Chevron Environmental Management Company

Draft for Public Review - Supplemental Investigation Report

Former Chevron Station 90129

4700 Brooklyn Ave NE

Seattle, Washington

FSID: 81966648

CSID: 10632

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Acronyms and Abbreviations

Arcadis	Arcadis U.S., Inc.
ASTM	ASTM International
bgs	below ground surface
BTEX	collectively benzene, toluene, ethylbenzene, and total xylenes
CEMC	Chevron Environmental Management Company
COC	constituent of concern
CUL	cleanup level
Delta	Delta Environmental Consultants, Inc.
DRO	diesel range organics
Ecology	Washington Department of Ecology
EDB	ethylene dibromide
EDC	1,2-dichloroethane
EIM	Environmental Information Management
EMCON	Sweet-Edwards/EMCON
GRO	gasoline range organics
HO	heavy oil range organics
IDW	investigation-derived waste
MTBE	methyl tertiary butyl ether
MTCA	Model Toxics Control Act
PEG	Pacific Environmental Group
PID	photo ionization detector
PLIA	Pollution Liability Insurance Agency
PLP	Potentially Liable Person
PTAP	Petroleum Technical Assistance Program
PVC	polyvinyl chloride
RZA	Rittenhouse-Zeman & Associates, Inc.
SAIC	Science Applications International Corporation
SIR	Supplemental Investigation Report
site	Former Chevron Station 90129, located at 4700 Brooklyn Avenue NE, Seattle, Washington

TPH	total petroleum hydrocarbon
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

1 Introduction

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) has prepared this *Draft for Public Review – Supplemental Investigation Report* (report) for former Chevron Service Station No. 90129, located at 4700 Brooklyn Avenue NE in Seattle, Washington (site). The site was previously identified as Former Chevron Facility No. 90129 in the Washington Department of Ecology (Ecology) database. A Site Location Map and Aerial Map are provided as Figure 1 and Figure 2, respectively.

A parcel map and parcel data for the site are presented in Appendix A. Site regulatory identifiers include Cleanup Site Identification No. 10632 and Facility Site Identification No. 81966648.

This report documents the investigation activities conducted at the site in June and August 2022 that were performed in general accordance with the June 14, 2020 *Supplemental Investigation Work Plan* (Work Plan; Arcadis 2020), which was approved via email from Ecology on February 23, 2021. Work was also completed pursuant to Agreed Order (AO) No. 13815 (Ecology 2017).

The data collected during this site investigation was uploaded in the Ecology Environmental Information Management (EIM) database under EIM identification number FSID81966648.

The objectives of the work were to address data gaps regarding the nature and extent of contaminants in soil, groundwater, and soil vapor associated with the historical use of the property.

2 Site Background

This section discusses general site and background information, and the environmental history at the site.

2.1 General Site Information

The site's general information is listed below:

Site Location: 4700 Brooklyn Avenue NE and surrounding ROW areas

Site County: King County

Site Parcel Number, Address:

Parcel 8816400985 (property), 4700 Brooklyn Ave NE

Property Owner: GEDR Brooklyn LLC.

Site Land Use: The area is zoned as NC3P-65, SM-U 75-240 which allows for mixed residential and commercial businesses with typical street front businesses and residential units above. The property is currently occupied by a 24-story apartment building with unoccupied retail/commercial space on the ground floor and two levels of below-grade parking. Current tenants include residents and property management offices.

Vicinity Land Use: Surrounding properties are also zoned NC3P-65 as described above. The property is bounded by Bank of America to the east, NE 47th Street to the south, Brooklyn Ave NE to the west, and residential construction to the north.

2.2 Site History

Based on available records, the site was occupied by a service station from as early as 1919 through 2016. Two 12,000-gallon gasoline underground storage tanks (USTs) and one 12,000-gallon diesel UST were removed by

FH Brooklyn in February 2017 (Aspect, 2017). The service station building, four dispenser islands, and associated piping were removed from the site in 2018. The current development was constructed in 2020.

Several historical dry-cleaning businesses were located in the vicinity of the site, including Carson Cleaners, which was located across Brooklyn Avenue NE to the west.

A more extensive summary of the site history is presented in the *Draft 2019 Site Investigation Summary*. (Arcadis 2020).

2.3 Environmental Setting

The site environmental setting is described below:

Site Elevation: The site is a rectangular property located near the University of Washington. The site has an elevation of approximately 215 feet.

Climate: The Seattle climate is characterized by mild temperatures and an extended rainy season, with an average annual rainfall of 37 inches. Average temperatures vary between 36 and 47 degrees Fahrenheit in the winter and 55 to 73 degrees Fahrenheit in the summer. The driest month of the year is typically July, with the rainy season extending from October to March.

Nearest Waterbodies: Surface water within the proximity of the site drains to the south towards Portage Bay and the ship canal. The closest water body is Lake Union approximately 3,800 feet southwest of the site.

Site Soils: Soil on the property was excavated to an average depth of 21 feet below ground surface (bgs) to install two levels of underground parking. Soil in the area consists of fill underlain by fine to medium sand, with dense silt encountered below 25 to 30 feet bgs (SAIC 2011).

Site Groundwater: Groundwater monitoring began at the site in 1990 and continued until November 2016, when it was put on hold until 2020. Past monitoring frequency was typically quarterly; however, multiple years only had semi-annual sampling. Depth to water at the site ranges between 15 and 18 feet bgs.

Monitoring network: Currently there are 11 groundwater wells associated with the site: MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-25, MW-27, MW-28, MW-30 and MW-31.

Groundwater elevation: Groundwater elevation ranges from approximately 198 to 203 feet above mean sea level with a 5-foot seasonal fluctuation.

Groundwater flow direction: Groundwater flow direction is predominantly to the east-southeast, with a more easterly direction of flow in the southern portion and southerly in the northern portion of the property (see rose diagram on Figures 4 and 5). Horizontal hydraulic gradients at the site range from 0.01 to 0.02 feet per foot (ft/ft).

Site Sediment: No risks to sediments have been identified.

3 Previous Environmental Investigations

Investigations have been conducted at the site since 1989 to evaluate soil, groundwater, and soil vapor quality, as well as the presence of light non-aqueous phase liquid (LNAPL). The previous investigations are summarized in the following sections.

3.1 Historical Soil Investigations

Historical soil investigations were summarized by Leidos in the *2019 Remedial Investigation Work Plan* and are presented below:

1989 UST Removal

Petroleum-hydrocarbon contamination was first encountered at the site in December 1989 during the removal of three gasoline USTs (two 12,000-gallon steel tanks and one 5,000-gallon steel tank), two pump islands, and associated fuel lines from the northern portion of the property as part of a station renovation. In addition, an undocumented, abandoned-in-place 1,000-gallon UST was discovered and removed from the southern portion of the property along the eastern wall of the new UST pit. The use of the abandoned-in-place UST was not able to be determined. Gasoline-range hydrocarbons (GRO) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected at concentrations exceeding Ecology's Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) in soil samples collected from the UST excavations. Approximately 450 cubic yards of affected soil and 450 cubic yards of unaffected soil was transported offsite for disposal (GeoEngineers, 1990a).

1990 Site Investigation

Following UST removal and replacement, GeoEngineers oversaw the installation of 14 monitoring wells (MW-1 through MW-14) and an 8-inch diameter recovery well (RW-1). Petroleum hydrocarbons were present in soil samples from eight of the 15 soil borings with benzene concentrations above the MTCA Method A CUL in four of the soil borings. Well MW-8 was subsequently destroyed during station renovation activities.

1992 Site Investigation

In 1992, an environmental investigation was conducted by Pacific Environmental Group, Inc. (Pacific) during a Stage II vapor recovery retrofit. Two soil samples were collected during the investigation: one sample (T-1) was collected from the excavated trench adjacent to the northeast dispenser and the other sample (SP-1) was collected from stockpiled soil associated with the excavation area. Concentrations of GRO in both samples were above the MTCA Method A CUL. Analytical results for BTEX compounds and total lead were below MTCA Method A CULs. Approximately 17 cubic yards of clean soil was disposed offsite while 3 cubic yards represented by SP-1 was used as backfill for the trenches.

2001 Supplemental Environmental Investigation

In March 2001, Delta Environmental Consultants, Inc. (Delta) performed a site investigation and reported the results in the *Supplemental Environmental Investigation* letter dated July 24, 2001 (Delta, 2001). Two soil borings were drilled and completed as monitoring wells (MW-15 and MW-16) in the northeastern and southeastern corners of the property, respectively, in order to delineate lateral soil and groundwater impacts. Soil analytical data for MW-15 and MW-16 indicated that all analytes were either not detected or were below the respective MTCA Method A CULs.

2010 Soil Investigation

In October 2010, SAIC advanced one soil boring, SB-1, to a depth of 25 feet bgs in the northwest corner of the property in order to delineate the lateral extent of soil impacts to the north. Three attempts were also made to install a monitoring well near the center of the northern property boundary adjacent to the northwest corner of the station building. However, all three attempts encountered a thick concrete slab at approximately 2.5 to 3.5 feet bgs. Soil samples were collected from boring SB-1 at 15 and 17.5 feet bgs for analysis. Petroleum hydrocarbons were not detected above MTCA Method A CULs in the collected soil samples (Leidos 2017).

2015 Site Investigation

Nine borings (P1 through P9) were advanced to depths ranging from 5 to 22 feet bgs by Riley Group, Inc. (RGI) in February 2015 as part of a baseline assessment. Details of the investigation were described in the *Baseline*

Environmental Assessment Report dated March 31, 2015 (Riley Group, 2015). A total of eight soil samples were submitted to the laboratory for analysis. Benzene was detected at concentrations above the MTCA Method A CUL in the soil samples collected at 10 feet bgs from boring P4 and 13 feet bgs from boring.

2016 Site Investigation

Aspect advanced nine soil borings (AB-1 through AB-9) in November 2016 and collected 56 soil samples for analysis of various constituents including petroleum hydrocarbons, halogenated VOCs (HVOCs), polychlorinated biphenyls (PCBs), polycyclic aromatic compounds (PAHs), and metals (Aspect, 2017a). Benzene, GRO, and naphthalene were detected at concentrations above MTCA Method A CULs in soil samples. Soil samples that exceeded MTCA Method A CULs ranged in depth from 13 to 33 feet bgs.

2017 UST Removal

In February 2017, Aspect provided oversight during removal of three 12,000-gallon USTs from the property and collected seven confirmation soil samples from the UST excavation and three samples from stockpiled pea gravel (Aspect, 2017b). All soil analytical results were less than the MTCA Method A soil CULs with the exception of sample Tank-B1-12, where benzene was detected at a concentration of 0.073 mg/kg. Prior to UST decommissioning, existing site wells (MW-1, MW-4, MW-5, MW-8, MW-9, and RW-1) were abandoned in accordance with WAC 173-160.

2019 Site Investigation

In 2019, Leidos installed nine monitoring wells (MW-20 through MW-23, and MW-25 through MW-29) and collected soil samples from each boring. GRO, DRO, HO, BTEX, and lead in soil were found to be below MTCA Method A CULs or non-detect. PCE was detected in soil at concentrations above the MTCA Method A CUL in MW-20 at depths of 10.5, 18, and 30 bgs, and in MW-21 at 28 feet bgs. TCE was detected in soil at concentrations above the MTCA Method A CUL in MW-21 collected at 26 and 28 feet bgs.

3.2 Historical Groundwater Investigations

Groundwater investigation began at the site in January 1990 with the installation of groundwater monitoring wells MW-1 through MW-14 along with RW-1 by GeoEngineers. A total of 16 groundwater monitoring wells (MW-1 through MW-16) and one recovery well (RW-1) were installed at the site between 1990 and 2001 with six (6) of the wells later being decommissioned. Wells MW-1, MW-4, MW-5, MW-8, MW-9, and RW-1 were decommissioned prior to the 2017 UST removal. Remaining onsite wells were decommissioned in 2018 during property redevelopment. Eleven groundwater monitoring wells remain off-property and consist of MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-25, MW-27, MW-28, MW-30, and MW-31. Groundwater monitoring wells were routinely gauged from 1990 to 2016. In 1990, LNAPL was present in MW-4 and MW-12 with thicknesses of 2.27 and 1.22 feet, respectively. Laboratory analysis of a sample of the LNAPL indicated it was gasoline.

Groundwater samples collected from MW-1, MW-2, MW-3, MW-7, MW-9, MW-10, MW-11, and MW-12 have historically contained benzene concentrations that exceeded the MTCA Method A CUL. Groundwater samples from MW-7, MW-11, and MW-12 historically contained concentrations of GRO above the MTCA Method A CUL.

In March 2001, monitoring wells MW-15 and MW-16 were installed in the northeastern and southeastern corners of the property, respectively. GRO, benzene, and methyl tertiary butyl ether (MTBE) were detected at concentrations that exceeded MTCA Method A CULs in MW-16. All other analytes were either not detected or were below the respective MTCA Method A CULs in groundwater samples collected from MW-15 and MW-16.

During the baseline assessment in 2015, groundwater grab samples were collected from P1 and P8 for analysis. DRO and HO in the groundwater sample collected from P8 exceeded the MTCA Method A CULs. Also, in January 2015, RGI collected samples from wells MW-3, MW-6, MW-9, and MW-13 to evaluate the presence of HVOCs in groundwater and if the upgradient Carson Cleaners had impacted groundwater beneath the subject property. Concentrations of HVOCs were detected in MW-9 and MW-13 above the MTCA Method A CULs.

In November 2016, LNAPL was detected in wells MW-10 (0.98 feet) and MW-13 (0.11 feet); LNAPL was also detected in MW-9, MW-11, and MW-12, but at thicknesses less than 0.01 foot. Groundwater samples were collected from the existing wells for petroleum hydrocarbon analysis with the samples from MW-9, MW-11, and MW-13 also analyzed for HVOCs. Cis-1,2-DCE was detected in the three wells at concentrations below the proposed cleanup level, while vinyl chloride was detected in MW-13 above the MTCA Method A CULs. One or more petroleum constituents exceeded MTCA Method A CULs groundwater samples collected from MW-4, MW-9, MW-11, MW-12, and MW-16 during the November sampling event (Leidos 2019).

In 2019, nine additional monitoring wells (MW-20 through MW-23, and MW-25 through MW-29) were installed off-property. Concentrations of GRO, DRO, and benzene in groundwater exceeded MTCA Method A CULs in MW-27 and MW-28. Concentrations of DRO and benzene in groundwater exceeded the MTCA Method A CUL in MW-17. Wells MW-24 and MW-29 were subsequently decommissioned as part of the construction of the existing on-property building.

