	--	--
	Acetone	30	--	--	--	--	--	--	--	--	--	--
	Acrylonitrile	0.00038	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	1.5	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Bromochloromethane	4,916	--	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	0.0095	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	Bromoform	0.80	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Bromomethane	0.056	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U
	Carbon Disulfide	5.2	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	0.011	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Chlorobenzene	2.3	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	Chloroform	0.010	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	Chloromethane	0.75	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U
	cis-1,3-Dichloropropene	No Value	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	Cumene	50	0.050 U	**1.7**	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	Dibromochloromethane	0.035	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Dibromomethane (Methylene Bromide)	0.47	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
	Dichlorodifluoromethane	0.11	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U
	Ethyl Chloride (Chloroethane)	95	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U
	Hexachlorobutadiene	0.042	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
	Methyl Ethyl Ketone	21	--	--	--	--	--	--	--	--	--	--
	Methyl Isobutyl Ketone	3.2	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	0.025	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	n-Butylbenzene	52	0.050 U	**4.5**	0.050 U	**0.53**	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	o-Chlorotoluene (2-Chlorotoluene)	5.8	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	p-Chlorotoluene (4-Chlorotoluene)	5.7	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	p-Isopropyltoluene	No Value	0.030 U	**0.15**	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Propyl benzene (n-Propylbenzene)	58	0.040 U	**5.8**	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
	sec-Butylbenzene	93	0.030 U	**1.4**	0.030 U	**0.70**	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Styrene	8.1	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	tert-Butylbenzene	71	0.030 U	**0.80**	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Tetrachloroethylene	0.13	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
	trans-1,3-Dichloropropene	No Value	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Trichloroethylene	0.017	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Trichlorofluoromethane	1.5	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
	Vinyl Chloride	0.0021	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Other PAHs	Acenaphthene	81	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	4.3	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	54	--	--	--	--	--	--	--	--	--	--
	Fluorene	55	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	39	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.19	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	20	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Barium	1,648	--	--	--	--	--	--	--	--	--	--
	Cadmium	0.77	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chromium, Total	No Value	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Chromium (VI)	0.018	--	--	--	--	--	--	--	--	--	--
	Lead	250	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Mercury	2.1	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Selenium	5.2	--	--	--	--	--	--	--	--	--	--
	Silver	14	--	--	--	--	--	--	--	--	--	--

Notes:

--: not analyzed; cPAHs: carcinogenic PAHs; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rounded to a whole number.

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > the SL and ≤ 10X the SL

Orange highlighted cell indicates constituent was detected at a concentration > 10X the SL and ≤ 100X the SL

Red highlighted cell indicates constituent was detected at a concentration > 100X the SL

[1] See Appendix E for the soil SLs used for RI screening purposes.

[2] Duplicate sample collected for one or more constituents in this table. See Table 2 for the data reduction rules for duplicate samples.

[3] TPH-D and TPH-HO were combined in accordance with Ecology guidance (Ecology 2004, 2016a). If only one constituent was non-detect, the non-detect concentration was assumed to equal one-half of the reporting limit. If neither constituent was detected, the reporting limits were summed. If future samples demonstrate separate products are present per Ecology 2004, TPH-D and TPH-HO may be split.

[4] The data reduction rules for non-detect results when compound totaling this constituent were the same as total xylenes and total naphthalenes inTable 2. Data reduction rules in Ecology 2001c may be used for total cPAHs in the future.

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)									
			4/5/2019		9/17/2019 - 9/18/2019							
			B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
			10	10 [2]	8	2	8	8	8	8	3	2
TPH-D and TPH-HO	TPH-D	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**780**	**2,170**
	TPH-HO	2,000	250 U	250 U	**705**	**295**	250 U	250 U	250 U	250 U	250 U	250 U
	TPH-D + TPH-HO combined [3]	2,000	300 U	300 U	**730**	**320**	300 U	300 U	300 U	300 U	**905**	**2,295**
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.0050 U	0.0050 U	0.0050 U	0.050 U	0.050 U	0.0050 U	0.050 U	0.0050 U	0.10 U	0.10 U
	1,2-Dichloroethane	0.025	0.030 U	0.030 U	0.030 U	0.30 U	0.30 U	0.030 U	0.30 U	0.030 U	0.60 U	0.60 U
	Methyl tert-Butyl Ether	0.12	0.050 U	0.050 U	0.050 U	0.50 U	0.50 U	0.050 U	0.50 U	0.050 U	1.0 U	1.0 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	3.2	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	1,1,2,2-Tetrachloroethane	0.0023	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,1,2-Trichloroethane	0.052	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	0.067	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,1-Dichloroethylene	0.075	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	1,1-Dichloropropene	No Value	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	0.77	0.10 U	0.10 U	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	0.0000052	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	2.2	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	1,2,4-Trimethylbenzene	4.5	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,2-cis-Dichloroethylene	0.12	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-chloropropane	0.00058	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene	22	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	0.040	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	1,2-trans-Dichloroethylene	0.59	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	4.4	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene	223	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	1,3-Dichloropropane	1.6	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene	0.28	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	2,2-Dichloropropane	No Value	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	2-Hexanone	0.21	--	--	--	--	--	--	--	--	--	--
	Acetone	30	--	--	--	--	--	--	--	--	--	--
	Acrylonitrile	0.00038	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	1.5	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Bromochloromethane	4,916	--	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	0.0095	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	Bromoform	0.80	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Bromomethane	0.056	0.090 U	0.090 U	--	--	--	--	--	--	--	--
	Carbon Disulfide	5.2	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	0.011	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Chlorobenzene	2.3	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	Chloroform	0.010	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	Chloromethane	0.75	0.060 U	0.060 U	--	--	--	--	--	--	--	--
	cis-1,3-Dichloropropene	No Value	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	Cumene	50	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	Dibromochloromethane	0.035	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Dibromomethane (Methylene Bromide)	0.47	0.040 U	0.040 U	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane	0.11	0.060 U	0.060 U	--	--	--	--	--	--	--	--
	Ethyl Chloride (Chloroethane)	95	0.060 U	0.060 U	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	0.042	0.10 U	0.10 U	--	--	--	--	--	--	--	--
	Methyl Ethyl Ketone	21	--	--	--	--	--	--	--	--	--	--
	Methyl Isobutyl Ketone	3.2	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	0.025	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	n-Butylbenzene	52	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	o-Chlorotoluene (2-Chlorotoluene)	5.8	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	p-Chlorotoluene (4-Chlorotoluene)	5.7	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	p-Isopropyltoluene	No Value	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Propyl benzene (n-Propylbenzene)	58	0.040 U	0.040 U	--	--	--	--	--	--	--	--
	sec-Butylbenzene	93	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Styrene	8.1	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	tert-Butylbenzene	71	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Tetrachloroethylene	0.13	0.020 U	0.020 U	--	--	--	--	--	--	--	--
	trans-1,3-Dichloropropene	No Value	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Trichloroethylene	0.017	0.030 U	0.030 U	--	--	--	--	--	--	--	--
	Trichlorofluoromethane	1.5	0.050 U	0.050 U	--	--	--	--	--	--	--	--
	Vinyl Chloride	0.0021	0.020 U	0.020 U	--	--	--	--	--	--	--	--
Other PAHs	Acenaphthene	81	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	4.3	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	54	--	--	--	--	--	--	--	--	--	--
	Fluorene	55	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	39	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.19	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	20	5.0 U	5.0 U	--	--	--	--	--	--	5.0 U	5.0 U
	Barium	1,648	--	--	--	--	--	--	--	--	--	--
	Cadmium	0.77	1.0 U	1.0 U	--	--	--	--	--	--	1.0 U	1.0 U
	Chromium, Total	No Value	5.0 U	5.0 U	--	--	--	--	--	--	5.0 U	**12**
	Chromium (VI)	0.018	--	--	--	--	--	--	--	--	--	--
	Lead	250	5.0 U	5.0 U	--	--	--	--	--	--	5.0 U	**13**
	Mercury	2.1	0.50 U	0.50 U	--	--	--	--	--	--	0.50 U	0.50 U
	Selenium	5.2	--	--	--	--	--	--	--	--	--	--
	Silver	14	--	--	--	--	--	--	--	--	--	--