A review of groundwater data collected in 2019 and 2020 indicated that concentrations of GRO, diesel-range organics (DRO), benzene, vinyl chloride, tetrachloroethene (PCE) and trichloroethene (TCE) exceeded the respective MTCA Method A CULs in groundwater samples collected from MW-22, MW-23, MW-25, MW-27 and MW-28.

PCE, TCE, and vinyl chloride are HVOCs commonly associated with dry-cleaners, and the source of these compounds has been identified as the Former Carson Cleaners facility, located across from the property at 4701 Brooklyn Avenue NE (Ecology Facility/Site No. 15518216; CSID 14878). As stated in a letter from Ecology to Carson Cleaners, dated April 16, 2019, these HVOCs likely originated from the former dry cleaner, which operated from the early 1960s until 2014 (Ecology 2019). The former Carson Cleaners facility is currently undergoing remedial investigation activities and is managed under a separate Agreed Order (No. DE 19805).

3.3 Historical Soil Vapor Investigations

In November 1991, as part of an investigation at the nearby service station at 4557 Brooklyn Avenue NE, four soil vapor samples were collected adjacent to the subject property. Petroleum hydrocarbons were detected in two of the samples.

The potential for vapor intrusion at the planned redevelopment on the Property was evaluated in September 2018 and based on exceedances of groundwater screening levels for vapor intrusion, a chemical vapor barrier was installed on all exterior below-grade foundation walls and beneath the slab-on-grade sections of the building garage (Aspect 2019). Aspect utilized all groundwater quality results from the off-Property monitoring for this vapor intrusion evaluation, including the preliminary results from January 2018 reported by Leidos. The chemical vapor barrier consists of two products: PrePrufe® 300R was installed on all exterior below-grade foundation walls and VaporBlock ® Plus™ VBP20 was installed beneath the slab-on-grade (floor) sections of the building garage. The installed chemical vapor barrier will prevent potential vapor intrusion into the building (Aspect 2019)

Due to the continued presence of off-property petroleum-related contamination in groundwater at the site, Leidos performed a Preliminary Vapor Intrusion (VI) Assessment for the site per Ecology VI guidance (Ecology, 2016a). Results indicated that additional vapor intrusion assessments should be performed (Leidos 2017). In 2019, Leidos installed two soil vapor points off-property, SVP-1 and SVP-2 (Figure 3). Construction details of these soil vapor

points, and any analytical results for previous soil vapor samples collected by Leidos were not provided to Arcadis. However, based on proposed soil vapor probe construction information contained in the Final Remedial Investigation Work Plan submitted May 26, 2017, it is assumed the vapor probes were constructed as follows:

> *Soil borings will be advanced to a depth of 5.5 feet bgs using a hand auger. Each soil vapor sampling probe will consist of a shallow probe that will be installed at a depth of approximately 5.25 feet bgs. Once each soil vapor probe has been advanced to its maximum depth, a soil vapor sampling sampling probe consisting of a 6-inch long, 0.75-inch diameter stainless steel screen with a 0.0057-inch (0.15-millimeter) screen pore size. Each screen will be connected to a length of ¼-inch outside diameter (O.D.) Teflon® tubing via a Swagelok® fitting with a rubber compression ferule. The above-grade end of the soil vapor sampling probe tubing will be fitted with a Swagelok® stainless steel on/off control valve.*
>
> *Each 6-inch long screen tip will be vertically centered in a 1-foot long interval containing standard sand pack, resulting in 3 inches of sand being above and below the screen. Each sand pack will be covered with a 1-foot interval of dry granular bentonite, which is then covered with at least 2 feet of hydrated granular bentonite. The dry granular bentonite is emplaced immediately above the sand pack to ensure that hydrated granular bentonite slurry does not flow down to the probe screen and seal it off from the adjacent soil. The remainder of the borehole will be filled with hydrated granular bentonite slurry (mixed at the surface and poured in) to approximately 12 inches bgs. The top portion will be completed with a 1-foot thick cement cap. An 8-inch flush-mounted well box will be installed to protect the tubing line that is set in the cement cap (Leidos 2017).*

4 Summary of Previous Remedial Actions

4.1 Vapor Extraction System

In February 1990, under the direction of GeoEngineers, Inc., H2Oil Recovery Equipment installed a vapor extraction system (VES). The VES was connected to 11 of the newly installed wells (MW-1, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-14, and RW-1) and was started on May 16, 1990, with a portable incineration combustion unit (ICU) to treat the extracted hydrocarbon vapors. The ICU was removed in 1991, and the VES emissions were discharged directly to the atmosphere (Leidos, 2017).

In March 1991, air-sparging units were installed in wells MW-4 and MW-12 to reduce the thickness of LNAPL. As of January 1996, an estimated 20,853 pounds of volatile petroleum hydrocarbons had been removed from the subsurface. There is no record of when the system was shut down or removed from the site.

4.2 UST Removals

As described in Section 3.1, in December 1989, EMCON removed three gasoline USTs (two 12,000-gallon and one 5,000-gallon steel tanks), two pump islands, and associated fuel lines from the northern portion of the property. In addition, an undocumented, abandoned-in-place 1,000-gallon UST was discovered and removed from the southern portion of the property.

In February 2017, Aspect provided oversight during removal of three 12,000-gallon USTs on the property as described in Section 3.1.

During 2018 interim action excavation activities, described below, an additional eight steel USTs of various sizes ranging from 125 to 5,250 gallons, were discovered and removed (Aspect 2019). Soil excavation and groundwater management activities completed during this interim action are further discussed below.

4.3 2018 Interim Action

An interim action was performed in 2018 to remove petroleum-contaminated soil and allow for the redevelopment of the property. Interim action soil removal was completed in conjunction with the mass excavation for property redevelopment. Details of the interim action were included in the 2019 *Interim Action Report* (Aspect 2019)

Soil on the property was excavated to an average depth of 21 feet bgs to accommodate the installation of two levels of underground parking. Quantities of 6,837 tons of Contaminated soil (petroleum concentrations exceeding MTCA Method A CULs) and 1,259 tons of Impacted soil (petroleum concentrations below MTCA Method A CULs) were removed from the property and disposed offsite (Aspect 2019). Confirmation samples collected from the final extents of the excavation indicated that all petroleum-contaminated soil exceeding MTCA Method A CULs was removed from the property (Aspect 2019). In addition, 1,842,284 gallons of groundwater were extracted, treated, and discharged into Portage Bay as part of construction dewatering.

5 Supplemental Investigation

Arcadis conducted supplemental site investigation activities in April, June, and August 2022. From June 1 to 3, 2022, one soil vapor point (SVP-3) and two additional groundwater monitoring wells (MW-30 and MW-31) were installed to further evaluate the extent of petroleum impacts in soil vapor and groundwater downgradient of the property. Groundwater monitoring events were conducted on June 13 and August 18, 2022. This section discusses the objectives, field activities, analytical results, and the management of investigation-derived waste (IDW) associated with the completed site investigation. The approximate locations of the groundwater monitoring wells and soil vapor point are shown on Figure 3.

5.1 Data Gap Investigation Objectives

Supplemental investigation activities were completed to further delineate the extent of groundwater impacts downgradient to the east and southeast of the property, and to evaluate current soil vapor conditions downgradient to the east-southeast, as described in the *Supplemental Investigation Work Plan* (Arcadis 2020). Note that the installation of two soil vapor points was originally proposed; however, numerous underground utilities did not allow a feasible location for one of the soil vapor points on NE 47th Street, and thus only one soil vapor point was installed. Arcadis reported this deviation to Ecology via a phone call on June 1, 2022, and Ecology agreed that based on the location of underground utilities, this vapor point could be removed from the scope.

5.2 Pre-field Activities

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

- Updated the site-specific health and safety plan and prepared job safety analyses and traffic control plans
- Secured a ROW permit from the City of Seattle
- Marked the proposed boring locations and contacted the state one-call public locate service a minimum of 48 hours prior to initiating the field activities; and
- Contracted a private utility locator to additionally identify potential conflicting utilities or other underground structures in the work areas.

5.3 Utility Locate

At least 48 hours prior to conducting subsurface activities, Washington811 was notified to mark known public utilities within the work areas. In addition, GPRS, a private utility locating company, conducted a utility survey prior to the start of the investigation. The utility locate survey was conducted on April 29, 2022. The survey included the use of ground-penetrating radar, to confirm that the proposed boring locations were clear of underground utilities and other features. Survey results, along with utility site plans provided by the City, were used to map utilities. As mentioned above, numerous utility lines were located in the sidewalk of NE 47th Street that precluded installation of the vapor point in this area.

5.4 Soil Boring and Soil Vapor Point Drilling and Sampling

Drilling activities were conducted by a licensed drilling subcontractor, Cascade Drilling, Inc. of Woodinville, Washington (Cascade), under the supervision of Arcadis personnel. Borings were first pre-cleared for any utilities via air knife, vacuum truck, and/or hand auger to a minimum depth of 5 feet bgs. After pre-clearance, the well borings were advanced using a hollow stem auger to the target depth. Although the Work Plan stated the borings would be advanced using direct push technology, the use of hollow-stem augers was subsequently determined to be the best technology to ensure reaching the desired depth; since soil impact delineation was not included in the data gap investigation objective, continuous logging of soil samples was not necessary to meet data investigation objectives. Ecology was not notified of this change prior to drilling activities. The boring for SVP-3 was continued using the hand auger to 5.5 feet bgs. MW-30 was advanced to 25.5 ft bgs, MW-31 was advanced to 26.5 ft bgs, and were backfilled with bentonite to set monitoring wells at a depth of 25 feet bgs. Boring depths and soil sample depths are presented in the table below and well construction details are presented on boring logs. During drilling, groundwater was encountered in the borings at an approximate depth of 15 to 18 feet bgs.

Location	Boring Type	Total Depth (feet bgs)	Laboratory Analytical Sample Intervals (feet bgs)
MW-30	Monitoring Well	25.5	5, 10, 15, 20, 25
MW-31	Monitoring Well	26.5	5, 10, 15, 20, 25
SVP-3	Soil Vapor Point	5.5	2.5, 5

During pre-clearance, soil samples were collected by hand auger at approximately 2.5 feet bgs for lithologic logging and screened for VOCs using a PID. After preclearance activities, soil samples were collected from a 1.5-foot split spoon sampler at 5-foot intervals. During drilling, Arcadis conducted lithologic logging in accordance with Udden-Wentworth, and the Unified Soil Classification System. Groundwater was encountered at approximately 17-17.5 feet bgs. Soil samples collected below the water table may not be representative of actual subsurface soil conditions. Although PID readings in MW-31 increased with depth, the level of the readings did not approach a level of concern based on estimated corresponding concentrations in soil, and therefore drilling was terminated at 26.5 feet bgs. Boring logs and well construction diagrams are included in Appendix B.

Field screening samples were placed into sealed zipper-locked bags for visual inspection and VOC screening.

Analytical samples were collected in laboratory-provided containers and placed in a cooler with ice. Samples were submitted to Pace Analytical (an Ecology-accredited laboratory) located in Mount Juliet, Tennessee (Pace), under standard chain-of-custody protocols. A duplicate soil sample was collected for data quality assurance purposes from MW-31 at 20 feet bgs (sample FD-1).

Soil samples were analyzed for the following:

- GRO by Northwest TPH-Gx
- DRO and heavy oil-range organics (HO) by Northwest TPH-Dx (without use of silica gel cleanup)
- BTEX, EDC, MTBE, and naphthalene by USEPA Method 8260D
- Lead by USEPA Method 6010D

5.5 Monitoring Well Installation

Two groundwater monitoring wells (MW-30 and MW-31) were installed during the June field activities. The groundwater monitoring wells were installed by Cascade to a depth of 25 feet bgs (screened from 10 to 25 feet bgs). Construction details for monitoring wells MW-30 and MW-31 are included on the boring logs in Appendix B. Each well was installed in accordance with the Minimum Standards for Construction and Maintenance of Wells (Washington Administrative Code [WAC] 173-160; Ecology 2013).

The wellheads were completed at the ground surface with a locking well cap and traffic-rated bolt-down well vault. Following the installation of monitoring wells, the well location, ground surface, and top-of-casing elevations were surveyed by a Washington-licensed land surveyor, OTAK, Inc. of Lake Oswego, Oregon. Monitoring wells were developed subsequent to installation to ensure removal of fine-grained sediments from the vicinity of the well screen. Approximately 40 gallons of groundwater were pumped from MW-30, and approximately 30 gallons of groundwater were pumped from MW-31. No sheens or odors were observed during well development. Purge water was stored in two 55-gallon drums that were subsequently transported for appropriate disposal at a certified facility, as described in Section 5.9 below.

5.6 Soil Vapor Probe Installation

As mentioned above, the boring for soil vapor probe SVP-3 was advanced using hand auger methods to a depth of 5.5 feet bgs. Once the soil vapor probe boring was advanced to total depth, a 6-inch-long stainless steel vapor probe screen, attached to a length of 0.25-inch-diameter Teflon™ tubing, was lowered to a centered depth of 5 feet bgs. A standard 1-foot sand pack was added to the boring surrounding the probe, followed by dry granular bentonite and hydrated bentonite to prevent vertical moisture migration. Portland cement was added above the bentonite to within approximately 1 foot bgs to allow for the installation of a traffic-rated vault in concrete. The soil vapor probe tubing was sealed with a compression cap to allow for equilibration with the subsurface.

5.7 Groundwater Monitoring and Sampling

Groundwater samples were collected from the new and existing wells in June and August 2022. Due to a parked car preventing access, monitoring well MW-30 was not able to be sampled during the June 2022 event.

During the June and August 2022 sampling events, the depth to groundwater ranged from 15.35 to 19.40 feet bgs. Groundwater flow direction was to the east-northeast and to the east, as shown on Figures 4 and 5.

Samples were collected via peristaltic pump using low-flow methods. Groundwater sampling field forms are included in Appendix C. Groundwater samples were collected in pre-preserved laboratory-provided bottles and placed in a cooler with ice. Samples were submitted to Pace under standard chain-of-custody protocol for the following analyses:

- GRO by Northwest TPH-Gx
- DRO and HO by Northwest TPH-Dx
- BTEX, Ethylene dibromide (EDB), and methyl tertiary-butyl ether (MTBE), by USEPA Method 8260C
- Lead by USEPA Method 6010D
- PCE, TCE, cis-1,2-Dichloroethene (cis-1,2-DCE), trans-1,2-Dichloroethene (trans-1,2-DCE), and vinyl chloride by USEPA Method 8260C, at Ecology's request; though these are considered to be associated with Carson Cleaners and are not considered COCs for the site. Select results are presented in Table 2.

5.8 Soil Vapor Sampling

On June 3, 2022, Arcadis collected soil vapor samples from existing soil vapor probe SVP-1 and newly installed SVP-3. Soil vapor probe SVP-2 was unable to be located, after searching the area with a metal detector.

Sample trains were constructed at each probe location to allow for purging and sample collection. Sampling trains were assembled using 0.25-inch Teflon tubing (or equivalent) and connected to the soil vapor probes. Prior to sampling, approximately three times the volume of the tubing of stagnant air was purged from the soil vapor probe and sample train to ensure samples were representative of subsurface conditions.

Soil vapor samples were collected using batch certified evacuated 1-liter canisters with 200 milliliter per minute (mL/min) regulators individually cleaned and batch certified by Freidman & Bruya, Inc. (a Washington-certified laboratory). Canisters were allowed to collect for up to 10 minutes or when the remaining vacuum reached approximately 5 inches of mercury (inHg), whichever came first. An equipment blank and a duplicate soil vapor sample were collected for data quality assurance. The blind duplicate sample (DUP-1) was collected from SVP-1. Soil vapor sampling field forms are included in Appendix D.

Prior to sampling, the sample train was shut-in tested to evaluate the integrity of the sampling system. The sample train and soil vapor probe were also leak-tested using a tracer gas (high purity helium) concurrently with purging and sampling to ensure no significant ambient air leakage had occurred. Purged soil vapor was measured for helium as a pre-sampling leak detection procedure. Potential leakage was calculated using the following formula:

$$\%\ Leakage = \frac{Helium\ Concentration\ in\ Sample\ or\ Purged\ Air\ (\%)}{Helium\ Concentration\ in\ Shroud\ (\%)}\ X\ 100$$

No leaks were observed during the shut-in testing.

Samples were submitted to Friedman & Bruya, Inc. under standard chain-of-custody procedures for the following analyses:

- Total petroleum hydrocarbons (TPH) with carbon chain specific results: EC5-8 (aliphatics), EC9-12 (aliphatics), and EC9-10 (aromatics) by TPH Massachusetts Air Phase Hydrocarbons (APH)
- BTEX and naphthalene by USEPA Method TO-15
- Oxygen, carbon dioxide, and methane by American Society for Testing and Materials (ASTM) Method 1946

- Helium (leak check) by ASTM Method 1946.

The approximate soil vapor probe locations are shown on Figure 3.

5.9 Investigation-Derived Waste

Soil cuttings, purged groundwater, and equipment rinse water generated during investigation activities were contained in Department of Transportation-approved 55-gallon steel drums. The drums were labeled and picked up by Clean Harbors daily during the work as there was no suitable temporary storage location. Waste included two drums of decon water/purge water from well development and four drums of soil. The soil and water drums were subsequently transported for appropriate disposal at a certified facility. A copy of the waste manifest from the June 2022 work is provided in Appendix E.

Purge and equipment decontamination water generated during the groundwater sampling events was collected and transported by the sampling subcontractor (Blaine Tech) to their office in Kent, Washington, where it was stored in a bulk tank pending characterization for disposal as non-hazardous waste.

6 Proposed Cleanup Standards

MTCA Method A CULs are considered the CULs for the site. For this RI, soil and groundwater concentrations are compared to current MTCA Method A CULs and COCs are identified as those detected at concentrations greater than current MTCA Method A CULs.

The COCs for the site include GRO, DRO, HO, BTEX, EDB, and MTBE. Note that PCE, TCE, and vinyl chloride are HVOCs associated with the Former Carson Cleaners facility.

MTCA Method A CULs for the site COCs in soil and groundwater are presented in the table below.

MTCA Method A CULs for Site COCs for Soil and Groundwater

COC	MTCA CUL Groundwater (µg/L)	MTCA CUL Soil (mg/kg)
GRO[1]	800/1,000	30/100
DRO	500	2,000
HO	500	2,000
Benzene	5	0.03
Toluene	1,000	7
Ethylbenzene	700	6
Total Xylenes	1,000	9
Lead	15	250
MTBE	20	0.1

COC	MTCA CUL Groundwater (µg/L)	MTCA CUL Soil (mg/kg)
EDB	0.1	--

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

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

MTCA Method B CULs for Air

COC	MTCA Method B CUL Indoor Air[1] (µg/m3)	MTCA Method B Screening Level Sub-Slab Soil Vapor[1] (µg/m3)
Benzene	0.32	10.6
Toluene	2,300	76,190
Ethylbenzene	460	15,238
Total Xylenes	46	1,524
Naphthalene	0.073	2.45
Total Petroleum Hydrocarbons[2]	46	1,500 / 6,957[3]

[1] Method B cancer risk values used when provided. If cancer risk values are not provided, noncancer risk is listed.
[2] Total petroleum hydrocarbon (TPH) concentration is the sum total of volatile organic compounds and aliphatic and aromatic hydrocarbons.
[3] A site specific TPH sub slab soil gas screening level was calculated in accordance with Ecology's 2022 Vapor Intrusion Guidance (Ecology 2022). The calculation of this CUL is presented in Table 4.

µg/m^3 = micrograms per cubic meter

7 Analytical Results

7.1 Quality Assurance / Quality Control Analyses

The following quality assurance and quality control (QA/QC) samples were collected during subsurface investigation sampling events.

- One field duplicate sample of soil vapor, groundwater, and soil were collected and submitted to the analytical laboratory.

Analytical results of duplicate samples collected as part of this investigation were generally comparable to parent samples for soil, groundwater, and soil vapor. Results of the soil vapor equipment blank sample indicated a detection of C9-12 aliphatics at 380 micrograms per cubic meter (µg/m^3), which may indicate some contamination of the sampling equipment, and is discussed further below. Based on the results of the quality control sampling

and testing, and on the data validation reports, sample results are considered usable. Data validation reports are included in Appendix I.

7.2 Soil Results

Soil encountered in each boring generally consisted of sand with some silt to the explored depths. Additional information on the encountered soil is provided on the boring logs in Appendix B.

Low concentrations of GRO (up to 2.47 J milligrams per kilogram [mg/kg]), DRO (up to 2.15 J mg/kg), and HO (up to 23.1 mg/kg) were detected in several of the samples; the detected concentrations were well below the MTCA Method A CULs. Maximum concentrations detected of GRO, DRO, and HO are shown on the table below:

Constituent	MTCA Method A Cleanup Level (mg/kg)	Maximum concentration detected (mg/kg)	Sample ID	Sample Depth
GRO	30/100	2.47 J	MW-31-25	25 feet bgs
DRO	2,000	2.15 J	MW-30-25	25 feet bgs
HO	2,000	23.1	MW-30-25	25 feet bgs

J = Estimated value greater than or equal to the method detection limit but less than the limit of quantitation (LOQ) or RDL.

Detected benzene concentrations in MW-31-20 and MW-31-25 (0.0404 mg/kg and 0.0858 mg/kg, respectively) were above the MTCA Method A CUL of 0.03 mg/kg. As mentioned above, groundwater was encountered at a depth of 15 to 18 feet bgs, so the benzene exceedances were in soil below the water table. As such, the detections may be due to the presence of impacted groundwater and may not be actual soil conditions.

Trace concentrations of benzene, toluene, and xylenes were also detected in several of the samples. Low concentrations of lead were detected in all the samples; the detected concentrations were well below the MTCA Method A CUL. Ethylbenzene, MTBE, EDC, and naphthalene were not detected in any of the samples.

The current soil analytical results are presented in Table 1. The soil laboratory analytical report and chain-of-custody documentation are provided in Appendix F.

7.3 Groundwater Results

Groundwater samples were collected in June (second quarter) and August (third quarter) of 2022 in conjunction with gauging events. MTCA Method A CUL exceedances during each of the events are listed below. Note again that HVOC detections and exceedances are not associated with the subject site but are noted here for informational purposes.

June 2022 MTCA Method A CULs COC Exceedances

Constituent	MTCA Method A CUL(µg/L)	Sample ID	Concentration detected exceeding MTCA Method A CUL (µg/L)
GRO	800/1,000	MW-27	2,160 [2,240]
		MW-28	2,460

Benzene	5	MW-22	5.37
		MW-31	37.7
PCE	5	MW-20	125
		MW-28	97.6
TCE	5	MW-20	13.3
		MW-22	296
		MW-23	43.2
		MW-27	762 [842]
		MW-28	623
		MW-31	60.8
Vinyl Chloride	0.20	MW-22	2.99
		MW-27	7.57 [9.29]
		MW-31	32

August 2022 MTCA Method A CULs COC Exceedances

Constituent	MTCA Method A CUL(mg/kg)	Sample ID	Concentration detected exceeding MTCA Method A CUL (µg/L)
GRO	800/1,000	MW-27	2,140
		MW-28	2,100
Benzene	5	MW-22	5.92
		MW-23	5.59
		MW-25	48.4
		MW-27	7.90
		MW-28	6.12
		MW-31	40.3
PCE	5	MW-25	6.30
		MW-27	324
		MW-28	309
		MW-31	9.28
TCE	5	MW-22	352 [304]
		MW-23	34.4

		MW-25	147
		MW-27	1,010
		MW-28	1,030
		MW-31	213
Vinyl Chloride	0.20	MW-22	4.7
		MW-23	11.4
		MW-25	55.4
		MW-28	2.94
		MW-31	41

Groundwater gauging data and analytical results are presented in Table 2. Groundwater laboratory analytical reports and chain-of-custody documentation are provided in Appendix G.

7.4 Soil Vapor Results

Soil vapor samples were collected from existing off-property soil vapor probe SVP-1 and newly installed SVP-3 to evaluate soil vapor quality against MTCA Method B sub-slab soil vapor screening levels. The analyzed constituents were not detected in the soil vapor samples collected with the exception of C5-8 range TPH (aliphatics) which were detected in SVP-1 and SVP-3 at concentrations of 410 and 730 µg/m³, respectively, and C9-12 range TPH (aliphatics) which were detected in SVP-1 and SVP-3 at concentrations of 380 and 1,100 µg/m³, respectively. Note, however, that C9-12 aliphatics were also detected in the equipment blank sample at 380 µg/m³, which may indicate some contamination of the sampling equipment. As a result, it is possible that the C9-C12 range TPH reported concentrations in SVP-1 and SVP-3 are slightly higher than actual concentrations. Current soil vapor analytical results are presented in Table 3. Ecology Guidance for Evaluating Vapor Intrusion in Washington State provides the procedure for calculating a site-specific CUL for TPH to account for the cumulative effects of petroleum mixtures (Ecology 2022). Site-specific CUL calculations are presented in Table 4. The detected concentrations of TPH did not exceed the calculated site-specific CUL of 6,957 µg/m³. Based on the soil vapor analytical results, there are no vapor intrusion concerns for the off property building to the southeast; this will be confirmed with another VI sampling event in January 2023.

Since SVP-2 was unable to be located, a vapor sample was not able to be collected from that location. Work conducted for the Carson Cleaners site included collection of a soil vapor sample (SG-04) in this area. However, samples were only analyzed for select HVOCs. Arcadis will evaluate this potential data gap and if any additional work may be warranted based on 2023 vapor sampling results and continued groundwater monitoring results.

The soil vapor laboratory analytical report is provided in Appendix H.

8 Conceptual Site Model

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

8.1 Source Characterization

Known potential sources of petroleum contaminants are the numerous former USTs, dispensers, and/or piping associated with the historical use of the property as a service station. No other known source of petroleum contamination has been identified onsite.

The 2018 excavation of the property in conjunction with redevelopment removed remaining potential primary and secondary sources including USTs, associated infrastructure, and residual petroleum-impacted soil.

As noted previously, the identified source of HVOC compounds is the Former Carson Cleaners facility, located at 4701 Brooklyn Avenue NE (Ecology Facility/Site No. 15518216; CSID 14878). The former Carson Cleaners facility is currently undergoing remedial investigation activities.

8.2 Nature and Extent of Contamination

Residual petroleum-impacted soil that exceeded CULs was removed from the property during the 2018 excavation, and soil samples collected from off-property borings during this supplemental investigation were below MTCA Method A CULs or laboratory reporting limits for all COCs except for detected benzene concentrations in MW-31-20 and MW-31-25 (0.0404 mg/kg and 0.0858 mg/kg, respectively). Based on results of previous offsite investigations indicating that no petroleum impacts were observed in off-site soil, continuous logging of soil borings was not necessary to meet the objectives of this investigation. Note that as groundwater was encountered at 15 to 18 feet bgs, these soil samples were collected from below the water table. As such, the detections may be due to the presence of impacted groundwater and may not be actual soil conditions.

Groundwater samples from off-property wells to the south and southeast of the property continue to contain petroleum COCs above MTCA Method A CULs. Groundwater analytical results indicate that GRO and/or benzene concentrations exceed MTCA Method A CULs in MW-22, MW-23, MW-25, MW-27, MW-28, and MW-31, to the south/southeast of the property.

HVOCs are also present in soil and groundwater above MTCA Method A CULs off-property. As previously discussed, the former Carson Cleaners operation is the identified source of the dry-cleaning-related contamination. The HVOC plume is comingled with the petroleum hydrocarbon plume.

8.3 Fate and Transport

8.3.1 General Fate and Transport Mechanism

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

Residual phase. Petroleum hydrocarbons are sorbed to soil or trapped within soil pore space.

Dissolved or aqueous phase. Petroleum hydrocarbons are dissolved in water within soil pore space.

Vapor phase. Petroleum hydrocarbons are volatilized into soil pore space.

Free phase. Recoverable LNAPL.

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

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

8.3.2 Site Fate and Transport Mechanism

Petroleum hydrocarbons encountered at the site are described below:

Residual phase. The USTs and associated equipment on-site were the source of soil impacts; former station infrastructure and soils surrounding the former tanks were removed by excavation in 2017. The interim action confirmation sample results indicated that petroleum-impacted soil was adequately removed from the Property.

Dissolved phase. Recent and historical sampling indicate that petroleum impacts remain in groundwater in off-property wells in the ROW. Wells MW-22, MW-23, MW-25, MW-27, MW-28, and MW-31 have concentrations of benzene and/or GRO above MTCA Method A CULs.

Vapor phase. Based on soil vapor data, petroleum hydrocarbon COCs do not pose a risk for vapor intrusion into area buildings. Carson Cleaners is conducting additional investigation to evaluate potential vapor intrusion concerns related to HVOCs (Anchor QEA, 2021).