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)									
			9/17/2019 - 9/18/2019							12/16/2019		
			B21	B22	B23		B24	MW1	MW2	B25	B26	B27
			1.5	2	2	8 [2]	5	7 [2]	8	2 [2]	5	5.5
TPH-D and TPH-HO	TPH-D	2,000	50 U	50 U	50 U	50 U	**165**	50 U	50 U	50 U	50 U	50 U
	TPH-HO	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
	TPH-D + TPH-HO combined [3]	2,000	300 U	300 U	300 U	300 U	**285**	300 U	300 U	300 U	300 U	300 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
	1,2-Dichloroethane	0.025	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
	Methyl tert-Butyl Ether	0.12	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	--	--	--	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	3.2	--	--	--	--	--	--	--	--	--	--
	1,1,2,2-Tetrachloroethane	0.0023	--	--	--	--	--	--	--	--	--	--
	1,1,2-Trichloroethane	0.052	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	0.067	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethylene	0.075	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	0.77	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	0.0000052	--	--	--	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	2.2	--	--	--	--	--	--	--	--	--	--
	1,2,4-Trimethylbenzene	4.5	--	--	--	--	--	--	--	--	--	--
	1,2-cis-Dichloroethylene	0.12	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-chloropropane	0.00058	--	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene	22	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	0.040	--	--	--	--	--	--	--	--	--	--
	1,2-trans-Dichloroethylene	0.59	--	--	--	--	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	4.4	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene	223	--	--	--	--	--	--	--	--	--	--
	1,3-Dichloropropane	1.6	--	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene	0.28	--	--	--	--	--	--	--	--	--	--
	2,2-Dichloropropane	No Value	--	--	--	--	--	--	--	--	--	--
	2-Hexanone	0.21	--	--	--	--	--	--	--	--	--	--
	Acetone	30	--	--	--	--	--	--	--	--	--	--
	Acrylonitrile	0.00038	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	1.5	--	--	--	--	--	--	--	--	--	--
	Bromochloromethane	4,916	--	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	0.0095	--	--	--	--	--	--	--	--	--	--
	Bromoform	0.80	--	--	--	--	--	--	--	--	--	--
	Bromomethane	0.056	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	5.2	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	0.011	--	--	--	--	--	--	--	--	--	--
	Chlorobenzene	2.3	--	--	--	--	--	--	--	--	--	--
	Chloroform	0.010	--	--	--	--	--	--	--	--	--	--
	Chloromethane	0.75	--	--	--	--	--	--	--	--	--	--
	cis-1,3-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	Cumene	50	--	--	--	--	--	--	--	--	--	--
	Dibromochloromethane	0.035	--	--	--	--	--	--	--	--	--	--
	Dibromomethane (Methylene Bromide)	0.47	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane	0.11	--	--	--	--	--	--	--	--	--	--
	Ethyl Chloride (Chloroethane)	95	--	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	0.042	--	--	--	--	--	--	--	--	--	--
	Methyl Ethyl Ketone	21	--	--	--	--	--	--	--	--	--	--
	Methyl Isobutyl Ketone	3.2	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	0.025	--	--	--	--	--	--	--	--	--	--
	n-Butylbenzene	52	--	--	--	--	--	--	--	--	--	--
	o-Chlorotoluene (2-Chlorotoluene)	5.8	--	--	--	--	--	--	--	--	--	--
	p-Chlorotoluene (4-Chlorotoluene)	5.7	--	--	--	--	--	--	--	--	--	--
	p-Isopropyltoluene	No Value	--	--	--	--	--	--	--	--	--	--
	Propyl benzene (n-Propylbenzene)	58	--	--	--	--	--	--	--	--	--	--
	sec-Butylbenzene	93	--	--	--	--	--	--	--	--	--	--
	Styrene	8.1	--	--	--	--	--	--	--	--	--	--
	tert-Butylbenzene	71	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethylene	0.13	--	--	--	--	--	--	--	--	--	--
	trans-1,3-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	Trichloroethylene	0.017	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane	1.5	--	--	--	--	--	--	--	--	--	--
	Vinyl Chloride	0.0021	--	--	--	--	--	--	--	--	--	--
Other PAHs	Acenaphthene	81	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	4.3	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	54	--	--	--	--	--	--	--	--	--	--
	Fluorene	55	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	39	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.19	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	20	5.0 U	5.0 U	--	--	--	--	--	--	--	--
	Barium	1,648	--	--	--	--	--	--	--	--	--	--
	Cadmium	0.77	1.0 U	1.0 U	--	--	--	--	--	--	--	--
	Chromium, Total	No Value	**27**	**6.6**	--	--	--	--	--	**8.1**	**6.7**	5.0 U
	Chromium (VI)	0.018	0.52 U	--	--	--	--	--	--	--	--	--
	Lead	250	**6.3**	5.0 U	--	--	--	--	--	5.0 U	5.0 U	5.0 U
	Mercury	2.1	0.50 U	0.50 U	--	--	--	--	--	--	--	--
	Selenium	5.2	--	--	--	--	--	--	--	--	--	--
	Silver	14	--	--	--	--	--	--	--	--	--	--

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)									
			12/16/2019					7/14/2020 - 7/15/2020				
			B28	B29	MW5	MW6	MW7	B30	B31	B32	B33	B34
			6 [2]	5	5	9	5.5	2-4	3-5	3-5	2-4	2-4
TPH-D and TPH-HO	TPH-D	2,000	**194**	50 U	50 U	50 U	50 U	67 U	28 U	**2,180 J**	75 U	29 U
	TPH-HO	2,000	250 U	250 U	250 U	250 U	250 U	267 U	113 U	**13,200 J**	301 U	114 U
	TPH-D + TPH-HO combined [3]	2,000	**319**	300 U	300 U	300 U	300 U	334 U	141 U	**15,380 J**	376 U	143 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-Dichloroethane	0.025	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Methyl tert-Butyl Ether	0.12	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1,1-Trichloroethane	3.2	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1,2,2-Tetrachloroethane	0.0023	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1,2-Trichloroethane	0.052	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1-Dichloroethane	0.067	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1-Dichloroethylene	0.075	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,1-Dichloropropene	No Value	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2,3-Trichlorobenzene	0.77	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2,3-Trichloropropane	0.0000052	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2,4-Trichlorobenzene	2.2	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2,4-Trimethylbenzene	4.5	--	--	--	--	--	**0.028**	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-cis-Dichloroethylene	0.12	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-Dibromo-3-chloropropane	0.00058	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-Dichlorobenzene	22	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-Dichloropropane	0.040	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,2-trans-Dichloroethylene	0.59	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,3,5-Trimethylbenzene	4.4	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,3-Dichlorobenzene	223	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,3-Dichloropropane	1.6	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	1,4-Dichlorobenzene	0.28	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	2,2-Dichloropropane	No Value	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	2-Hexanone	0.21	--	--	--	--	--	0.10 U	0.087 U	0.097 U	0.097 U	0.085 U
	Acetone	30	--	--	--	--	--	0.10 U	0.087 U	0.097 U	0.097 U	0.085 U
	Acrylonitrile	0.00038	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Bromobenzene	1.5	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Bromochloromethane	4,916	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Bromodichloromethane	0.0095	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Bromoform	0.80	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Bromomethane	0.056	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Carbon Disulfide	5.2	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Carbon Tetrachloride	0.011	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Chlorobenzene	2.3	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Chloroform	0.010	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Chloromethane	0.75	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	cis-1,3-Dichloropropene	No Value	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Cumene	50	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Dibromochloromethane	0.035	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Dibromomethane (Methylene Bromide)	0.47	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Dichlorodifluoromethane	0.11	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Ethyl Chloride (Chloroethane)	95	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Hexachlorobutadiene	0.042	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Methyl Ethyl Ketone	21	--	--	--	--	--	0.10 U	0.087 U	0.097 U	0.097 U	0.085 U
	Methyl Isobutyl Ketone	3.2	--	--	--	--	--	0.10 U	0.087 U	0.097 U	0.097 U	0.085 U
	Methylene Chloride	0.025	--	--	--	--	--	0.10 U	0.087 U	0.097 U	0.097 U	0.085 U
	n-Butylbenzene	52	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	o-Chlorotoluene (2-Chlorotoluene)	5.8	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	p-Chlorotoluene (4-Chlorotoluene)	5.7	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	p-Isopropyltoluene	No Value	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Propyl benzene (n-Propylbenzene)	58	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	sec-Butylbenzene	93	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Styrene	8.1	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	tert-Butylbenzene	71	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Tetrachloroethylene	0.13	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	trans-1,3-Dichloropropene	No Value	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Trichloroethylene	0.017	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Trichlorofluoromethane	1.5	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
	Vinyl Chloride	0.0021	--	--	--	--	--	0.020 U	0.017 U	0.020 U	0.019 U	0.017 U
Other PAHs	Acenaphthene	81	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Acenaphthylene	No Value	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Anthracene	4.3	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Fluoranthene	54	--	--	--	--	--	**0.051**	0.011 U	0.12 U	0.012 U	0.011 U
	Fluorene	55	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Phenanthrene	No Value	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Pyrene	39	--	--	--	--	--	0.012 U	0.011 U	0.12 U	0.012 U	0.011 U
	Total cPAHs [4]	0.19	--	--	--	--	--	0.019 U	0.017 U	0.18 U	0.018 U	0.016 U
Metals	Arsenic	20	--	--	--	--	--	**4.8**	**3.6 J**	**3.3 J**	**4.6 J**	--
	Barium	1,648	--	--	--	--	--	**63**	**48 J**	**47 J**	**54 J**	--
	Cadmium	0.77	--	--	--	--	--	0.66 U	0.61 U	0.60 U	0.60 U	--
	Chromium, Total	No Value	**6.7**	**26**	**6.8**	**5.5**	5.0 U	**18**	**31 J**	**26 J**	**22 J**	--
	Chromium (VI)	0.018	--	20 U	--	--	--	--	--	--	--	--
	Lead	250	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**7.6**	**2.8 J**	**2.8 J**	**4.6 J**	--
	Mercury	2.1	--	--	--	--	--	0.066 U	0.061 U	0.060 U	**0.39 J**	--
	Selenium	5.2	--	--	--	--	--	0.66 U	0.61 U	0.60 U	0.60 U	--
	Silver	14	--	--	--	--	--	0.66 U	0.61 U	0.60 U	0.60 U	--