Free phase. LNAPL has not been observed off-Property. COC concentrations in monitoring wells also are not indicative of the presence of LNAPL at the site.

8.4 Exposure Pathways and Potential Receptors

8.4.1 Potential Receptors

Identified potential receptors include:

- Workers who contact contaminated soil in the future during off property construction, if no worker protection controls are in place.
- Humans who contact contaminated soil in the future if off property pavement is removed.
- Humans who inhale contaminated soil particles in the future during remedial action activities, if no protection controls are in place.
- Accidental contact or consumption of groundwater during investigation, remediation, and/or construction work by humans.
- Drinking water is supplied by the City of Seattle, and groundwater is not used as a drinking water source within the City of Seattle (Seattle Public Utilities, 2022), but groundwater will still be considered a potential source of drinking water.
- Humans who inhale indoor air via vapor intrusion off-property by volatilization of contaminated shallow groundwater (Leidos 2017).

8.4.2 Potential Exposure Pathways

Potential exposure pathways for the site are:

Soil. Potential exposure to soil via incidental ingestion, dermal contact, and inhalation of windblown dust and leaching to groundwater.

Groundwater. Potential exposure to groundwater via incidental ingestion and dermal contact.

Soil vapor. Potential exposure to soil vapor via inhalation (volatilization of petroleum impacts contained in groundwater and/or soil).

Potential exposure pathways are evaluated below.

8.4.2.1 Potential Soil Exposure Pathways

Potential soil exposure pathways for the site include:

Soil samples collected during the 2018 Interim Action confirm that petroleum impacted soils have been removed from the property, and that remaining soils meet Method A CULs. However, soil samples collected during this investigation have indicated concentrations of benzene above the MTCA Method A CULs at depths of 20 and 25 feet bgs possibly remain at off-property locations. Potential soil exposure pathways for the site include:

- *Exposure to soil via incidental ingestion, dermal contact, and inhalation of windblown dust*. The area is typical of urban developed land, with limited to no vegetation. Sidewalks and streets are paved with asphalt or concrete. Potential exposure via incidental ingestion, dermal contact, or inhalation of windblown dust for construction workers working off-property is a complete pathway, although unlikely given the depth of residual impacts.
- *Soil leaching to groundwater*. COC concentrations in groundwater have been shown to be above Method A groundwater CULs. Therefore, the soil leaching to groundwater pathway is potentially complete.

8.4.2.2 Potential Groundwater Exposure Pathway

Groundwater analytical data shows concentrations of PCE, TCE, GRO, and /or benzene above MTCA Method A CULs. No drinking water wells are present on the property or within 1 mile of the site. Drinking water is supplied by the City of Seattle.

Due to the depth of groundwater (ranging from 15 to 19 ft bgs), no ingestion or dermal contact are likely during any future subsurface construction work. However, per WAC 173-340-720(2), groundwater in Washington is generally classified as potable unless it can be demonstrated that it is not a possible future source, to protect potential beneficial uses. Although unlikely, the potential groundwater exposure pathway for future construction workers working off-property is a complete pathway.

8.4.2.3 Soil Vapor Potential Pathway

Exposure to COCs in indoor air via the volatilization of contaminants in soil and groundwater is another potential exposure pathway. During construction of the on-property building, a chemical vapor barrier was installed on all exterior below-grade foundation walls and beneath the slab-on-grade sections of the building garage (Aspect 2019) as a mitigation measure. The underground parking garage also has a mechanical ventilation system as required by Seattle Department of Construction & Inspections (SDCI Section 403), Therefore, potential vapor intrusion is also not a concern for on-property occupants. Furthermore, results from the soil vapor samples do not indicate a vapor intrusion risk for occupants of the off-property building to the southeast; this will be confirmed with another vapor sampling event in January 2023. Indoor and outdoor utility corridors can potentially act as preferential migration pathways for contaminant transport. Since indoor air and sub-slab vapor sampling will be conducted at buildings located east, southeast, and south of the site as part of the investigation conducted by west-adjoining Carson Cleaners, results of that investigation can be evaluated to determine whether the utility

corridor is a potential vapor pathway. According to the Carson Cleaners Remedial Investigation Work Plan, dated October 2021, results of their previous vapor intrusion investigation did not indicate an immediate health concern for building occupants (Anchor QEA 2021).

Future construction workers may be exposed to vapor phase petroleum hydrocarbons through inhalation during excavations, trenching, or drilling or if they are working in utility corridors where vapors may have accumulated. Soil vapor screening levels were developed under long-term exposure assumptions, and are used to assess risk of intrusion of vapor phase COCs in the subsurface to occupied structures, and are not intended to evaluate risk of temporary exposure to commercial workers during the above-described activities.

9 Conclusions and Recommendations

This report documents the supplemental investigation activities conducted in June and August 2022 which were completed to further delineate the extent of residual downgradient off-property groundwater impacts to the east-southeast, and to further evaluate off-property soil vapor quality to the east/southeast. The investigation included the installation and sampling of two monitoring wells (MW-30 and MW-31) and one soil vapor point (SVP-3).

Based on the analytical results, the extent of COCs in groundwater above MTCA Method A CULs is not delineated off-property to the east (beyond MW-31). However, only two events have been performed in the new wells. As such, additional groundwater monitoring is recommended to further evaluate groundwater quality and concentration trends.

The current soil vapor sample results indicated that site COCs do not pose a vapor intrusion risk to occupants of the off-property buildings to the east and southeast; this will be confirmed with an additional sampling event in February 2023, approximately 6 months from the first event.

Additionally, there is on-going subsurface investigation for the Carson Cleansers site that includes sub-slab and indoor air sampling of buildings in the vicinity of the site.

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

- Continue quarterly groundwater gauging and sampling in 2023 to further evaluate groundwater quality and concentration trends
- Evaluate groundwater conditions after four groundwater monitoring events have been completed to determine if further assessment is warranted
- Perform an additional soil vapor sampling event in February 2023 to confirm no vapor intrusion concerns associated with petroleum hydrocarbons.
- Evaluate whether further soil vapor sampling is needed at former location of SVP-2.
- Evaluate results of investigation conducted by Carson Cleaners to determine whether utility corridors may be a potential pathway for vapor migration that would warrant additional investigation.

10 References

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Tables

Table 1. Soil Analytical Results
90129 4700 Brooklyn
Seattle, Washington

Analytical results are presented in milligrams per kilogram (mg/kg)

Sample ID	Date	Depth	TPH	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	MTBE	EDC	Naphthalene
MTCA Method A CULs			--	30/100	2,000	2,000	0.03	7	6	9	250	0.1	--	--
MW-30-5	06/02/2022	5	--	<1.21	<1.59	<3.98	<0.000666	<0.00185	<0.00105	0.00153 J	1.95	<0.000499	<0.000925	<0.00696
MW-30-10	06/02/2022	10	--	1.05 BJ	<1.48	<3.71	<0.000576	<0.00160	<0.000910	0.00120 J	1.85	<0.000432	<0.000801	<0.00602
MW-30-15	06/02/2022	15	--	1.18 BJ	<1.51	<3.79	<0.000604	<0.00168	<0.000954	<0.00114	1.87	<0.000453	<0.000840	<0.00631
MW-30-20	06/02/2022	20	--	<1.14	1.54 J	5.91 J	<0.000627	<0.00175	<0.000990	<0.00118	2.00	<0.000470	<0.000872	<0.00655
MW-30-25	06/02/2022	25	--	<1.23	2.15 J	23.1	<0.000677	<0.00188	<0.00107	<0.00128	1.35	<0.000504	<0.000941	<0.00708
MW-31-5	06/01/2022	5	--	<1.24	<1.56	<3.90	<0.000683	<0.00190	<0.00108	<0.00129	2.53	<0.000512	<0.000949	<0.00714
MW-31-10	06/01/2022	10	--	1.31	<1.48	6.23	<0.000578	0.00587 J	<0.000912	0.00524 J	1.78	<0.000433	<0.000803	<0.00604
MW-31-15	06/01/2022	15	--	<1.26	<1.62	<4.07	<0.000693	<0.00193	<0.00109	0.00224 J	2.33	<0.000520	<0.000964	<0.00725
MW-31-20 [FD-1]	06/01/2022	20	--	1.93 BJ [1.77]	<1.63 [<1.61}	<4.09 [<4.04]	**0.0404 [0.0442]**	0.00587 J [0.00607 J]	<0.00109 [<0.00109]	0.00147 J [<0.00130]	1.76 [2.06]	00519 [<0.000	<0.000963 [<0.00959]	<0.00724 [<0.00721]
MW-31-25	06/01/2022	25	--	2.47 BJ	<1.64	<4.10	**0.0858**	0.0146	<0.00112	<0.00134	1.82	<0.000534	<0.000991	<0.00745
SVP-3-2.5	06/01/2022	2.5	--	<0.999	<1.44	<3.61	<0.000550	<0.00153	<0.000868	<0.00104	1.65	<0.000412	<0.000764	<0.00575
SVP-3-5	06/01/2022	5	--	<1.04	<1.47	<3.69	<0.000575	<0.00160	<0.000908	<0.00108	2.17	<0.000132	<0.000800	<0.00601

Notes:
30/100 = GRO MTCA Method A CUL with benzene present is 30 mg/kg and without benzene present is 100 mg/kg
Grey text indicates soil that has been excavated
BOLD and highlighted values are greater than their respective MTCA Method A CUL
BOLD values are non-detect below the laboratory MDL, but the MDL is greater than the MTCA Method A CUL
Sample depth measured in feet below ground surface

Abbreviations:
ID = Identification
FD = Field Duplicate
MW = Groundwater monitoring well
-- = Not applicable, not available, or not analyzed
MDL = Method detection limit
MTCA = Model Toxics Control Act Cleanup
CUL = Cleanup Level
USEPA = United States Environmental Protection Agency

Laboratory Qualifiers:
<n = Not detected at or above the laboratory MDL
J = The identification of the analyte is acceptable; the reported value is an estimate.
B = The same analyte is found in the associated blank.

Analytical Methods:
Samples analyzed by NWTPH-Gx
GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics
Samples analyzed by NWTPH-Dx
DRO = Total Petroleum Hydrocarbons as Diesel Range Organics
HO = Total Petroleum Hydrocarbons as Heavy Oil Range Organics
Samples analyzed by USEPA Method 8260D
BTEX = benzene, toluene, ethylbenzene, and total xylenes
MTBE = Methyl tertiary butyl ether
EDC = 1,2-Dichloroethane
Naphthalene
Samples analyzed by USEPA Method 6010D
Lead

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-17	12/26/2019	215.40	18.09	0.00	197.31	240	610	<360	3.7	<0.39	6.6	1.2 J	<0.44	<0.0020	9.50	3.70	<0.22	<2.7
MW-17	2/18/2020	215.40	17.15	0.00	198.25	822	1930	267	9.92	0.489 J	25.2	32.6	<0.102	<0.0024	4.05	5.10	<0.118	<1.9
MW-17	4/29/2020								Well abandoned to accommodate utility installation during construction									
MW-18	12/26/2019	215.95	18.70	0.00	197.25	<100	<66	<97	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	3.80	<0.85	<0.22	<2.7
MW-18	2/18/2020	215.95	17.84	0.00	198.11	38.5 BJ	<66	<83	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	2.94	<0.153	<0.118	<1.9
MW-18	4/29/2020	215.95	17.87	0.00	198.08	79.4 BJ	--	--	<0.0941	<0.278	<0.137	0.335	<0.101	<0.00636	3.90	<0.190	<0.234	<2.9
MW-18	09/03/2020	215.95	18.03	0.00	197.92	57.8 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	4.53	0.056	<0.100	<6.00
MW-18	12/09/2020	215.95	18.05	0.00	197.90	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	2.23	<0.0400	<0.100	<6.00
MW-18	03/03/2021	215.95	17.63	0.00	198.32	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	5.42	<0.0400	<0.100	<2.00
MW-18	06/16/2021	215.95	19.31	0.00	196.64	<100	--	--	0.0290 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	2.34	0.07	<0.100	<2.00
MW-19	12/26/2019	216.36	18.97	0.00	197.39	<100	<63	<93	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	<0.85	<0.22	<2.7
MW-19	2/18/2020	216.36	18.39	0.00	197.97	42.4 BJ	<66	114 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	<0.153	<0.118	<1.9
MW-19	4/29/2020	216.36	18.58	0.00	197.78	49 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	<0.190	<0.234	<2.9
MW-19	09/03/2020	216.36	18.58	0.00	197.78	51.2 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.138	<0.0400	<0.100	<6.00
MW-19	12/09/2020	216.36	18.05	0.00	198.31	34.5 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0830 J	<0.0400	<0.100	<6.00
MW-19	03/03/2021	216.36	16.69	0.00	199.67	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.131	<0.0400	<0.100	<2.00
MW-19	06/16/2021	216.36	21.14	0.00	195.22	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0750 J	<0.0400	<0.100	<2.00
MW-19	09/22/2021	216.36	20.21	0.00	196.15	<100 [84.2 J]	--	--	<0.0400 [<0.0400]	0.0750 J [0.0770 J]	0.0620 J [0.0610 J]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0690 J [0.122]	<0.0400 [<0.0400]	<0.100 [<0.100]	<2.00 [<2.00]
MW-19	12/14/2021	216.36	19.50	0.00	196.86	<31.6	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00568	0.12	<0.0160	<0.0273	1.75 B J
MW-19	03/31/2022	216.36	19.59	0.00	196.77	68.0 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00557	0.240 C5	<0.0160	<0.0273	<0.849
MW-19	06/13/2022	216.36	19.40	0.00	196.96	51.6 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00574	0.172	<0.0160	<0.0273	<0.849
MW-19	08/18/2022	216.50	19.25	0.00	197.25	<31.6	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.0210	0.182	<0.0160	<0.0273	<0.849
MW-20	12/26/2019	215.87	18.46	0.00	197.41	<100	<60	<89	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	100	20	<0.22	<2.7
MW-20	2/18/2020	215.87	17.51	0.00	198.36	62.3 BJ	<66	95.2 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	52	21.6	<0.118	<1.9
MW-20	4/29/2020	215.87	17.54	0.00	198.33	76.4 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	107	13.7	<0.234	<2.9
MW-20	09/03/2020	215.87	17.76	0.00	198.11	100 BJ	--	--	0.0280 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	116	7.19	<0.100	<6.00
MW-20	12/09/2020	215.87	18.74	0.00	197.13	71.0 BJ	--	--	0.0280 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	138	9.47	<0.100	<6.00
MW-20	03/03/2021	215.87	15.49	0.00	200.38	82.3 BJ	--	--	0.0210 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	135	12.9	<0.100	<2.00
MW-20	06/16/2021	215.87	18.73	0.00	197.14	42.8 J	--	--	0.0300 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	142	7.36	<0.100	<2.00
MW-20	09/22/2021	215.87	19.05	0.00	196.82	49.8 J	--	--	0.0240 J	0.0760 J	<0.100	<0.260	<0.0400	<0.0200	133 E	6.66	<0.100	<2.00
MW-20	12/14/2021	215.87	18.37	0.00	197.50	110 B	--	--	0.0240 J	<0.0500	<0.0212	<0.191	<0.0118	<0.00536	137	15.4	<0.0273	<0.849
MW-20	03/31/2022	215.87	18.21	0.00	197.66	104 B [102 B]	-- [--]	-- [--]	0.0210 J [<0.0160]	<0.0500 [<0.0500]	<0.0212 [<0.0212]	<0.191 [<0.191]	<0.0118 [<0.0118]	<0.00536 [<0.00552]	117 [128]	15.3 [15.2]	<0.0273 [<0.0273]	<0.849 [<0.849]
MW-20	06/13/2022	215.87	18.11	0.00	197.76	111 B	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00536	125	13.3	<0.0273	<0.849
MW-20	08/18/2022	216.01	19.40	0.00	196.61	<31.6	--	--	<0.0800	<0.250	<0.106	<0.955	<0.0590	<0.105	0.275 J	<0.0800	<0.137	<0.849
MW-21	12/26/2019	213.89	17.32	0.00	196.57	<100	<64	<95	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	<0.85	<0.22	<2.7
MW-21	2/18/2020	213.89	16.42	0.00	197.47	<31.6	<66	114 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	<0.153	<0.118	<1.9
MW-21	4/29/2020	213.89	16.52	0.00	197.37	37.0 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	<0.190	<0.234	<2.9
MW-21	09/02/2020	213.89	16.02	0.00	197.87	68.2 BJ [47.2 BJ]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.124 [0.12]	0.093 [0.078]	<0.100 [<0.100]	<6.00 [<6.00]
MW-21	12/08/2020	213.89	16.39	0.00	197.50	<100 [<100]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0420 J [0.0464 J]	<0.0400 [<0.0400]	<0.100 [<0.100]	<6.00 [<6.00]
MW-21	03/03/2021	213.89	15.49	0.00	198.40	<100 [47.3 BJ]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0420 J [0.0510 J]	0.0400 J [0.0390 J]	<0.100 [<0.100]	<2.00 [<2.00]
MW-21	06/17/2021	213.89	16.51	0.00	197.38	36.1 BJ [115 B]	--	--	<0.0400 [<0.0400]	0.0550 J [0.0670 J]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0730 J [0.0610 J]	0.0310 J [0.0340 J]	<0.100 [<0.100]	<2.00 [<2.00]
MW-21	09/22/2021	213.89	17.23	0.00	196.66	<100	--	--	<0.0400	0.127 J	0.0560 J	0.226 J	<0.0400	<0.0200	<0.100	0.0320 J	<0.100	<2.00
MW-21	12/14/2021	213.89	16.86	0.00	197.03	48.6 BJ	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00563	0.128	0.712	<0.0273	<0.849
MW-21	03/31/2022	213.89	16.31	0.00	197.58	54.7 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00547	<0.0280	<0.0160	<0.0273	<0.849
MW-21	06/13/2022	213.89	16.31	0.00	197.58	51.5 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00563	<0.0280	<0.0160	<0.0273	<0.849
MW-21	08/18/2022	214.00	16.58	0.00	197.42	32.9 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.0210	<0.0280	<0.0160	<0.0273	<0.849
MW-22	12/26/2019	212.93	16.80	0.00	196.13	<100	73 J	<91	10	<0.39	<0.50	<0.75	<0.44	<0.0020	1.1 J	410	6.4	<2.7
MW-22	2/18/2020	212.93	16.22	0.00	196.71	536	92.2 J	110 J	9.33	<0.412	<0.158	<0.316	<0.102	<0.0024	1.11	447	5.13	1.98 J
MW-22	4/29/2020	212.93	16.25	0.00	196.68	549 B	--	--	8.3	<0.278	<0.137	<0.174	<0.101	<0.00536	<3.00	384	5.00	<2.9
MW-22	09/02/2020	212.93	16.12	0.00	196.81	412 B	--	--	3.2	<0.200	<0.100	<2.60	<0.400	<0.0200	1.99	233	1.57	<6.00
MW-22	12/07/2020	212.93	16.07	0.00	196.86	188 B	--	--	2.24	<0.200	<0.100	<2.60	<0.400	<0.0200	2.29	158	1.00	<6.00
MW-22	03/03/2021	212.93	15.40	0.00	197.53	127 B	--	--	2.66	<0.200	<0.100	<2.60	<0.400	<0.0200	1.54	168	1.23	<2.00
MW-22	06/17/2021	212.93	16.18	0.00	196.75	440	--	--	6.39	<2.00	<1.00	<2.60	<0.400	<0.0200	0.430 J	306	2.94	<2.00
MW-22	09/22/2021	212.93	16.50	0.00	196.43	570	--	--	5.75	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	421	7.22	<2.00
MW-22	12/14/2021	212.93	16.87	0.00	196.06	673 B	--	--	6.98	0.560 J	<0.212	<1.91	0.53	<0.00547	0.800 J	482	7.5	<0.849
MW-22	12/14/2021	212.93	--	--	--	832 B	--	--	7.17	0.0860 J	<0.0212	<0.191	<0.0118	<0.00536	1.05	547	9.57	<0.849
MW-22	03/31/2022	212.93	16.11	0.00	196.82	533 B	--	--	5.10	<0.500	<0.212	<1.91	<0.118	<0.00547	0.510 J	356	5.09	<0.849
MW-22	06/13/2022	212.93	16.23	0.00	196.70	555 B	--	--	5.37	<0.500	<0.212	<1.91	<0.118 C3	<0.00541	0.510 J	296	2.99	<0.849
MW-22	08/18/2022	213.09	16.30	0.00	196.79	555 [409]	--	--	5.92 [<1.60]	<0.500 [<5.00]	<0.212 [<2.12]	<1.91 [<19.1]	<0.118 [<1.18]	<0.0210 [<0.00547]	0.690 J [<2.80]	352 [304]	4.70 [<2.73]	<0.849 [<0.849]
MW-23	12/26/2019	211.72	16.15	0.00	195.57	<100	<66	<98	16	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	130	22	<2.7
MW-23	2/18/2020	211.72	15.82	0.00	195.90	246	67.2 J	159 J	8.69	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	59.8	7.85	<1.9
MW-23	4/29/2020	211.72	15.69	0.00	196.03	148	--	--	4.1 J	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	14.0	4.24 J	4.59 J
MW-23	09/02/2020	211.72	15.69	0.00	196.03	626	--	--	6.95	<2.00	<1.00	<2.60	<0.400	<0.0200	0.360 J	12.8	8.2	<6.00
MW-23	12/07/2020	211.72	15.54	0.00	196.18	209 B	--	--	5.92	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	6.68	5.48	<6.00
MW-23	03/02/2021	211.72	14.95	0.00	196.77	103 B	--	--	4.28	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	7.45	5.02	<2.00
MW-23	09/22/2021	211.72	15.82	0.00	195.90	334	--	--	4.2	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	28.9	9.08	<2.00
MW-23	12/14/2021	211.72	15.44	0.00	196.28	353 B	--	--	5.75	<0.500	<0.212	<1.91	<0.118	<0.00547	<0.280	205	7.81	1.88 BJ
MW-23	03/31/2022	211.72	15.90	0.00	195.82	261 B	--	--	2.90	<0.500	<0.212	<1.91	<0.118	<0.00547	<0.280	74.2	4.87	<0.849
MW-23	06/13/2022	211.72	15.52	0.00	196.20	382 B	--	--	4.05	<0.500	<0.212	<1.91	<0.118	<0.00536	<0.280	43.2	3.75 C3	<0.849
MW-23	08/18/2022	211.90	15.90	0.00	196.00	296 B	--	--	5.59	<0.500	<0.212	<1.91	<0.118	<0.0210	<0.280	34.4	11.4	<0.849
MW-25	12/26/2019	212.81	16.62	0.00	196.19	210 J	110 J	<100	53	3.4	7	2.8 J	<0.44	<0.0020	16	600	180	<2.7
MW-25	2/18/2020	212.81	15.98	0.00	196.83	1,500	107 J	122 J	42.2	2.82	2.1	1.58	<0.102	<0.0024	4.49	530	92.7	<1.9
MW-25	5/5/2020	212.81	16.03	0.00	196.78	1,630	--	--	28.10	<5.56	<2.74	<3.48	<2.02	<0.00536	22.8	496	53.7	<2.9
MW-25	09/02/2020	212.81	16.04	0.00	196.77	1,810	--	--	24.1	1.54 J	1.26 J	<5.20	<0.800	<0.0200	15.6	695	47.3	<6.00
MW-25	12/08/2020	212.81	16.05	0.00	196.76	1,480	--	--	21.1	<4.00	0.860 J	<5.20	<0.800	<0.0200	29.2	837	27.7	<6.00
MW-25	03/02/2021	212.81	15.21	0.00	197.60	620	--	--	13.5	<4.00	<2.00	<5.20	<0.800	<0.0200	27.8	570	27.4	<2.00
MW-25	06/16/2021	212.81	16.01	0.00	196.80	218	--	--	2.52	<4.00	<2.00	<5.20	<0.800	<0.0200	50.1	225	3.54	<2.00
MW-25	12/14/2021	212.81	16.11	0.00	196.70	1,700	--	--	20.2	<1.00	<0.424	<3.82	<0.236	<0.00552	<0.560	366	62	1.71 BJ
MW-25	03/31/2022	212.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	08/18/2022	212.97	16.10	0.00	196.87	638	--	--	48.4	0.633	0.146	<0.191	<0.0118	<0.0210	6.30	147	55.4	<0.849
MW-27	12/26/2019	214.43	17.32	0.00	197.11	3,600	5,300	190 J	6.5	2.0	140	38	<0.44	<0.0020	0.53 J	830	18	<2.7
MW-27	2/18/2020	214.43	16.46	0.00	197.97	3,860	7,010	172 J	7.9	<10.3	116	30.3	<0.102	<0.0024	<4.98	1,050	11.4	<1.9
MW-27	4/29/2020	214.43	16.64	0.00	197.79	3,320	--	--	4.95	<6.95	<3.43	<4.35	<2.53	<0.00536	<7.5	1,170	12.6	<2.9
MW-27	09/02/2020	214.43	16.77	0.00	197.66	2,470	--	--	4.00	<5.00	131	8.45	<1.00	<0.0200	2.50	346	5.7	<6.00
MW-27	12/08/2020	214.43	16.78	0.00	197.65	2,550	--	--	2.53	<5.00	64.8	6.50	<1.00	<0.0200	3.9	638	9.85	<6.00
MW-27	03/02/2021	214.43	15.83	0.00	198.60	2,120	--	--	1.55	<5.00	38.6	9.15	<1.00	<0.0200	2.50	281	3.53	<2.00
MW-27	06/17/2021	214.43	17.27	0.00	197.16	2,580	--	--	2.3	<5.00	51.1	<6.50	<1.00	<0.0200	<2.50	748	7.72	<2.00
MW-27	09/22/2021	214.43	17.69	0.00	196.74	1,460	--	--	2.02	<5.00	45.9	<6.50	<1.00	<0.0200	<2.50	455	7.12	<2.00
MW-27	12/14/2021	214.43	17.14	0.00	197.29	2,100	--	--	1.78	<1.25	30.3	<4.78	<0.295	<0.00536	<0.700	534	5.98	4.58 B

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-27	03/31/2022	214.43	16.93	0.00	197.50	**2,030**	--	--	2.65	<1.25	14.0	<4.78	<0.295	<0.00536	<0.700	**1,110**	**16.3**	<0.849
MW-27	06/13/2022	214.43	16.82	0.00	197.61	**2,160 [2,240]**	--	--	2.05 [2.02]	1.43 J [0.380]	9.40 [9.87]	<4.78 [1.08]	<0.295 [<0.0118]	<0.00536 [<0.00584]	<0.700 [0.166]	**762 [842]**	**7.57 C3 [9.29 C3]**	<0.849 [<0.849]
MW-27	08/18/2022	214.53	16.25	0.00	198.28	**2,140**	--	--	**7.90**	1.93 J	152	15.9	<0.295	<0.525	**324**	**1,010**	<0.682	<0.849
MW-28	12/26/2019	214.44	17.30	0.00	197.14	**2,800**	**2,200**	160 J	**8.10**	1.1 J	170	38	<0.44	<0.0020	**410**	**1,800**	**12**	<2.7
MW-28	2/18/2020	214.44	16.40	0.00	198.04	**3,960**	**3,020**	152 J	**14.6**	2.820	295	153	<0.102	<0.0024	**64.30**	**158**	**2.17**	<1.9
MW-28	4/29/2020	214.44	16.57	0.00	197.87	**3,670**	--	--	**10.4**	<1.39	224	58.3	<0.505	<0.00536	**238**	**713**	**4.01**	3.05 J
MW-28	09/02/2020	214.44	16.69	0.00	197.75	**2,830**	--	--	**13.5**	1.88	259	48.8	<0.200	<0.0200	**212**	**325**	**2.62**	<6.00
MW-28	12/08/2020	214.44	16.78	0.00	197.66	**3,350**	--	--	**7.97**	1.27	166	35.8	<0.200	<0.0200	**301**	**638**	**0.50**	<6.00
MW-28	03/02/2021	214.44	15.80	0.00	198.64	**2,470**	--	--	**5.52**	1.02	137	24.9	<0.200	<0.0200	**298**	**902**	**2.58**	<2.00
MW-28	06/17/2021	214.44	17.27	0.00	197.17	**3,680**	--	--	**14.6**	3.45 J	195	26.3	<2.00	<0.0200	**348**	**615**	**<5.00**	<2.00
MW-28	09/22/2021	214.44	17.70	0.00	196.74	**4,400**	--	--	**17.3**	3.98 J	284	19.9	<0.800	<0.0200	**136**	**449**	**4.36**	<2.00
MW-28	12/14/2021	214.44	17.19	0.00	197.25	**3,540**	--	--	**5.78**	1.86 J	136	14.3	<0.236	<0.00536	**75.3**	**571**	<0.546	3.13 B
MW-28	03/31/2022	214.44	16.95	0.00	197.49	**2,590**	--	--	4.80	1.26 J	133	15.6	<0.236	<0.00536	**261 C5**	**1,120**	**2.22**	<0.849
MW-28	06/13/2022	214.44	16.83	0.00	197.61	**2,460**	--	--	4.54	1.42 J	96.5	13.0	<0.236	<0.00541	**97.6**	**623**	<0.546 C3	<0.849
MW-28	08/18/2022	214.58	17.03	0.00	197.55	**2,100**	--	--	**6.12**	1.64 J	129	10.4	<0.236	<0.420	**309**	**1,030**	**2.94**	<0.849
MW-29	12/26/2019	217.26	19.63	0.00	197.63	<100	<76	<110	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	<0.85	**<0.22**	<2.7
MW-29	2/18/2020	217.26	19.55	0.00	197.71	95.4 BJ	<66	155 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	<0.153	<0.118	<1.9
MW-29	4/29/2020	217.26	19.62	0.00	197.64	92.5 BJ	--	--	<0.941	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	0.216	**<0.234**	<2.9
MW-29	09/03/2020	217.26	20.22	0.00	197.04	46.6 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0440 J	<0.0400	<0.100	<6.00
MW-29	12/09/2020	217.26	19.61	0.00	197.65	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	<0.100	<0.0400	<0.100	<6.00
MW-29											Well decommissioned							
MW-30	08/18/2022	210.23	15.35	0.00	194.88	43.1 B J	--	--	0.0220 J	0.0810 J	<0.0212	<0.191	<0.0118	<0.0210	2.24	0.172	0.996	<0.849
MW-31	06/13/2022	212.21	15.74	0.00	196.47	594	--	--	**37.7**	0.300	0.0450 J	<0.191	<0.0118	<0.00536	0.0760 J	**60.8**	**32.0 C3**	<0.849
MW-31	08/18/2022	212.21	15.72	0.00	196.49	599	--	--	**40.3**	<1.00	0.700 J	<3.82	<0.236	<0.420	**9.28**	**213**	**41.0**	<0.849