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)									
			7/14/2020 - 7/15/2020									
			B35	B36	B37	B38	B39	B40	B41	B42	B43	B44
			2-4	5-7	5-7	4-6	5-7	5-7	3-5	4-6	2-4	6-11
TPH-D and TPH-HO	TPH-D	2,000	69 U	35 U	91 U	352 U	31 U	148 U	35 U	32 U	114 U	32 U
	TPH-HO	2,000	276 U	140 U	364 U	**7,490**	125 U	296 U	139 U	127 U	**429**	127 U
	TPH-D + TPH-HO combined [3]	2,000	345 U	175 U	455 U	**7,666**	156 U	444 U	174 U	159 U	**486**	159 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2-Dichloroethane	0.025	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Methyl tert-Butyl Ether	0.12	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1,1-Trichloroethane	3.2	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1,2,2-Tetrachloroethane	0.0023	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1,2-Trichloroethane	0.052	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1-Dichloroethane	0.067	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1-Dichloroethylene	0.075	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,1-Dichloropropene	No Value	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2,3-Trichlorobenzene	0.77	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2,3-Trichloropropane	0.0000052	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2,4-Trichlorobenzene	2.2	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2,4-Trimethylbenzene	4.5	0.019 U	0.024 U	0.023 U	**0.024**	0.020 U	0.020 U	0.023 U	0.019 U	**0.36**	0.022 U
	1,2-cis-Dichloroethylene	0.12	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2-Dibromo-3-chloropropane	0.00058	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2-Dichlorobenzene	22	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2-Dichloropropane	0.040	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,2-trans-Dichloroethylene	0.59	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,3,5-Trimethylbenzene	4.4	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	**0.076**	0.022 U
	1,3-Dichlorobenzene	223	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,3-Dichloropropane	1.6	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	1,4-Dichlorobenzene	0.28	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	2,2-Dichloropropane	No Value	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	2-Hexanone	0.21	0.095 U	0.12 U	0.11 U	0.12 U	0.099 U	0.099 U	0.11 U	0.094 U	0.092 U	0.11 U
	Acetone	30	0.095 U	0.12 U	0.11 U	0.12 U	0.099 U	0.099 U	0.11 U	0.094 U	0.092 U	0.11 U
	Acrylonitrile	0.00038	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Bromobenzene	1.5	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Bromochloromethane	4,916	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Bromodichloromethane	0.0095	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Bromoform	0.80	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Bromomethane	0.056	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Carbon Disulfide	5.2	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Carbon Tetrachloride	0.011	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Chlorobenzene	2.3	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Chloroform	0.010	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Chloromethane	0.75	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	cis-1,3-Dichloropropene	No Value	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Cumene	50	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	**0.021**	0.022 U
	Dibromochloromethane	0.035	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Dibromomethane (Methylene Bromide)	0.47	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Dichlorodifluoromethane	0.11	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Ethyl Chloride (Chloroethane)	95	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Hexachlorobutadiene	0.042	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Methyl Ethyl Ketone	21	0.095 U	0.12 U	0.11 U	0.12 U	0.099 U	0.099 U	0.11 U	0.094 U	0.092 U	0.11 U
	Methyl Isobutyl Ketone	3.2	0.095 U	0.12 U	0.11 U	0.12 U	0.099 U	0.099 U	0.11 U	0.094 U	0.092 U	0.11 U
	Methylene Chloride	0.025	0.095 U	0.12 U	0.11 U	0.12 U	0.099 U	0.099 U	0.11 U	0.094 U	0.092 U	0.11 U
	n-Butylbenzene	52	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	o-Chlorotoluene (2-Chlorotoluene)	5.8	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	p-Chlorotoluene (4-Chlorotoluene)	5.7	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	p-Isopropyltoluene	No Value	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Propyl benzene (n-Propylbenzene)	58	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	**0.044**	0.022 U
	sec-Butylbenzene	93	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Styrene	8.1	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	tert-Butylbenzene	71	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Tetrachloroethylene	0.13	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	trans-1,3-Dichloropropene	No Value	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Trichloroethylene	0.017	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Trichlorofluoromethane	1.5	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
	Vinyl Chloride	0.0021	0.019 U	0.024 U	0.023 U	0.023 U	0.020 U	0.020 U	0.023 U	0.019 U	0.018 U	0.022 U
Other PAHs	Acenaphthene	81	**0.012**	0.014 U	0.014 U	0.014 U	0.012 U	0.012 U	0.015 U	0.012 U	0.011 U	0.013 U
	Acenaphthylene	No Value	0.012 U	0.014 U	0.014 U	0.014 U	0.012 U	0.012 U	0.015 U	0.012 U	0.011 U	0.013 U
	Anthracene	4.3	0.012 U	0.014 U	0.014 U	0.014 U	0.012 U	0.012 U	0.015 U	0.012 U	0.011 U	0.013 U
	Benzo(g,h,i)perylene	No Value	0.012 U	0.014 U	0.014 U	0.014 U	**0.013**	0.012 U	0.015 U	0.012 U	**0.016**	0.013 U
	Fluoranthene	54	**0.073**	0.014 U	0.014 U	**0.069**	**0.059**	0.012 U	0.015 U	0.012 U	**0.068**	0.013 U
	Fluorene	55	0.012 U	0.014 U	0.014 U	0.014 U	0.012 U	0.012 U	0.015 U	0.012 U	0.011 U	0.013 U
	Phenanthrene	No Value	0.012 U	0.014 U	0.014 U	**0.021**	0.012 U	0.012 U	0.015 U	0.012 U	**0.029**	0.013 U
	Pyrene	39	**0.029**	0.014 U	0.014 U	**0.11**	0.012 U	0.012 U	0.015 U	0.012 U	**0.016**	0.013 U
	Total cPAHs [4]	0.19	**0.0097**	0.021 U	0.021 U	**0.012**	0.018 U	0.018 U	0.023 U	0.017 U	**0.011**	0.019 U
Metals	Arsenic	20	**7.1**	**6.6**	**7.9**	**9.9**	**2.8**	**5.9**	**12**	**2.8 J**	**4.6**	**1.5**
	Barium	1,648	**78**	**112**	**89**	**115**	**46**	**75**	**93**	**68 J**	**70**	**37**
	Cadmium	0.77	0.72 U	0.84 U	0.84 U	0.85 U	0.69 U	0.69 U	0.91 U	0.61 U	0.60 U	0.68 U
	Chromium, Total	No Value	**24**	**25**	**24**	**23**	**15**	**23**	**24**	**23 J**	**22**	**15**
	Chromium (VI)	0.018	--	--	--	--	--	--	--	--	--	--
	Lead	250	**11**	**6.3**	**5.1**	**35**	**5.1**	**4.9**	**6.9**	**2.8 J**	**15**	**1.6**
	Mercury	2.1	**0.073**	0.084 U	0.084 U	**0.16**	0.069 U	0.069 U	**0.10**	**0.024 J**	**0.063**	**0.014**
	Selenium	5.2	0.72 U	0.84 U	0.84 U	0.85 U	0.69 U	0.69 U	0.91 U	0.61 U	0.60 U	0.68 U
	Silver	14	0.72 U	0.84 U	0.84 U	0.85 U	0.69 U	0.69 U	0.91 U	0.61 U	0.60 U	0.68 U