Notes:
800/1,000 = GRO MTCA Method A CUL with benzene present is 800 µg/L and without is 1,000 µg/L
BOLD and highlighted values are greater than their respective MTCA Method A cleanup level
BOLD values are non-detect below the laboratory method detection limit (MDL), but the MDL is greater than the MTCA Method A cleanup level
Results reported in micrograms per liter (µg/L)
Well TOC for 08/18/2022 used as per the updated survey on 06/05/2022
EDB result for 08/18/2022 as per U.S. Environmental Protection Agency (EPA) method 8260D.

Abbreviations:
TOC = Top of Casing
DTW = Depth to water in feet below TOC
GWE = Groundwater elevation in feet relative to NAVD88
-- = Not applicable, not available, or not analyzed
MTCA = Model Toxics Control Act Cleanup
CUL = Cleanup Level
PCE = Tetrachloroethene
TCE = Trichloroethene
EDB = 1,2-Dibromoethane (Ethylene dibromide)
MTBE = Methyl tertiary butyl ether
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
HO = Heavy Oil Range Organics
EPA = U.S. Environmental Protection Agency

Laboratory Qualifiers:
< = Not detected at or above the Repored Detection Limit (RDL) for data prior to 12/2021 and not detected at or above the Method Detection Limit (MDL) for subsequent data
J = Estimated value; result is greater than the laboratory Method Detection Limit (MDL) but less than the Reported Detection Limit (RDL) or Reporting Limit (RL) or Limit of Quantification (LOQ)
B = The same analyte is found in the associated blank
C3 = The reported concentration is an estimate. The continuing calibration standard associated with this data responded low.Method sensitivity check is acceptable.
C5 = The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-2	1/22/90	100.05	--	--	--	25	--	--	1,100	1,090	161	1,120	--					
MW-2	4/12/91	100.05	--	--	--	3,100	--	--	100	540	140	260	--					
MW-2	6/28/91	100.05	--	--	--	7,000	--	--	300	1,100	500	1,300	--					
MW-2	9/18/91	100.05	--	--	--	4,800	--	--	150	49	280	660	--					
MW-2	12/3/91	100.05	--	--	--	9,000	--	--	290	1,300	540	1,500	--					
MW-2	2/25/92	100.05	--	--	--	1,600	--	--	42	170	120	310	--					
MW-2	5/15/92	100.05	--	--	--	410	--	--	19	40	40	70	--					
MW-2	7/31/92	100.05	16.45	--	83.60	--	--	--	--	--	--	--	--					
MW-2	8/18/92	100.05	16.55	--	83.50	10,000	--	--	160	890	750	1,600	--					
MW-2	9/25/92	100.05	16.90	--	83.15	--	--	--	--	--	--	--	--					
MW-2	2/23/93	100.05	16.68	--	83.37	750	--	--	14	22	62	100	--					
MW-2	5/12/93	100.05	16.25	--	83.80	ND	--	--	ND	ND	ND	ND	--					
MW-2	8/18/93	100.05	15.86	--	84.19	ND	--	--	ND	1.1	6.7	3.5	--					
MW-2	11/10/93	100.05	16.15	--	83.90	ND	--	--	ND	ND	2.5	ND	--					
MW-2	2/3/94	100.05	15.79	--	84.26	ND	--	--	ND	ND	4.5	0.5	--					
MW-2	4/26/94	100.05	15.42	--	84.63	ND	--	--	0.6	ND	9.9	3.4	--					
MW-2	7/20/94	100.05	16.75	--	83.30	ND	--	--	ND	ND	0.6	ND	--					
MW-2	10/18/94	100.05	18.16	--	81.89	180	--	--	4.3	4.0	24	13	--					
MW-2	2/1/95	100.05	18.45	--	81.60	360	--	--	7.1	6.7	35	39	--					
MW-2	7/12/95	100.05	18.22	--	81.83	ND	--	--	ND	ND	ND	ND	--					
MW-2	1/4/96	100.05	17.81	--	82.24	ND	--	--	0.63	ND	ND	ND	--					
MW-2	1/7/97	100.05	--	--	--	--	--	--	--	--	--	--	--					
MW-2	2/12/98	100.05	--	--	--	--	--	--	--	--	--	--	--					
MW-2	10/15/04	100.05	17.06	--	82.99	170	--	--	9.4	1.4	11	6.8	--					
MW-2	12/17-18/09	100.05	16.24	--	83.81	<50	32	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	3/17/10	100.05	15.90	--	84.15	<50	<31	<71	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	06/22-23/10	100.05	15.24	--	84.81	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	9/13/10	100.05	17.34	--	82.71	<50	<29	72	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	12/20/10	100.05	17.58	--	82.47	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	6/16/11	100.05	17.48	--	82.57	<50	51	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	9/22/11	100.05	18.25	--	81.80	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	1/14/12	100.05	18.60	--	81.45	1,300	<29	<68	1.7	20	9.5	110	<2.5					
MW-2	3/31/12	100.05	19.70	--	80.35	<50	<29	<68	--	--	--	--	--					
MW-2	6/2/12	100.05	17.80	--	82.25	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	9/30/12	100.05	19.42	--	80.63	--	--	--	--	--	--	--	--					
MW-2	12/15/12	100.05	19.44	--	80.61	--	--	--	--	--	--	--	--					
MW-2	3/16/13	100.05	19.78	--	80.27	--	--	--	--	--	--	--	--					
MW-2	7/21/13	100.05	18.14	--	81.91	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	9/28/13	100.05	18.65	--	81.40	57	<29	<68	<0.5	0.6	<0.5	3.7	<2.5					
MW-2	12/7/13	100.05	18.85	--	81.20	400	--	--	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	3/15/14	100.05	18.62	--	81.43	70	<30	<70	<0.5	1.9	1.1	10	<2.5					
MW-2	6/22/14	100.05	17.96	--	82.09	110	<29	<68	<0.5	<0.5	<0.5	4.2	<2.5					
MW-2	9/20/14	100.05	18.58	--	81.47	120	<30	<69	<0.5	1.6	1.3	13	<2.5					
MW-2	12/27/14	100.05	18.11	--	81.94	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-2	11/15/15	100.05	18.86	--	81.19	--	--	--	--	--	--	--	--					
MW-3	1/22/90	101.25	--	--	--	85,000	--	--	1,380	14,100	2,060	12,800	--					
MW-3	4/12/91	101.25	--	--	--	2,500	--	--	3.6	39	18	69	--					
MW-3	6/28/91	101.25	--	--	--	6,600	--	--	63	680	210	870	--					
MW-3	9/18/91	101.25	--	--	--	4,900	--	--	ND	82	86	300	--					
MW-3	12/3/91	101.25	--	--	--	17,000	--	--	170	2,200	710	2,800	--					
MW-3	2/25/92	101.25	--	--	--	7,900	--	--	25	150	210	920	--					
MW-3	5/15/92	101.25	--	--	--	9,800	--	--	90	1,100	260	1,300	--					
MW-3	7/31/92	101.25	15.81	--	85.44	--	--	--	--	--	--	--	--					
MW-3	8/18/92	101.25	15.94	--	85.31	24,000	--	--	290	4,200	7,200	3,800	--					
MW-3	9/25/92	101.25	16.55	--	84.70	--	--	--	--	--	--	--	--					
MW-3	2/24/93	101.25	16.12	--	85.13	8,400	--	--	48	440	210	1,300	--					
MW-3	5/12/93	101.25	15.60	--	85.65	4,700	--	--	130	840	120	600	--					
MW-3	8/18/93	101.25	15.60	--	85.65	7,300	--	--	130	1,000	240	1,100	--					
MW-3	11/10/93	101.25	16.11	--	85.14	14,000	--	--	260	1,900	470	2,400	--					
MW-3	2/3/94	101.25	15.66	--	85.59	8,000	--	--	78	720	220	800	--					
MW-3	4/26/94	101.25	14.91	--	86.34	2,900	--	--	9.6	7.9	34	160	--					
MW-3	7/20/94	101.25	16.92	--	84.33	17,000	--	--	360	3,500	550	2,400	--					
MW-3	10/18/94	101.25	18.68	--	82.57	46,000	--	--	230	6,700	1,200	6,100	--					
MW-3	2/1/95	101.25	18.53	--	82.72	56,000	--	--	160	6,500	1,300	7,700	--					
MW-3	7/12/95	101.25	18.30	--	82.95	83,000	--	--	230	12,000	2,200	14,000	--					
MW-3	1/4/96	101.25	17.97	--	83.28	38,000	--	--	110	1,600	1,600	7,200	--					
MW-3	1/7/97	101.25	17.10	--	84.15	25,000	--	--	80.8	476	1,150	3,660	--					
MW-3	2/12/98	101.25	16.83	--	84.42	18,200	--	--	94.3	134	966	2,810	--					
MW-3	5/31/99	101.25	17.00	--	84.25	29,300	--	--	187	644	826	5,060	--					
MW-3	6/8/00	101.25	17.82	--	83.43	43,300	--	--	380	838	1,620	9,840	ND					
MW-3	1/30/01	101.25	18.49	--	82.76	31,300	--	--	380	306	1,380	3,240	--					
MW-3	4/11/01	101.25	17.91	--	83.34	12,100	--	--	59.6	37.8	524	900	--					
MW-3	7/28/01	101.25	17.66	--	83.59	40,900	--	--	561	1,960	1,720	10,400	--					
MW-3	10/15/01	101.25	17.82	--	83.43	43,200	--	--	623	1,650	1,680	10,400	--					
MW-3	1/5/02	101.25	16.42	--	84.83	5,060	--	--	39.6	14.1	261	362	--					
MW-3	4/2/02	101.25	16.54	--	84.71	35,000	--	--	280	820	910	6,200	<20					
MW-3	7/11/02	101.25	16.68	--	84.57	48,000	--	--	560	1,100	1,100	6,900	<20					
MW-3	10/10/02	101.25	17.22	--	84.03	50,000	--	--	630	1,100	1,300	8,400	<100					
MW-3	1/10/03	101.25	--	--	--	--	--	--	--	--	--	--	--					
MW-3	4/21/03	101.25	15.79	--	85.46	17,000	--	--	280	340	480	2,600	<20					
MW-3	6/26/03	101.25	16.15	--	85.10	34,000	--	--	470	750	940	6,200	<50					
MW-3	10/14/03	101.25	17.03	--	84.22	56,000	--	--	810	1,100	1,400	8,700	<50					
MW-3	1/7/04	101.25	16.41	--	84.84	13,000	--	--	160	150	400	1,300	<10					
MW-3	4/21/04	101.25	16.36	--	84.89	1,500	--	--	72	14	3.1	120	<10/<2[6]					
MW-3	7/1/04	101.25	16.90	--	84.35	26,000	--	--	540	410	750	3,700	<50					
MW-3	10/15/04	101.25	17.79	--	83.46	26,000	--	--	520	370	920	3,600	<100					
MW-3	1/5/05	101.25	17.76	--	83.49	9,000	--	--	180	47	590	95	<10					
MW-3	8/4/05	101.25	17.71	--	83.54	--	--	--	--	--	--	--	--					
MW-3	7/26/06	101.25	16.87	--	84.38	--	--	--	--	--	--	--	--					
MW-3	7/19/07	101.25	17.75	--	83.50	--	--	--	--	--	--	--	--					
MW-3	7/23/08	101.25	17.69	--	83.56	--	--	--	--	--	--	--	--					
MW-3	7/13/09	101.25	16.40	--	84.85	--	--	--	--	--	--	--	--					
MW-3	12/17-18/09	101.25	16.82	--	84.43	880	170	<70	25	13	76	22	<2.5					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-3	3/17/10	101.25	16.38	--	84.87	75	33	<71	4.2	1.3	1.9	<1.5	6.2					
MW-3	06/22-23/10	101.25	15.91	--	85.34	690	73	<69	15	18	30	67	<20					
MW-3	9/13/10	101.25	17.79	--	83.46	2,100	40	73	26	21	110	150	<20					
MW-3	12/20/10	101.25	17.81	--	83.44	2,300	200	86	34	15	220	25	85					
MW-3	6/16/11	101.25	17.68	--	83.57	2,200	540	77	55	22	170	110	<50					
MW-3	9/23/11	101.25	18.70	--	82.55	8,100	170	<68	210	130	690	590	79					
MW-3	1/14/12	101.25	19.00	--	82.25	5,200	100	<69	180	81	630	130	120					
MW-3	3/31/12	101.25	18.25	--	83.00	1,700	120	<76	30	6.5	160	14	73					
MW-3	6/2/12	101.25	18.10	--	83.15	4,200	110	93	68	48	340	170	73					
MW-3	9/30/12	101.25	19.00	--	82.25	5,600	410	330	200	95	710	350	91/<5[6]					
MW-3	12/15/12	101.25	18.30	--	82.95	2,400	160	72	46	12	240	36	62/<3[6]					
MW-3	3/16/13	101.25	18.08	--	83.17	4,000	100	<69	76	35	420	170	<73					
MW-3	7/21/13	101.25	21.31	--	79.94	8,000	250	76	210	100	840	410	110/<1[6]					58.9
MW-3	9/28/13	101.25	26.33	--	74.92	6,900	170	75	260	120	920	240	<130/<0.5[6]					328
MW-3	12/7/13	101.25	19.45	--	81.80	11,000	150	<67	210	130	1,200	690	<140					--