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)						
			7/14/2020 - 7/15/2020						
			B45	MW8	MW9	MW10	MW11		MW12
			8-10	6-8	11-13 [2]	6-8	3-5	9-11	18-20
TPH-D and TPH-HO	TPH-D	2,000	32 U	--	--	--	--	--	--
	TPH-HO	2,000	128 U	--	--	--	--	--	--
	TPH-D + TPH-HO combined [3]	2,000	160 U						
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2-Dichloroethane	0.025	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Methyl tert-Butyl Ether	0.12	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	0.022 U	0.023 U	0.019 U	0.022 U	0.019 U	0.19 U	0.019 U
	1,1,1-Trichloroethane	3.2	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,1,2,2-Tetrachloroethane	0.0023	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,1,2-Trichloroethane	0.052	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,1-Dichloroethane	0.067	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,1-Dichloroethylene	0.075	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,1-Dichloropropene	No Value	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2,3-Trichlorobenzene	0.77	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2,3-Trichloropropane	0.0000052	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2,4-Trichlorobenzene	2.2	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2,4-Trimethylbenzene	4.5	0.022 U	0.023 U	0.019 U	0.022 U	**89**	**29**	0.019 U
	1,2-cis-Dichloroethylene	0.12	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2-Dibromo-3-chloropropane	0.00058	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2-Dichlorobenzene	22	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2-Dichloropropane	0.040	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,2-trans-Dichloroethylene	0.59	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,3,5-Trimethylbenzene	4.4	0.022 U	0.023 U	0.019 U	0.022 U	**9.0**	**6.8**	0.019 U
	1,3-Dichlorobenzene	223	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,3-Dichloropropane	1.6	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	1,4-Dichlorobenzene	0.28	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	2,2-Dichloropropane	No Value	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	2-Hexanone	0.21	0.11 U	0.12 U	0.094 U	0.11 U	0.97 U	0.93 U	0.096 U
	Acetone	30	0.11 U	0.12 U	0.094 U	0.11 U	0.97 U	0.93 U	0.096 U
	Acrylonitrile	0.00038	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Bromobenzene	1.5	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Bromochloromethane	4,916	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Bromodichloromethane	0.0095	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Bromoform	0.80	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Bromomethane	0.056	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Carbon Disulfide	5.2	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Carbon Tetrachloride	0.011	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Chlorobenzene	2.3	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Chloroform	0.010	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Chloromethane	0.75	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	cis-1,3-Dichloropropene	No Value	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Cumene	50	0.022 U	0.023 U	0.019 U	0.022 U	**3.7**	**3.3**	0.019 U
	Dibromochloromethane	0.035	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Dibromomethane (Methylene Bromide)	0.47	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Dichlorodifluoromethane	0.11	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Ethyl Chloride (Chloroethane)	95	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Hexachlorobutadiene	0.042	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Methyl Ethyl Ketone	21	0.11 U	0.12 U	0.094 U	0.11 U	0.97 U	0.93 U	0.096 U
	Methyl Isobutyl Ketone	3.2	0.11 U	0.12 U	0.094 U	0.11 U	0.97 U	0.93 U	0.096 U
	Methylene Chloride	0.025	0.11 U	0.12 U	0.094 U	0.11 U	0.97 U	0.93 U	0.096 U
	n-Butylbenzene	52	0.022 U	0.023 U	**0.025**	0.022 U	**5.6**	**5.2**	0.019 U
	o-Chlorotoluene (2-Chlorotoluene)	5.8	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	p-Chlorotoluene (4-Chlorotoluene)	5.7	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	p-Isopropyltoluene	No Value	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Propyl benzene (n-Propylbenzene)	58	0.022 U	0.023 U	**0.047**	0.022 U	**12**	**11**	0.019 U
	sec-Butylbenzene	93	0.022 U	0.023 U	0.019 U	0.022 U	**1.3**	**1.9**	0.019 U
	Styrene	8.1	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	tert-Butylbenzene	71	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Tetrachloroethylene	0.13	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	trans-1,3-Dichloropropene	No Value	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Trichloroethylene	0.017	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Trichlorofluoromethane	1.5	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
	Vinyl Chloride	0.0021	0.022 U	0.023 U	0.019 U	0.022 U	0.19 U	0.19 U	0.019 U
Other PAHs	Acenaphthene	81	0.015 U	--	--	--	--	--	--
	Acenaphthylene	No Value	0.015 U	--	--	--	--	--	--
	Anthracene	4.3	0.015 U	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	0.015 U	--	--	--	--	--	--
	Fluoranthene	54	0.015 U	--	--	--	--	--	--
	Fluorene	55	0.015 U	--	--	--	--	--	--
	Phenanthrene	No Value	0.015 U	--	--	--	--	--	--
	Pyrene	39	0.015 U	--	--	--	--	--	--
	Total cPAHs [4]	0.19	0.022 U	--	--	--	--	--	--
Metals	Arsenic	20	**4.0 J**	**7.7**	**1.8**	**2.3 J**	**4.8**	**4.5**	**1.7**
	Barium	1,648	**53 J**	--	--	--	--	--	--
	Cadmium	0.77	0.74 U	--	--	--	--	--	--
	Chromium, Total	No Value	**20 J**	--	--	--	--	--	--
	Chromium (VI)	0.018	--	--	--	--	--	--	--
	Lead	250	**2.4 J**	**4.1**	**1.6**	**2.8 J**	**12**	**6.2**	**1.2**
	Mercury	2.1	**0.047 J**	--	--	--	--	--	--
	Selenium	5.2	0.74 U	--	--	--	--	--	--
	Silver	14	0.74 U	--	--	--	--	--	--

Table 8: Other Constituents Soil Concentrations

Type	Constituent	Soil SL [1] (mg/kg)	Sample Date, Sample Location, Sample Depth (feet bgs), and Concentration (mg/kg)				
			5/21/2021				
			TP1	TP2	TP3	TP4	TP5
			2-4 [2]	2-4	2-4	2-4	3-5 [2]
TPH-D and TPH-HO	TPH-D	2,000	50 U	50 U	50 U	50 U	50 U
	TPH-HO	2,000	250 U	250 U	250 U	250 U	250 U
	TPH-D + TPH-HO combined [3]	2,000	300 U	300 U	300 U	300 U	300 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.00048	0.0050 U	--	0.0050 U	0.0050 U	--
	1,2-Dichloroethane	0.025	0.030 U	--	0.030 U	0.030 U	--
	Methyl tert-Butyl Ether	0.12	0.050 U	--	0.050 U	0.050 U	--
Other VOCs	1,1,1,2-Tetrachloroethane	0.019	--	--	--	--	--
	1,1,1-Trichloroethane	3.2	--	--	--	--	--
	1,1,2,2-Tetrachloroethane	0.0023	--	--	--	--	--
	1,1,2-Trichloroethane	0.052	--	--	--	--	--
	1,1-Dichloroethane	0.067	--	--	--	--	--
	1,1-Dichloroethylene	0.075	--	--	--	--	--
	1,1-Dichloropropene	No Value	--	--	--	--	--
	1,2,3-Trichlorobenzene	0.77	--	--	--	--	--
	1,2,3-Trichloropropane	0.0000052	--	--	--	--	--
	1,2,4-Trichlorobenzene	2.2	--	--	--	--	--
	1,2,4-Trimethylbenzene	4.5	--	--	--	--	--
	1,2-cis-Dichloroethylene	0.12	--	--	--	--	--
	1,2-Dibromo-3-chloropropane	0.00058	--	--	--	--	--
	1,2-Dichlorobenzene	22	--	--	--	--	--
	1,2-Dichloropropane	0.040	--	--	--	--	--
	1,2-trans-Dichloroethylene	0.59	--	--	--	--	--
	1,3,5-Trimethylbenzene	4.4	--	--	--	--	--
	1,3-Dichlorobenzene	223	--	--	--	--	--
	1,3-Dichloropropane	1.6	--	--	--	--	--
	1,4-Dichlorobenzene	0.28	--	--	--	--	--
	2,2-Dichloropropane	No Value	--	--	--	--	--
	2-Hexanone	0.21	--	--	--	--	--
	Acetone	30	--	--	--	--	--
	Acrylonitrile	0.00038	--	--	--	--	--
	Bromobenzene	1.5	--	--	--	--	--
	Bromochloromethane	4,916	--	--	--	--	--
	Bromodichloromethane	0.0095	--	--	--	--	--
	Bromoform	0.80	--	--	--	--	--
	Bromomethane	0.056	--	--	--	--	--
	Carbon Disulfide	5.2	--	--	--	--	--
	Carbon Tetrachloride	0.011	--	--	--	--	--
	Chlorobenzene	2.3	--	--	--	--	--
	Chloroform	0.010	--	--	--	--	--
	Chloromethane	0.75	--	--	--	--	--
	cis-1,3-Dichloropropene	No Value	--	--	--	--	--
	Cumene	50	--	--	--	--	--
	Dibromochloromethane	0.035	--	--	--	--	--
	Dibromomethane (Methylene Bromide)	0.47	--	--	--	--	--
	Dichlorodifluoromethane	0.11	--	--	--	--	--
	Ethyl Chloride (Chloroethane)	95	--	--	--	--	--
	Hexachlorobutadiene	0.042	--	--	--	--	--
	Methyl Ethyl Ketone	21	--	--	--	--	--
	Methyl Isobutyl Ketone	3.2	--	--	--	--	--
	Methylene Chloride	0.025	--	--	--	--	--
	n-Butylbenzene	52	--	--	--	--	--
	o-Chlorotoluene (2-Chlorotoluene)	5.8	--	--	--	--	--
	p-Chlorotoluene (4-Chlorotoluene)	5.7	--	--	--	--	--
	p-Isopropyltoluene	No Value	--	--	--	--	--
	Propyl benzene (n-Propylbenzene)	58	--	--	--	--	--
	sec-Butylbenzene	93	--	--	--	--	--
	Styrene	8.1	--	--	--	--	--
	tert-Butylbenzene	71	--	--	--	--	--
	Tetrachloroethylene	0.13	--	--	--	--	--
	trans-1,3-Dichloropropene	No Value	--	--	--	--	--
	Trichloroethylene	0.017	--	--	--	--	--
	Trichlorofluoromethane	1.5	--	--	--	--	--
	Vinyl Chloride	0.0021	--	--	--	--	--
Other PAHs	Acenaphthene	81	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--
	Anthracene	4.3	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--
	Fluoranthene	54	--	--	--	--	--
	Fluorene	55	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--
	Pyrene	39	--	--	--	--	--
	Total cPAHs [4]	0.19	--	--	--	--	--
Metals	Arsenic	20	--	--	--	--	--
	Barium	1,648	--	--	--	--	--
	Cadmium	0.77	--	--	--	--	--
	Chromium, Total	No Value	--	--	--	--	--
	Chromium (VI)	0.018	--	--	--	--	--
	Lead	250	--	--	--	--	--
	Mercury	2.1	--	--	--	--	--
	Selenium	5.2	--	--	--	--	--
	Silver	14	--	--	--	--	--

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L)									
			4/5/2019									
			B1 [2]	B2	B3	B5	B6	B7	B9	B10	B11	B12 [2]
TPH-D and TPH-HO	TPH-D	500	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
	TPH-HO	500	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U
	TPH-D + TPH-HO combined [3]	500	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
	1,2-Dichloroethane	3.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl tert-Butyl Ether	24	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,1-Trichloroethane	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane	0.22	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1,2-Trichloroethane	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethane	7.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,1-Dichloroethylene	7.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloropropene	No Value	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,3-Trichlorobenzene	6.4	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	1,2,3-Trichloropropane	0.00038	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2,4-Trichlorobenzene	15	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	1,2,4-Trimethylbenzene	80	1.0 U	**5.9**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-cis-Dichloroethylene	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dibromo-3-chloropropane	0.042	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichlorobenzene	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-Dichloropropane	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,2-trans-Dichloroethylene	77	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3,5-Trimethylbenzene	80	1.0 U	**2.8**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichlorobenzene	No Value	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,3-Dichloropropane	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	1,4-Dichlorobenzene	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	2,2-Dichloropropane	No Value	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	2-Hexanone	40	--	--	--	--	--	--	--	--	--	--
	Acetone	7,200	--	--	--	--	--	--	--	--	--	--
	Acrylonitrile	0.081	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	64	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromochloromethane	No Value	--	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromoform	55	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Bromomethane	11	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Carbon Disulfide	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	0.62	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chlorobenzene	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloroform	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chloromethane	150	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	cis-1,3-Dichloropropene	No Value	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Cumene	800	4.0 U	**22**	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
	Dibromochloromethane	5.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dibromomethane (Methylene Bromide)	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Dichlorodifluoromethane	4.2	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Ethyl Chloride (Chloroethane)	15,000	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Hexachlorobutadiene	0.56	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Methyl Ethyl Ketone	4,800	--	--	--	--	--	--	--	--	--	--
	Methyl Isobutyl Ketone	640	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	n-Butylbenzene	400	1.0 U	**9.3**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	o-Chlorotoluene (2-Chlorotoluene)	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Chlorotoluene (4-Chlorotoluene)	160	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	p-Isopropyltoluene (Isopropyltoluene)	No Value	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Propyl benzene (n-Propylbenzene)	800	1.0 U	**43**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	sec-Butylbenzene	800	1.0 U	**6.3**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Styrene	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	tert-Butylbenzene	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Tetrachloroethylene	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	trans-1,3-Dichloropropene	No Value	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichloroethylene	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Trichlorofluoromethane	120	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Vinyl Chloride	0.29	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Other PAHs	Acenaphthene	480	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	2,400	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	640	--	--	--	--	--	--	--	--	--	--
	Fluorene	320	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	240	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.20	--	--	--	--	--	--	--	--	--	--
Metals [5]	Arsenic	8.0	**23**	--	**100**	**25**	**16**	3.0 U	**42**	**53**	**93**	**62**
	Barium	2,000	--	--	--	--	--	--	--	--	--	--
	Cadmium	5.0	0.50 U	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Chromium, Total	100	**82**	--	**34**	**55**	**11**	**11**	**5.6**	5.0 U	**7.1**	5.0 U
	Lead	15	**55**	--	**8.6**	**19**	**5.6**	5.0 U	5.0 U	5.0 U	**5.1**	5.0 U
	Mercury	2.0	0.50 U	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Selenium	50	--	--	--	--	--	--	--	--	--	--
	Silver	80	--	--	--	--	--	--	--	--	--	--

Notes:

--: not analyzed; cPAHs: carcinogenic PAHs; U: constituent not detected at shown reporting limit

Constituent results are shown as two significant figures in standard notation, except numbers greater than 100 are rou

Bold font indicates constituent was detected.

Yellow highlighted cell indicates constituent was detected at a concentration > the SL and ≤ 10X the SL

Orange highlighted cell indicates constituent was detected at a concentration > 10X the SL and ≤ 100X the SL

Red highlighted cell indicates constituent was detected at a concentration > 100X the SL

[1] See Appendix E for the groundwater (GW) SLs used for RI screening purposes.

[2] Duplicate sample collected for one or more constituents in this table. See Table 3 for the data reduction rules for duplicate samples.

[3] TPH-D and TPH-HO were combined in accordance with Ecology guidance (Ecology 2004, 2016a). If only one constituent was non-detect, the non-detect concentration was assumed to equal one-half of the reporting limit. If neither constituent was detected, the reporting limits were summed. If future samples demonstrate separate products are present per Ecology 2004, TPH-D and TPH-HO may be split.

[4] The data reduction rules for non-detect results when compound totaling this constituent were the same as total xylenes and total naphthalenes in Table 3. Data reduction rules in Ecology 2001c may be used for total cPAHs in the future.

[5] The 2019 metal analyses were for total metals. The 2020 metal analyses were for dissolved metals.

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L)									
			9/17/2019			12/16/2019			7/14/2020 - 7/15/2020			
			B13 [2]	B17	B18	B27	B28	B29 [2]	B30	B32 [2]	B33	B34
TPH-D and TPH-HO	TPH-D	500	200 U	200 U	200 U	200 U	200 U	200 U	273 U	132 U	--	139 U
	TPH-HO	500	400 U	400 U	400 U	400 U	400 U	400 U	546 U	461 U	--	554 U
	TPH-D + TPH-HO combined [3]	500	600 U	600 U	600 U	600 U	600 U	600 U	819 U	593 U	--	693 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloroethane	3.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U
	Methyl tert-Butyl Ether	24	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U	0.50 U	0.50 U	0.50 U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,1-Trichloroethane	200	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,2,2-Tetrachloroethane	0.22	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,2-Trichloroethane	5.0	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethane	7.7	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethylene	7.0	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloropropene	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichlorobenzene	6.4	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichloropropane	0.00038	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trichlorobenzene	15	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trimethylbenzene	80	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-cis-Dichloroethylene	16	--	--	--	--	--	--	**1.0**	0.50 U	0.50 U	0.50 U
	1,2-Dibromo-3-chloropropane	0.042	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichlorobenzene	600	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloropropane	5.0	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-trans-Dichloroethylene	77	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,3,5-Trimethylbenzene	80	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,3-Dichlorobenzene	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	**0.89**
	1,3-Dichloropropane	160	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	2,2-Dichloropropane	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	2-Hexanone	40	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U
	Acetone	7,200	--	--	--	--	--	--	**4.0**	**7.4 J**	**5.1 J**	2.5 U
	Acrylonitrile	0.081	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Bromobenzene	64	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Bromochloromethane	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Bromodichloromethane	1.4	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Bromoform	55	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Bromomethane	11	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Carbon Disulfide	800	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Carbon Tetrachloride	0.62	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Chlorobenzene	100	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Chloroform	1.2	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Chloromethane	150	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	cis-1,3-Dichloropropene	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Cumene	800	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Dibromochloromethane	5.2	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Dibromomethane (Methylene Bromide)	80	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Dichlorodifluoromethane	4.2	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Ethyl Chloride (Chloroethane)	15,000	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Hexachlorobutadiene	0.56	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Methyl Ethyl Ketone	4,800	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U
	Methyl Isobutyl Ketone	640	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U
	Methylene Chloride	5.0	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U
	n-Butylbenzene	400	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	o-Chlorotoluene (2-Chlorotoluene)	160	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	p-Chlorotoluene (4-Chlorotoluene)	160	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	p-Isopropyltoluene (Isopropyltoluene)	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Propyl benzene (n-Propylbenzene)	800	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	sec-Butylbenzene	800	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Styrene	100	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	tert-Butylbenzene	800	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Tetrachloroethylene	5.0	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	trans-1,3-Dichloropropene	No Value	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Trichloroethylene	1.4	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Trichlorofluoromethane	120	--	--	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U
	Vinyl Chloride	0.29	--	--	--	--	--	--	**4.5**	0.50 U	0.50 U	0.50 U
Other PAHs	Acenaphthene	480	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Acenaphthylene	No Value	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Anthracene	2,400	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Fluoranthene	640	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Fluorene	320	--	--	--	--	--	--	0.050 U	0.050 U	0.050 U	0.010 U
	Phenanthrene	No Value	--	--	--	--	--	--	0.050 U	0.050 U	**0.41 J**	0.010 U
	Pyrene	240	--	--	--	--	--	--	0.050 U	0.050 U	**0.35 J**	0.010 U
	Total cPAHs [4]	0.20	--	--	--	--	--	--	0.076 U	0.076 U	0.076 U	0.015 U
Metals [5]	Arsenic	8.0	--	--	--	--	--	--	**2.2**	**11 J**	1.0 U	--
	Barium	2,000	--	--	--	--	--	--	**10**	**24 J**	**10 J**	--
	Cadmium	5.0	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U	--
	Chromium, Total	100	--	--	--	--	--	--	1.0 U	**6.1 J**	1.0 U	--
	Lead	15	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U	--
	Mercury	2.0	--	--	--	--	--	--	0.010 U	0.010 U	0.010 U	--
	Selenium	50	--	--	--	--	--	--	1.0 U	**2.0 J**	**2.6 J**	--
	Silver	80	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U	--