MW-3	3/15/14	101.25	18.80	--	82.45	2,200	110	<68	27	8.7	240	33	<21					8
MW-3	6/22/14	101.25	18.27	--	82.98	8,200	130	<67	70	58	640	530	<54/<0.5[6]					1.6
MW-3	9/20/14	101.25	19.06	--	82.19	7,900	200	<66	170	72	960	260	<82/<1[6]					0.0014
MW-3	12/27/14	101.25	18.27	--	82.98	1,200	64	<66	24	3.8	130	11	<32					5.5
MW-3	11/15/15	101.25	19.45	--	81.80	--	--	--	--	--	--	--	--					--
MW-4	4/12/91	100.01	--	--	--	ND	--	--	8,300	15,000	1,900	16,000	--					
MW-4	6/28/91	100.01	--	--	--	85,000	--	--	9,900	18,000	2,400	16,000	--					
MW-4	6/28/91 (D)	100.01	--	--	--	120,000	--	--	13,000	22,000	3,100	24,000	--					
MW-4	9/18/91	100.01	--	--	--	130,000	--	--	14,000	22,000	2,900	22,000	--					
MW-4	9/18/91 (D)	100.01	--	--	--	360,000	--	--	14,000	26,000	5,400	40,000	--					
MW-4	12/3/91	100.01	--	--	--	86,000	--	--	8,900	12,000	2,000	18,000	--					
MW-4	2/25/92	100.01	--	--	--	120,000	--	--	7,500	11,000	1,800	16,000	--					
MW-4	2/25/92 (D)	100.01	--	--	--	86,000	--	--	8,100	11,000	1,600	15,000	--					
MW-4	5/15/92	100.01	--	--	--	90,000	--	--	11,000	17,000	1,800	18,000	--					
MW-4	5/15/92 (D)	100.01	--	--	--	81,000	--	--	10,000	16,000	1,500	16,000	--					
MW-4	7/31/92	100.01	16.25	--	83.76	--	--	--	--	--	--	--	--					
MW-4	8/18/92	100.01	16.32	--	83.69	200,000	--	--	17,000	28,000	2,800	26,000	--					
MW-4	8/18/92 (D)	100.01	16.50	--	83.51	160,000	--	--	17,000	29,000	2,200	19,000	--					
MW-4	9/25/92	100.01	16.52	--	83.49	--	--	--	--	--	--	--	--					
MW-4	2/24/93	100.01	16.03	--	83.98	290,000	--	--	22,000	42,000	4,700	27,000	--					
MW-4	5/12/93	100.01	14.91	--	85.10	160,000	--	--	13,000	27,000	2,400	22,000	--					
MW-4	8/18/93	100.01	16.35	--	83.66	150,000	--	--	10,000	22,000	2,500	18,000	--					
MW-4	11/10/93	100.01	15.89	--	84.12	170,000	--	--	13,000	26,000	3,400	23,000	--					
MW-4	2/3/94	100.01	15.53	--	84.48	190,000	--	--	9,800	21,000	2,400	15,000	--					
MW-4	7/20/94	100.01	16.39	--	83.62	170,000	--	--	12,000	26,000	3,000	20,000	--					
MW-4	10/18/94	100.01	18.03	0.04	82.01	--	--	--	--	--	--	--	--					
MW-4	2/1/95	100.01	17.90	--	82.11	100,000	--	--	2,100	7,100	1,400	14,000	--					
MW-4	7/12/95	100.01	17.60	--	82.41	970,000	--	--	5,800	9,600	3,300	42,000	--					
MW-4	1/4/96	100.01	17.36	--	82.65	1,400,000	--	--	300	1,100	570	8,600	--					
MW-4	1/7/97	100.01	17.60	--	82.41	--	--	--	--	--	--	--	--					
MW-4	2/12/98	100.01	16.65	--	83.36	24,400	--	--	917	202	385	3,390	--					
MW-4	5/31/99	100.01	16.84	--	83.17	32,600	--	--	1,660	217	566	4,390	--					
MW-4	6/8/00	100.01	17.50	<0.01	82.51	58,500	--	--	971	206	1,120	7,570	ND					
MW-4	1/30/01	100.01	18.10	--	81.91	59,800	--	--	1,800	140	901	4,450	--					
MW-4	4/11/01	100.01	17.91	--	82.10	56,800	--	--	1,450	105	984	4,560	--					
MW-4	7/28/01	100.01	17.88	--	82.13	91,600	--	--	1,480	142	1,240	5,930	--/<50[6]					
MW-4	10/15/01	100.01	18.06	--	81.95	65,900	--	--	1,460	116	944	3,890	--/40.4[6]					
MW-4	1/5/02	100.01	17.04	--	82.97	25,600	--	--	247	52.3	483	2,030	--/<50.0[6]					
MW-4	4/2/02	100.01	--	--	--	--	--	--	--	--	--	--	--					
MW-4	7/11/02	100.01	16.88	--	83.13	34,000	--	--	1,000	59	450	1,400	130/110[6]					
MW-4	10/10/02	100.01	17.28	--	82.73	31,000	--	--	1,200	49	620	1,700	170/110[6]					
MW-4	1/10/03	100.01	--	--	--	--	--	--	--	--	--	--	--					
MW-4	4/21/03	100.01	15.78	--	84.23	11,000	--	--	120	6.0	220	520	<20					
MW-4	6/26/03	100.01	15.96	--	84.05	8,000	--	--	330	12	160	510	150/160[6]					
MW-4	10/14/03	100.01	16.56	--	83.45	13,000	--	--	550	17	280	690	150/140[6]					
MW-4	1/7/04	100.01	16.02	--	83.99	12,000	--	--	370	8.9	24	650	62/47[6]					
MW-4	4/21/04	100.01	15.83	--	84.18	1,300	--	--	69	0.7	3.2	24	78/78[6]					
MW-4	7/1/04	100.01	16.02	--	83.99	980	--	--	90	0.7	3.9	15	67/70[6]					
MW-4	10/15/04	100.01	16.41	--	83.60	9,900	--	--	530	9.0	240	510	140/110[6]					
MW-4	1/5/05	100.01	16.14	--	83.87	14,000	--	--	630	9.8	330	660	130/110[6]					
MW-4	8/4/05	100.01	16.36	--	83.65	9,600	--	--	420	6.3	260	370	99					
MW-4	7/26/06	100.01	15.98	--	84.03	330	--	--	21	<0.5	<0.5	2.5	12					
MW-4	7/19/07	100.01	16.30	--	83.71	350	--	--	13	<0.5	<0.5	2.6	6.3					
MW-4	7/23/08	100.01	16.36	--	83.65	1,700	--	--	99	1.9	7	41	8.5					
MW-4	7/13/09	100.01	15.07	--	84.94	<50	--	--	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-4	12/17-18/09	100.01	15.16	--	84.85	3,300	3,300	<680	19	0.9	1.9	6.2	<2.5					
MW-4	3/17/10	100.01	14.95	--	85.06	930	20,000	4,600	10	1.9	1.4	2.2	3.5					
MW-4	06/22-23/10	100.01	14.21	--	85.80	140	120	<68	3.8	<2.0	2.3	1.9	<2.5					
MW-4	9/13/10	100.01	7.31	--	92.70	3,400	2,900	400	130	1.3	58	34	8.1					
MW-4	12/20/10	100.01	17.69	--	82.32	2,200	130,000	31,000	150	5.6	28	18	41					
MW-4	6/16/11	100.01	17.60	--	82.41	3,000	16,000	2,300	140	5.1	21	<15	15					
MW-4	9/23/11	100.01	18.30	--	81.71	3,700	2,800	<330	290	<10	64	<50	16					
MW-4	1/14/12	100.01	18.65	--	81.36	2,900	7,900	930	170	4.6	69	69	19					
MW-4	3/31/12	100.01	18.05	--	81.96	1,500	6,000	800	44	3.7	25	15	15					
MW-4	6/2/12	100.01	17.85	--	82.16	1,800	510	160	79	3.1	30	20	14					
MW-4	9/30/12	100.01	18.52	--	81.49	2,000	4,600	650	230	<4.0	100	28	13/12[6]					
MW-4	12/15/12	100.01	18.05	--	81.96	800	2,300	130	39	<2.0	37	<5.0	13/11[6]					
MW-4	3/16/13	100.01	17.86	--	82.15	2,200	4,000	420	75	4.2	25	19	9/6/96					
MW-4	7/21/13	100.01	18.20	--	81.81	2,200	5,900	700	150	<5.0	83	<25	12/10[6]					
MW-4	9/28/13	100.01	18.70	--	81.31	5,000	4,400	590	320	3.3	200	63	<17/8[6]					
MW-4	12/7/13	100.01	18.88	--	81.13	3,900	2,600	290	140	<4.0	91	23	11/8[6]					
MW-4	3/15/14	100.01	18.64	--	81.37	1,000	3,700	220	17	<2.0	17	<5.0	7/3/66					
MW-4	6/22/14	100.01	17.99	--	82.02	840	240	<67	53	0.9	12	2.4	6/1/66					
MW-4	9/20/14	100.01	18.61	--	81.40	3,200	460	<66	160	1.8	120	24	7/3/66					
MW-4	12/27/14	100.01	18.14	--	81.87	650	31	<66	4.6	<0.7	12	<1.5	3/6/36					
MW-4	11/15/15	100.01	18.88	--	81.13	--	--	--	--	--	--	--	--					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-5	2/19/90	100.75	--	--	--	ND	--	--	ND	5.0	ND	22	--					
MW-5	4/12/91	100.75	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-5	6/28/91	100.75	--	--	--	89	--	--	ND	1.9	0.96	6.1	--					
MW-5	9/18/91	100.75	--	--	--	68	--	--	ND	ND	1.1	ND	--					
MW-5	12/3/91	100.75	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-5	2/25/92	100.75	--	--	--	92	--	--	ND	ND	15	ND	--					
MW-5	5/15/92	100.75	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-5	7/31/92	100.75	16.02	--	84.73	--	--	--	--	--	--	--	--					
MW-5	8/18/92	100.75	16.09	--	84.66	ND	--	--	ND	ND	ND	ND	--					
MW-5	9/25/92	100.75	16.42	--	84.33	--	--	--	--	--	--	--	--					
MW-5	2/23/93	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	5/12/93	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	8/18/93	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	11/10/93	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	2/3/94	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	4/26/94	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	7/20/94	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	10/18/94	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	2/1/95	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	7/12/95	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	1/4/96	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	1/7/97	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	2/12/98	100.75	--	--	--	--	--	--	--	--	--	--	--					
MW-5	12/17-18/09	100.75	16.09	--	84.66	<50	50	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	3/17/10	100.75	15.76	--	84.99	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	06/22-23/10	100.75	15.11	--	85.64	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	9/13/10	100.75	17.63	--	83.12	52	<31	<71	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	12/20/10	100.75	17.75	--	83.00	<50	<31	110	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	6/16/11	100.75	17.73	--	83.02	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	9/22/11	100.75	18.60	--	82.15	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	1/14/12	100.75	18.90	--	81.85	52	<29	<67	<0.5	1.3	0.7	7.5	<2.5					
MW-5	3/31/12	100.75	18.20	--	82.55	<50	<31	<73	<0.5	0.6	<0.5	1.9	<2.5					
MW-5	6/2/12	100.75	18.05	--	82.70	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	9/30/12	100.75	18.82	--	81.93	<50	<29	90	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	12/15/12	100.75	18.20	--	82.55	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	3/16/13	100.75	18.04	--	82.71	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	7/21/13	100.75	18.47	--	82.28	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	9/28/13	100.75	19.07	--	81.68	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-5	12/7/13	100.75	21.32	--	79.43	--	--	--	--	--	--	--	--					
MW-5	3/15/14	100.75	18.78	--	81.97	<50	<30	<69	<0.5	0.5	<0.5	2.9	<2.5					
MW-5	6/22/14	100.75	18.26	--	82.49	<50	<29	<67	<0.5	0.5	<0.5	<1.5	<2.5					
MW-5	9/20/14	100.75	18.94	--	81.81	<50	<29	<67	<0.5	0.5	<0.5	<1.5	<2.5					
MW-5	12/27/14	100.75	18.33	--	82.42	<50	<29	<67	<0.5	0.5	<0.5	<1.5	<2.5					
MW-5	11/15/15	100.75	19.22	--	81.53	--	--	--	--	--	--	--	--					
MW-6	2/19/90	100.93	--	--	--	**38,200**	--	--	ND	74	259	**2,430**	--					
MW-6	4/12/91	100.93	--	--	--	ND	--	--	ND	1.8	4.8	53	--					
MW-6	6/28/91	100.93	--	--	--	390	--	--	**1,100**	**5,300**	**860**	**47,000**	--					
MW-6	9/18/91	100.93	--	--	--	**1,600**	--	--	3.7	ND	15	130	--					
MW-6	12/3/91	100.93	--	--	--	**2,000**	--	--	3.7	1.8	19	130	--					
MW-6	2/25/92	100.93	--	--	--	**4,100**	--	--	**8.9**	2.9	44	320	--					
MW-6	5/15/92	100.93	--	--	--	ND	--	--	ND	ND	ND	8.0	--					