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L) 7/14/2020 - 7/15/2020							
			B35	B37	B39	B41	B42	B43	B44	B45
TPH-D and TPH-HO	TPH-D	500	269 U	291 U	327 U	**913**	196 U	368 U	222 U	202 U
	TPH-HO	500	538 U	581 U	654 U	595 U	392 U	735 U	**1,950**	405 U
	TPH-D + TPH-HO combined [3]	500	807 U	872 U	981 U	**1,211**	588 U	1,103 U	**2,061**	607 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloroethane	3.5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Methyl tert-Butyl Ether	24	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,1-Trichloroethane	200	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,2,2-Tetrachloroethane	0.22	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1,2-Trichloroethane	5.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethane	7.7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethylene	7.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloropropene	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichlorobenzene	6.4	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichloropropane	0.00038	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trichlorobenzene	15	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trimethylbenzene	80	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-cis-Dichloroethylene	16	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dibromo-3-chloropropane	0.042	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichlorobenzene	600	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloropropane	5.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,2-trans-Dichloroethylene	77	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,3,5-Trimethylbenzene	80	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,3-Dichlorobenzene	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,3-Dichloropropane	160	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	1,4-Dichlorobenzene	5.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	2,2-Dichloropropane	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	2-Hexanone	40	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
	Acetone	7,200	2.5 U	**3.2**	2.5 U	**3.4**	2.5 U	**9.0**	2.5 U	2.5 U
	Acrylonitrile	0.081	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Bromobenzene	64	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Bromochloromethane	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Bromodichloromethane	1.4	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Bromoform	55	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Bromomethane	11	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Carbon Disulfide	800	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Carbon Tetrachloride	0.62	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Chlorobenzene	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Chloroform	1.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Chloromethane	150	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	cis-1,3-Dichloropropene	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Cumene	800	0.50 U	0.50 U	0.50 U	**0.56**	0.50 U	0.50 U	0.50 U	0.50 U
	Dibromochloromethane	5.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Dibromomethane (Methylene Bromide)	80	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Dichlorodifluoromethane	4.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Ethyl Chloride (Chloroethane)	15,000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Hexachlorobutadiene	0.56	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Methyl Ethyl Ketone	4,800	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	**3.7**	2.5 U	2.5 U
	Methyl Isobutyl Ketone	640	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
	Methylene Chloride	5.0	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
	n-Butylbenzene	400	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	o-Chlorotoluene (2-Chlorotoluene)	160	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	p-Chlorotoluene (4-Chlorotoluene)	160	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	p-Isopropyltoluene (Isopropyltoluene)	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Propyl benzene (n-Propylbenzene)	800	0.50 U	0.50 U	0.50 U	**0.75**	0.50 U	0.50 U	0.50 U	0.50 U
	sec-Butylbenzene	800	0.50 U	0.50 U	0.50 U	**0.63**	0.50 U	0.50 U	0.50 U	0.50 U
	Styrene	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	tert-Butylbenzene	800	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Tetrachloroethylene	5.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	trans-1,3-Dichloropropene	No Value	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Trichloroethylene	1.4	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Trichlorofluoromethane	120	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Vinyl Chloride	0.29	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Other PAHs	Acenaphthene	480	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Acenaphthylene	No Value	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Anthracene	2,400	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Benzo(g,h,i)perylene	No Value	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Fluoranthene	640	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Fluorene	320	0.010 U	0.050 U	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Phenanthrene	No Value	0.010 U	**0.062**	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Pyrene	240	0.010 U	**0.13**	0.050 U	0.050 U	0.010 U	0.050 U	0.010 U	0.010 U
	Total cPAHs [4]	0.20	0.015 U	0.076 U	0.076 U	0.076 U	0.015 U	0.076 U	0.015 U	0.015 U
Metals [5]	Arsenic	8.0	1.0 U	**10**	**4.2**	**2.0**	1.0 U	**3.2**	1.0 U	**1.5 J**
	Barium	2,000	**21 J**	**4.1**	**3.7**	**4.6**	**10**	**3.1**	**6.1**	**7.5 J**
	Cadmium	5.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Chromium, Total	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Lead	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Mercury	2.0	0.010 U	0.010 U	0.010 U	0.010 U	**0.15**	0.010 U	0.010 U	0.010 U
	Selenium	50	**5.4 J**	1.0 U	**1.1**	1.0 U	1.0 U	1.0 U	**1.6**	1.0 U
	Silver	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L)									
			10/18/2019				12/23/2019					
			MW1 [2]	MW2	MW3	MW4E	MW1 [2]	MW2	MW3 [2]	MW4E [2]	MW5	MW6 [2]
TPH-D and TPH-HO	TPH-D	500	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
	TPH-HO	500	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U	400 U
	TPH-D + TPH-HO combined [3]	500	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U	600 U
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
	1,2-Dichloroethane	3.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Methyl tert-Butyl Ether	24	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	--	--	--	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	200	--	--	--	--	--	--	--	--	--	--
	1,1,2,2-Tetrachloroethane	0.22	--	--	--	--	--	--	--	--	--	--
	1,1,2-Trichloroethane	5.0	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	7.7	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethylene	7.0	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	6.4	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	0.00038	--	--	--	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	15	--	--	--	--	--	--	--	--	--	--
	1,2,4-Trimethylbenzene	80	--	--	--	--	--	--	--	--	--	--
	1,2-cis-Dichloroethylene	16	--	--	--	--	--	--	--	--	--	--
	1,2-Dibromo-3-chloropropane	0.042	--	--	--	--	--	--	--	--	--	--
	1,2-Dichlorobenzene	600	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloropropane	5.0	--	--	--	--	--	--	--	--	--	--
	1,2-trans-Dichloroethylene	77	--	--	--	--	--	--	--	--	--	--
	1,3,5-Trimethylbenzene	80	--	--	--	--	--	--	--	--	--	--
	1,3-Dichlorobenzene	No Value	--	--	--	--	--	--	--	--	--	--
	1,3-Dichloropropane	160	--	--	--	--	--	--	--	--	--	--
	1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	--	--	--	--
	2,2-Dichloropropane	No Value	--	--	--	--	--	--	--	--	--	--
	2-Hexanone	40	--	--	--	--	--	--	--	--	--	--
	Acetone	7,200	--	--	--	--	--	--	--	--	--	--
	Acrylonitrile	0.081	--	--	--	--	--	--	--	--	--	--
	Bromobenzene	64	--	--	--	--	--	--	--	--	--	--
	Bromochloromethane	No Value	--	--	--	--	--	--	--	--	--	--
	Bromodichloromethane	1.4	--	--	--	--	--	--	--	--	--	--
	Bromoform	55	--	--	--	--	--	--	--	--	--	--
	Bromomethane	11	--	--	--	--	--	--	--	--	--	--
	Carbon Disulfide	800	--	--	--	--	--	--	--	--	--	--
	Carbon Tetrachloride	0.62	--	--	--	--	--	--	--	--	--	--
	Chlorobenzene	100	--	--	--	--	--	--	--	--	--	--
	Chloroform	1.2	--	--	--	--	--	--	--	--	--	--
	Chloromethane	150	--	--	--	--	--	--	--	--	--	--
	cis-1,3-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	Cumene	800	--	--	--	--	--	--	--	--	--	--
	Dibromochloromethane	5.2	--	--	--	--	--	--	--	--	--	--
	Dibromomethane (Methylene Bromide)	80	--	--	--	--	--	--	--	--	--	--
	Dichlorodifluoromethane	4.2	--	--	--	--	--	--	--	--	--	--
	Ethyl Chloride (Chloroethane)	15,000	--	--	--	--	--	--	--	--	--	--
	Hexachlorobutadiene	0.56	--	--	--	--	--	--	--	--	--	--
	Methyl Ethyl Ketone	4,800	--	--	--	--	--	--	--	--	--	--
	Methyl Isobutyl Ketone	640	--	--	--	--	--	--	--	--	--	--
	Methylene Chloride	5.0	--	--	--	--	--	--	--	--	--	--
	n-Butylbenzene	400	--	--	--	--	--	--	--	--	--	--
	o-Chlorotoluene (2-Chlorotoluene)	160	--	--	--	--	--	--	--	--	--	--
	p-Chlorotoluene (4-Chlorotoluene)	160	--	--	--	--	--	--	--	--	--	--
	p-Isopropyltoluene (Isopropyltoluene)	No Value	--	--	--	--	--	--	--	--	--	--
	Propyl benzene (n-Propylbenzene)	800	--	--	--	--	--	--	--	--	--	--
	sec-Butylbenzene	800	--	--	--	--	--	--	--	--	--	--
	Styrene	100	--	--	--	--	--	--	--	--	--	--
	tert-Butylbenzene	800	--	--	--	--	--	--	--	--	--	--
	Tetrachloroethylene	5.0	--	--	--	--	--	--	--	--	--	--
	trans-1,3-Dichloropropene	No Value	--	--	--	--	--	--	--	--	--	--
	Trichloroethylene	1.4	--	--	--	--	--	--	--	--	--	--
	Trichlorofluoromethane	120	--	--	--	--	--	--	--	--	--	--
	Vinyl Chloride	0.29	--	--	--	--	--	--	--	--	--	--
Other PAHs	Acenaphthene	480	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	2,400	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	640	--	--	--	--	--	--	--	--	--	--
	Fluorene	320	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	240	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.20	--	--	--	--	--	--	--	--	--	--
Metals [5]	Arsenic	8.0	**63**	**44**	**17**	**10.0**	**40**	**4.2**	3.0 U	**10**	**67**	**8.2**
	Barium	2,000	--	--	--	--	--	--	--	--	--	--
	Cadmium	5.0	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Chromium, Total	100	**3.6**	**11**	**3.5**	**14**	5.0 U	**6.6**	5.0 U	5.0 U	5.0 U	5.0 U
	Lead	15	5.0 U	5.0 U	5.0 U	**11**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
	Mercury	2.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Selenium	50	--	--	--	--	--	--	--	--	--	--
	Silver	80	--	--	--	--	--	--	--	--	--	--

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L)									
			12/23/2019	7/21/2020 - 7/22/2020								
			MW7	MW1	MW2	MW3	MW4E	MW5	MW6	MW7	MW8	MW9
TPH-D and TPH-HO	TPH-D	500	200 U	--	--	--	--	--	--	--	--	--
	TPH-HO	500	400 U	--	--	--	--	--	--	--	--	--
	TPH-D + TPH-HO combined [3]	500	600 U	--	--	--	--	--	--	--	--	--
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.010 U	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloroethane	3.5	1.0 U	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Methyl tert-Butyl Ether	24	5.0 U	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1,1-Trichloroethane	200	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1,2,2-Tetrachloroethane	0.22	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1,2-Trichloroethane	5.0	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethane	7.7	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloroethylene	7.0	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,1-Dichloropropene	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichlorobenzene	6.4	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2,3-Trichloropropane	0.00038	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trichlorobenzene	15	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2,4-Trimethylbenzene	80	--	**2.5**	**1.3**	**941**	**1.9**	**1.7**	**25**	**3.6**	**1.5**	**3.0**
	1,2-cis-Dichloroethylene	16	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2-Dibromo-3-chloropropane	0.042	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2-Dichlorobenzene	600	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2-Dichloropropane	5.0	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,2-trans-Dichloroethylene	77	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,3,5-Trimethylbenzene	80	--	**0.63**	0.50 U	**282**	**0.52**	0.50 U	**8.2**	**0.86**	**0.51**	**0.87**
	1,3-Dichlorobenzene	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,3-Dichloropropane	160	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	1,4-Dichlorobenzene	5.0	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	2,2-Dichloropropane	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	2-Hexanone	40	--	2.5 U	2.5 U	63 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U	2.5 U
	Acetone	7,200	--	**5.8**	2.5 U	63 U	**3.9**	**2.9**	25 U	**7.0**	**2.8**	**11**
	Acrylonitrile	0.081	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Bromobenzene	64	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Bromochloromethane	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Bromodichloromethane	1.4	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Bromoform	55	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Bromomethane	11	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Carbon Disulfide	800	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	**2.2**	**4.1**	0.50 U
	Carbon Tetrachloride	0.62	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Chlorobenzene	100	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Chloroform	1.2	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Chloromethane	150	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	cis-1,3-Dichloropropene	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Cumene	800	--	0.50 U	0.50 U	**41**	0.50 U	**1.3**	**28**	**2.5**	0.50 U	**21**
	Dibromochloromethane	5.2	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Dibromomethane (Methylene Bromide)	80	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Dichlorodifluoromethane	4.2	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Ethyl Chloride (Chloroethane)	15,000	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Hexachlorobutadiene	0.56	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Methyl Ethyl Ketone	4,800	--	2.5 U	2.5 U	63 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U	2.5 U
	Methyl Isobutyl Ketone	640	--	2.5 U	2.5 U	63 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U	2.5 U
	Methylene Chloride	5.0	--	2.5 U	2.5 U	63 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U	2.5 U
	n-Butylbenzene	400	--	0.50 U	0.50 U	**15**	0.50 U	**4.1**	**7.3**	**1.7**	0.50 U	**4.1**
	o-Chlorotoluene (2-Chlorotoluene)	160	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	p-Chlorotoluene (4-Chlorotoluene)	160	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	p-Isopropyltoluene (Isopropyltoluene)	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Propyl benzene (n-Propylbenzene)	800	--	**0.51**	0.50 U	**102**	0.50 U	**3.3**	**78**	**7.7**	**0.55**	**52**
	sec-Butylbenzene	800	--	0.50 U	0.50 U	13 U	0.50 U	**3.8**	**6.3**	**0.90**	0.50 U	**3.5**
	Styrene	100	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	tert-Butylbenzene	800	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Tetrachloroethylene	5.0	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	trans-1,3-Dichloropropene	No Value	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Trichloroethylene	1.4	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Trichlorofluoromethane	120	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
	Vinyl Chloride	0.29	--	0.50 U	0.50 U	13 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U	0.50 U
Other PAHs	Acenaphthene	480	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	No Value	--	--	--	--	--	--	--	--	--	--
	Anthracene	2,400	--	--	--	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	No Value	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	640	--	--	--	--	--	--	--	--	--	--
	Fluorene	320	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	No Value	--	--	--	--	--	--	--	--	--	--
	Pyrene	240	--	--	--	--	--	--	--	--	--	--
	Total cPAHs [4]	0.20	--	--	--	--	--	--	--	--	--	--
Metals [5]	Arsenic	8.0	**10.0**	**4.2**	**10**	**4.6**	1.0 U	**15**	1.0 U	**1.5**	**3.7**	**14**
	Barium	2,000	--	--	--	--	--	--	--	--	--	--
	Cadmium	5.0	5.0 U	--	--	--	--	--	--	--	--	--
	Chromium, Total	100	5.0 U	--	--	--	--	--	--	--	--	--
	Lead	15	5.0 U	1.0 U	1.0 U	**1.7**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Mercury	2.0	0.50 U	--	--	--	--	--	--	--	--	--
	Selenium	50	--	--	--	--	--	--	--	--	--	--
	Silver	80	--	--	--	--	--	--	--	--	--	--

Table 9: Other Constituents GW Concentrations

Type	Constituent	GW SL [1] (ug/L)	Sample Date, Sample Location, and Concentration (ug/L)					
			7/21/2020 - 7/22/2020					
			MW10 [2]		MW11		MW13E	
TPH-D and TPH-HO	TPH-D	500	--		--		--	
	TPH-HO	500	--		--		--	
	TPH-D + TPH-HO combined [3]	500	--		--		--	
Other Potential Gasoline-Related VOCs	1,2-Dibromoethane (Ethylene Dibromide)	0.050	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethane	3.5	0.50	U	0.50	U	0.50	U
	Methyl tert-Butyl Ether	24	0.50	U	0.50	U	0.50	U
Other VOCs	1,1,1,2-Tetrachloroethane	1.7	0.50	U	0.50	U	0.50	U
	1,1,1-Trichloroethane	200	0.50	U	0.50	U	0.50	U
	1,1,2,2-Tetrachloroethane	0.22	0.50	U	0.50	U	0.50	U
	1,1,2-Trichloroethane	5.0	0.50	U	0.50	U	0.50	U
	1,1-Dichloroethane	7.7	0.50	U	0.50	U	0.50	U
	1,1-Dichloroethylene	7.0	0.50	U	0.50	U	0.50	U
	1,1-Dichloropropene	No Value	0.50	U	0.50	U	0.50	U
	1,2,3-Trichlorobenzene	6.4	0.50	U	0.50	U	0.50	U
	1,2,3-Trichloropropane	0.00038	0.50	U	0.50	U	0.50	U
	1,2,4-Trichlorobenzene	15	0.50	U	0.50	U	0.50	U
	1,2,4-Trimethylbenzene	80	**0.82**		**19**		**1.8**	
	1,2-cis-Dichloroethylene	16	0.50	U	0.50	U	0.50	U
	1,2-Dibromo-3-chloropropane	0.042	0.50	U	0.50	U	0.50	U
	1,2-Dichlorobenzene	600	0.50	U	0.50	U	0.50	U
	1,2-Dichloropropane	5.0	0.50	U	0.50	U	0.50	U
	1,2-trans-Dichloroethylene	77	0.50	U	0.50	U	0.50	U
	1,3,5-Trimethylbenzene	80	0.50	U	**2.8**		0.50	U
	1,3-Dichlorobenzene	No Value	0.50	U	0.50	U	0.50	U
	1,3-Dichloropropane	160	0.50	U	0.50	U	0.50	U
	1,4-Dichlorobenzene	5.0	0.50	U	0.50	U	0.50	U
	2,2-Dichloropropane	No Value	0.50	U	0.50	U	0.50	U
	2-Hexanone	40	2.5	U	2.5	U	2.5	U
	Acetone	7,200	**4.3**		**4.4**		**5.8**	
	Acrylonitrile	0.081	0.50	U	0.50	U	0.50	U
	Bromobenzene	64	0.50	U	0.50	U	0.50	U
	Bromochloromethane	No Value	0.50	U	0.50	U	0.50	U
	Bromodichloromethane	1.4	0.50	U	0.50	U	0.50	U
	Bromoform	55	0.50	U	0.50	U	0.50	U
	Bromomethane	11	0.50	U	0.50	U	0.50	U
	Carbon Disulfide	800	**1.2**		0.50	U	0.50	U
	Carbon Tetrachloride	0.62	0.50	U	0.50	U	0.50	U
	Chlorobenzene	100	0.50	U	0.50	U	0.50	U
	Chloroform	1.2	0.50	U	0.50	U	0.50	U
	Chloromethane	150	0.50	U	0.50	U	0.50	U
	cis-1,3-Dichloropropene	No Value	0.50	U	0.50	U	0.50	U
	Cumene	800	0.50	U	**16**		0.50	U
	Dibromochloromethane	5.2	0.50	U	0.50	U	0.50	U
	Dibromomethane (Methylene Bromide)	80	0.50	U	0.50	U	0.50	U
	Dichlorodifluoromethane	4.2	0.50	U	0.50	U	0.50	U
	Ethyl Chloride (Chloroethane)	15,000	0.50	U	0.50	U	0.50	U
	Hexachlorobutadiene	0.56	0.50	U	0.50	U	0.50	U
	Methyl Ethyl Ketone	4,800	2.5	U	2.5	U	2.5	U
	Methyl Isobutyl Ketone	640	2.5	U	2.5	U	2.5	U
	Methylene Chloride	5.0	2.5	U	2.5	U	2.5	U
	n-Butylbenzene	400	0.50	U	**4.2**		0.50	U
	o-Chlorotoluene (2-Chlorotoluene)	160	0.50	U	0.50	U	0.50	U
	p-Chlorotoluene (4-Chlorotoluene)	160	0.50	U	0.50	U	0.50	U
	p-Isopropyltoluene (Isopropyltoluene)	No Value	0.50	U	0.50	U	0.50	U
	Propyl benzene (n-Propylbenzene)	800	0.50	U	**32**		**0.58**	
	sec-Butylbenzene	800	0.50	U	**3.1**		0.50	U
	Styrene	100	0.50	U	0.50	U	0.50	U
	tert-Butylbenzene	800	0.50	U	0.50	U	0.50	U
	Tetrachloroethylene	5.0	0.50	U	0.50	U	0.50	U
	trans-1,3-Dichloropropene	No Value	0.50	U	0.50	U	0.50	U
	Trichloroethylene	1.4	0.50	U	0.50	U	0.50	U
	Trichlorofluoromethane	120	0.50	U	0.50	U	0.50	U
	Vinyl Chloride	0.29	0.50	U	0.50	U	0.50	U
Other PAHs	Acenaphthene	480	--		--		--	
	Acenaphthylene	No Value	--		--		--	
	Anthracene	2,400	--		--		--	
	Benzo(g,h,i)perylene	No Value	--		--		--	
	Fluoranthene	640	--		--		--	
	Fluorene	320	--		--		--	
	Phenanthrene	No Value	--		--		--	
	Pyrene	240	--		--		--	
	Total cPAHs [4]	0.20	--		--		--	
Metals [5]	Arsenic	8.0	**1.6**		**14**		1.0	U
	Barium	2,000	--		--		--	
	Cadmium	5.0	--		--		--	
	Chromium, Total	100	--		--		--	
	Lead	15	1.0	U	1.0	U	1.0	U
	Mercury	2.0	--		--		--	
	Selenium	50	--		--		--	
	Silver	80	--		--		--	

Table 10: MW Construction Details and Groundwater Elevations

MW Construction Details								October 18, 2019 GW Elevations			January 27, 2020 GW Elevations			July 21-22, 2020 GW Elevations			August 19, 2020 GW Elevations			August 31, 2020 GW Elevations		
MW ID	MW Dia (in)	Depth to Top of Screen (ft bTOC)	Depth to Bottom of Screen (ft bTOC)	MW Depth (ft bTOC)	Northing [1]	Easting [1]	TOC Elev (ft NAVD88)	Measured Depth to Water (ft bTOC)	Measured LNAPL Thickness (ft)	GW Elev (ft NAVD88)	Measured Depth to Water (ft bTOC)	Measured LNAPL Thickness (ft)	GW Elev (ft NAVD88)	Measured Depth to Water (ft bTOC)	Measured LNAPL Thickness (ft)	GW Elev [4] (ft NAVD88)	Measured Depth to Water (ft bTOC)	Measured LNAPL Thickness (ft)	GW Elev (ft NAVD88)	Measured Depth to Water (feet bTOC)	Measured LNAPL Thickness (feet)	GW Elev (ft NAVD88)
MW1	2	5	15	15	126265.657	1295942.327	53.90	7.23	NM	46.67	4.11	NM	49.79	6.80	NM	47.10	7.28	NM	46.62	7.29	--	46.61
MW2	2	5	15	15	125763.302	1295554.607	53.90	6.96	NM	46.94	3.93	NM	49.97	6.60	NM	47.30	7.20	NM	46.70	7.33	--	46.57
MW3	2	5	15	15	125870.331	1295931.542	54.33	7.53	NM	46.80	4.55	NM	49.78	6.90	NM	47.43	7.55	NM	46.78	7.71	--	46.62
MW4E	2	N/A [2]	N/A [2]	28 [3]	125920.012	1295929.866	54.19	7.48	NM	46.71	4.35	NM	49.84	7.00	NM	47.19	7.62	NM	46.57	7.78	--	46.41
MW5	2	5	15	15	125769.519	1295879.428	53.79	NM	NM	NM	3.66	NM	50.13	6.50	NM	47.29	6.94	NM	46.85	7.09	--	46.70
MW6	2	5	15	15	125894.932	1295858.881	55.41	NM	NM	NM	5.50	NM	49.91	8.60	NM	46.81	8.40	NM	47.01	8.80	--	46.61
MW7	2	5	15	15	125786.622	1295956.769	53.88	NM	NM	NM	4.30	NM	49.58	7.20	NM	46.68	7.16	NM	46.72	7.33	--	46.55
MW8	2	5	15	15	125933.334	1295984.581	54.08	NM	NM	NM	NM	NM	NM	7.25	NM	46.83	7.28	NM	46.80	7.40	--	46.68
MW9	2	5	15	15	125870.148	1295985.330	54.25	NM	NM	NM	NM	NM	NM	6.90	NM	47.35	7.33	NM	46.92	7.36	--	46.89
MW10	2	5	15	15	125743.458	1295974.528	53.88	NM	NM	NM	NM	NM	NM	6.65	NM	47.23	7.11	NM	46.77	7.26	--	46.62
MW11	2	5	15	15	125746.389	1295852.729	54.18	NM	NM	NM	NM	NM	NM	6.85	NM	47.33	7.29	NM	46.89	7.44	--	46.74
MW13E	2	N/A [2]	N/A [2]	28.5 [3]	125970.496	1295838.639	54.81	NM	NM	NM	NM	NM	NM	8.60	NM	46.21	8.31	NM	46.50	8.44	--	46.37

Notes:

--: No LNAPL thickness was detected; bTOC: below top of casing; dia: diameter; elev: elevation; ft: feet; in; inches; N/A: not available; NAVD88: North American Vertical Datum of 1988; NM: not measured; TOC: top of casing

For a given GWM event, groundwater elevations were conditionally formatted in a color gradient from highest (red) to lowest (green). MW4E and MW13E were not included in the formatting since these two MWs are notably deeper than the rest of the MWs and the screen intervals are unknown.

[1] Northings and Eastings in Washington State Plane, North Zone, North American Datum of 1983 (2011).

[2] The construction details for these two MWs that were likely installed in 2002 are unknown. These two MWs were discovered and identified as MW4E and MW13E during 2019 and 2020 investigation activities, respectively. These two MWs are most likely associated with the vacant Tacoma Water property at 3311 Auburn Way

[3] These MW depths were measured in July 2020.

[4] The accuracy of the depth to water measurements was only 0.05 feet during this gauging event.

Table 11: Water Quality Parameter Results

MW	Date	pH	Specific Conductivity (mS/cm)	Temp-erature (°C)	Total Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Total Dissolved Solids (mg/L)
MW1	10/18/2019	7.06	0.572	18.1	2.17	-105	92.5	366
	7/22/2020	6.57	1.487	18.0	0.17	-89.1	12.63	--
MW2	10/18/2019	7.31	0.308	15.3	0.00	-139	766.0	200
	7/22/2020	6.79	1.047	15.8	0.17	-102.6	17.70	--
MW3	10/18/2019	6.93	0.666	16.1	0.00	-122	58.3	427
	7/21/2020	6.21	1.152	18.0	0.05	-77.5	3.61	--
MW4E	10/18/2019	6.65	0.012	15.1	5.36	72	0.0	8
	7/21/2020	6.26	1.258	16.3	0.08	-61.1	8.20	--
MW5	7/22/2020	6.70	0.987	17.6	0.15	-110.8	13.50	--
MW6	7/21/2020	6.17	1.643	17.5	0.02	-68.8	15.10	--
MW7	7/21/2020	6.58	1.452	22.1	0.18	-87.5	18.70	--
MW8	7/21/2020	6.83	1.081	15.7	0.12	-30.3	12.25	--
MW9	7/21/2020	6.42	1.154	18.4	0.13	-72.5	13.40	--
MW10	7/22/2020	6.43	0.906	16.3	0.14	-19.0	11.21	--
MW11	7/22/2020	6.47	1.123	16.0	0.03	-72.1	9.54	--
MW13E	7/21/2020	6.39	1.089	18.6	1.11	-52.5	45.37	--

Notes:

--: No measurement; °C: Degrees Celius; mg/L: milligrams per liter; mS/cm: milliSiemens per centimeter; mV: millivolt; NTU: Nephelometric Turbidity Units