MW-6	7/31/92	100.93	15.86	--	85.07	--	--	--	--	--	--	--	--					
MW-6	8/18/92	100.93	15.95	--	84.98	**3,300**	--	--	3.7	0.84	17	110	--					
MW-6	9/25/92	100.93	16.26	--	84.67	--	--	--	--	--	--	--	--					
MW-6	2/23/93	100.93	16.17	--	84.76	**1,900**	--	--	ND	0.8	5.2	67	--					
MW-6	5/12/93	100.93	15.63	--	85.30	**1,600**	--	--	2.1	1.2	8.5	74	--					
MW-6	8/18/93	100.93	15.37	--	85.56	ND	--	--	ND	ND	ND	1.0	--					
MW-6	11/10/93	100.93	15.83	--	85.10	**1,300**	--	--	2.3	2.0	2.9	36	--					
MW-6	2/3/94	100.93	15.45	--	85.48	740	--	--	2.8	5.4	2.6	23	--					
MW-6	4/26/94	100.93	15.19	--	85.74	300	--	--	ND	ND	ND	2.4	--					
MW-6	7/20/94	100.93	16.94	--	83.99	**2,500**	--	--	ND	1.1	5.6	38	--					
MW-6	10/18/94	100.93	18.68	--	82.25	440	--	--	ND	1.0	1.3	2.5	--					
MW-6	2/1/95	100.93	--	--	--	--	--	--	--	--	--	--	--					
MW-6	7/12/95	100.93	--	--	--	--	--	--	--	--	--	--	--					
MW-6	1/4/96	100.93	17.94	--	82.99	**9,400**	--	--	**11**	90	120	770	--					
MW-6	1/7/97	100.93	16.90	--	84.03	**1,440**	--	--	2.85	5.05	10.4	56.7	--					
MW-6	2/12/98	100.93	16.93	--	84.00	308	--	--	**6.43**	1.63	ND	3.53	--					
MW-6	5/21/99	100.93	17.17	--	83.76	**1,660**	--	--	**116**	6.98	2.21	37.5	--					
MW-6	6/8/00	100.93	17.90	--	83.03	**1,970**	--	--	**61.9**	6.96	23.8	122	ND/ND					
MW-6	1/30/01	100.93	18.51	--	82.42	--	--	--	--	--	--	--	--					
MW-6	4/11/01	100.93	18.21	--	82.72	**10,800**	--	--	**190**	20.0	45.0	262	--					
MW-6	7/28/01	100.93	18.09	--	82.84	**4,600**	--	--	**264**	7.94	23.1	91.2	--					
MW-6	10/15/01	100.93	18.28	--	82.65	**6,890**	--	--	**267**	13.8	45.9	203	--					
MW-6	1/5/02	100.93	17.09	--	83.84	**3,500**	--	--	**213**	7.25	22.9	109	--					
MW-6	12/17-18/09	100.93	16.03	--	84.90	460	99	<72	<0.5	<0.5	2.2	15	<2.5					
MW-6	3/17/10	100.93	15.69	--	85.24	590	56	<71	0.9	0.5	2.2	17	<2.5					
MW-6	06/22-23/10	100.93	14.99	--	85.94	<50	31	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	9/13/10	100.93	17.64	--	83.29	**980**	240	<71	1.9	1.1	2.3	23	<2.5					
MW-6	12/20/10	100.93	17.74	--	83.19	**1,300**	350	<72	3.5	1.8	4.8	37	2.8					
MW-6	6/16/11	100.93	17.75	--	83.18	600	260	160	1.5	1	2.7	20	<2.5					
MW-6	9/22/11	100.93	18.65	--	82.28	--	--	--	--	--	--	--	--					
MW-6	1/14/12	100.93	21.10	--	79.83	--	--	--	--	--	--	--	--					
MW-6	3/31/12	100.93	18.30	--	82.63	560	<29	<68	1.3	1.2	1.3	9.4	<2.5					
MW-6	6/2/12	100.93	18.10	--	82.83	**1,300**	<29	<67	1.8	1.3	3.1	18	<2.5					
MW-6	9/30/12	100.93	18.92	--	82.01	--	--	--	--	--	--	--	--					
MW-6	12/15/12	100.93	18.22	--	82.71	560	<29	<67	0.6	0.7	1.7	12	<2.5					
MW-6	3/16/13	100.93	18.06	--	82.87	110	<29	<67	0.5	1.9	0.5	4.8	<2.5					
MW-6	7/21/13	100.93	18.54	--	82.39	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	9/28/13	100.93	19.05	--	81.88	81	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	12/7/13	100.93	19.32	--	81.61	67	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	3/15/14	100.93	18.78	--	82.15	180	<29	<67	<0.5	<0.5	<0.5	3.5	<2.5					
MW-6	6/22/14	100.93	18.28	--	82.65	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	9/20/14	100.93	18.98	--	81.95	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-6	12/27/14	100.93	18.34	--	82.59	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-6	11/15/15	100.93	19.32	--	81.61	--	--	--	--	--	--	--	--					
MW-7	2/19/90	99.07	--	--	--	526,000	--	--	3,280	8,170	1,210	8,010	--					
MW-7	6/28/91	99.07	--	--	--	30,000	--	--	760	950	4,600	8,500	--					
MW-7	9/18/91	99.07	--	--	--	11,000	--	--	280	970	560	2,800	--					
MW-7	12/3/91	99.07	--	--	--	9,400	--	--	250	330	630	2,600	--					
MW-7	2/25/92	99.07	--	--	--	3,800	--	--	210	260	510	2,200	--					
MW-7	5/15/92	99.07	--	--	--	9,000	--	--	170	35	630	2,900	--					
MW-7	8/18/92	99.07	16.90	--	--	28,000	--	--	190	75	100	560	--					
MW-7	9/25/92	99.07	17.05	--	82.02	--	--	--	--	--	--	--	--					
MW-7	2/23/93	99.07	16.81	--	82.26	32,000	--	--	160	1,500	800	6,300	--					
MW-7	5/12/93	99.07	16.32	--	82.75	24,000	--	--	160	940	890	5,200	--					
MW-7	8/18/93	99.07	16.39	--	82.68	27,000	--	--	79	470	750	6,500	--					
MW-7	11/10/93	99.07	16.94	--	82.13	14,000	--	--	36	60	400	3,800	--					
MW-7	2/3/94	99.07	16.71	--	82.36	3,800	--	--	7.5	8.3	130	680	--					
MW-7	4/26/94	99.07	15.72	--	83.35	10,000	--	--	48	190	480	1,900	--					
MW-7	7/20/94	99.07	16.03	--	83.04	14,000	--	--	26	280	570	2,900	--					
MW-7	10/18/94	99.07	17.49	--	81.58	6,200	--	--	11	13	230	980	--					
MW-7	2/1/95	99.07	17.58	--	81.49	510	--	--	9.5	1.3	51	22	--					
MW-7	7/12/95	99.07	17.24	--	81.83	8,600	--	--	30	25	270	1,300	--					
MW-7	1/4/96	99.07	--	--	--	--	--	--	--	--	--	--	--					
MW-7	1/7/97	99.07	--	--	--	--	--	--	--	--	--	--	--					
MW-7	2/12/98	99.07	--	--	--	--	--	--	--	--	--	--	--					
MW-7	5/31/99	99.07	--	--	--	--	--	--	--	--	--	--	--					
MW-7	6/8/00	99.07	17.11	--	--	321	--	--	3.15	ND	63.6	5.66	ND					
MW-7	12/17-18/09	99.07	13.48	--	85.59	330	86	<68	0.7	<0.5	5.5	7.6	<2.5					
MW-7	3/17/10	99.07	13.35	--	85.72	670	33	73	29	1.1	7.4	9.9	<2.5					
MW-7	06/22-23/10	99.07	13.11	--	85.96	<50	<31	<72	1	<0.5	0.8	<1.5	<2.5					
MW-7	9/13/10	99.07	16.45	--	82.62	960	120	97	4	<0.5	9.6	8.2	<2.5					
MW-7	12/20/10	99.07	17.12	--	81.95	170	54	<75	2.6	<0.5	3.5	<1.5	<2.5					
MW-7	6/16/11	99.07	16.77	--	82.30	180	160	430	1.5	<0.5	0.8	<1.5	<2.5					
MW-7	9/23/11	99.07	17.58	--	81.49	210	100	440	2.3	<0.5	4.2	<1.5	<2.5					
MW-7	1/14/12	99.07	17.80	--	81.27	130	33	130	1.5	<0.5	3.2	<1.5	<2.5					
MW-7	3/31/12	99.07	17.50	--	81.57	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-7	6/2/12	99.07	17.10	--	81.97	100	44	170	1.3	<0.5	1.1	<1.5	<2.5					
MW-7	9/30/12	99.07	17.78	--	81.29	54	35	86	0.8	<0.5	1.3	<1.5	<2.5					
MW-7	12/15/12	99.07	17.42	--	81.65	300	51	<68	2.4	<0.5	5.7	2.3	<2.5					
MW-7	3/16/13	99.07	17.27	--	81.80	280	<30	<70	2.7	<0.5	5.8	<1.5	<2.5					
MW-7	7/21/13	99.07	17.22	--	81.85	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-7	9/28/13	99.07				--			--	--	--	--	--					
MW-7	12/7/13	99.07	20.33	--	78.74						--	--	--					
MW-7	3/15/14	99.07	18.01	--	81.06	120	<29	<67	<0.5	<0.5	1.1	2.8	<2.5					
MW-7	6/22/14	99.07	17.48	--	81.59	83	<29	<68	0.9	<0.5	1.8	<1.5	<2.5					
MW-7	9/20/14	99.07	17.93	--	81.14	75	<29	<68	0.9	<0.5	1.5	<1.5	<2.5					
MW-7	12/27/14	99.07	20.63	--	78.44						--	--	--					
MW-7	11/15/15	99.07	18.18	--	80.89	--	--	--	--	--	--	--	--					
MW-9	2/19/90	100.02	--	--	--	99,600	--	--	181	489	494	4,290	--					
MW-9	4/12/91	100.02	--	--	--	ND	--	--	ND	ND	180	930	--					
MW-9	6/28/91	100.02	--	--	--	10,000	--	--	100	160	570	1,800	--					
MW-9	9/18/91	100.02	--	--	--	15,000	--	--	150	260	720	3,200	--					
MW-9	12/3/91	100.02	--	--	--	16,000	--	--	140	290	780	3,400	--					
MW-9	2/25/92	100.02	--	--	--	9,500	--	--	120	220	640	2,900	--					
MW-9	5/15/92	100.02	--	--	--	18,000	--	--	120	210	660	3,300	--					
MW-9	7/31/92	100.02	15.86	--	84.16	--	--	--	--	--	--	--	--					
MW-9	8/18/92	100.02	15.93	--	84.09	16,000	--	--	72	120	560	1,900	--					
MW-9	9/25/92	100.02	16.14	--	83.88	--	--	--	--	--	--	--	--					
MW-9	2/23/93	100.02	15.87	--	84.15	9,000	--	--	45	120	390	1,100	--					
MW-9	5/12/93	100.02	15.44	--	84.58	11,000	--	--	34	58	280	910	--					
MW-9	8/18/93	100.02	15.21	--	84.81	3,100	--	--	22	47	94	500	--					
MW-9	11/10/93	100.02	15.85	--	84.17	10,000	--	--	67	150	470	1,700	--					
MW-9	2/3/94	100.02	15.63	--	84.39	26,000	--	--	85	340	910	3,600	--					
MW-9	4/26/94	100.02	14.98	--	85.04	12,000	--	--	37	73	200	750	--					
MW-9	7/20/94	100.02	15.91	--	84.11	15,000	--	--	37	110	360	1,600	--					
MW-9	10/18/94	100.02	16.91	--	83.11	28,000	--	--	110	350	970	2,000	--					
MW-9	2/1/95	100.02	16.86	--	83.16	21,000	--	--	47	230	570	2,600	--					
MW-9	7/12/95	100.02	16.50	--	83.52	17,000	--	--	69	130	480	2,000	--					
MW-9	1/4/96	100.02	16.00	--	84.02	39,000	--	--	46	140	420	2,600	--					
MW-9	1/7/97	100.02	15.12	Sheen	84.90	31,600	--	--	47.7	ND	25.2	112	--					
MW-9	2/12/98	100.02	15.87	--	84.15	ND	--	--	ND	ND	ND	ND	--					
MW-9	5/31/99	100.02	16.03	--	83.99	ND	--	--	ND	ND	ND	ND	--					
MW-9	6/8/00	100.02	16.74	--	83.28	--	--	--	--	--	--	--	--					
MW-9	1/30/01	100.02	17.40	--	82.62	307,000	--	--	ND	ND	ND	ND	--					
MW-9	4/11/01	100.02	17.15	--	82.87	43,000	--	--	<50	289	911	5,530	--					
MW-9	7/28/01	100.02	17.18	--	82.84	27,800	--	--	35.9	290	1,110	5,490	--					
MW-9	10/15/01	100.02	17.54	--	82.48	84,100	--	--	<25.0	99.3	262	2,290	--					
MW-9	1/5/02	100.02	16.12	--	83.90	9,020	--	--	<5.00	10.0	103	850	--					
MW-9	12/17-18/09	100.02	10.88	--	89.14	<50	<29	<68	130	3.4	0.7	2.2	<2.5					
MW-9	3/17/10	100.02	10.96	--	89.06	13,000	78	170	610	1,600	280	1,500	73					
MW-9	06/22-23/10	100.02	12.00	--	88.02	12,000	310	<70	11	15	150	1,100	<10					
MW-9	9/13/10	100.02	16.27	--	83.75	2,900	990	800	53	23	61	110	<10					
MW-9	12/20/10	100.02	16.45	--	83.57	4,000	150	<74	51	13	79	170	8.8					
MW-9	6/16/11	100.02	16.35	--	83.67	1,600	240	190	41	4.4	53	59	<10					
MW-9	9/23/11	100.02	17.25	--	82.77	4,200	200	<70	88	12	180	290	<20					
MW-9	1/14/12	100.02	17.55	--	82.47	5,800	330	<68	120	17	180	260	36					
MW-9	3/31/12	100.02	16.85	--	83.17	7,900	1,300	91	140	14	220	320	24					
MW-9	6/2/12	100.02	16.60	--	83.42	8,900	1,100	240	120	16	210	300	26					
MW-9	9/30/12	100.02	17.61	--	82.41	7,800	1,200	190	130	22	220	300	30/<3[c]					
MW-9	12/15/12	100.02	17.00	--	83.02	18,000	4,000	<69	150	25	420	930	34/<3[c]					
MW-9	3/16/13	100.02	16.86	--	83.16	21,000	9,700	520	120	20	330	700	32/<5[c]					
MW-9	7/20/13	100.02	17.43	0.02	82.61	--	--	--	--	--	--	--	--					
MW-9	9/28/13	100.02	18.58	0.68	81.98	--	--	--	--	--	--	--	--					
MW-9	12/7/13	100.02	19.72	1.78	81.72	--	--	--	--	--	--	--	--					
MW-9	3/15/14	100.02	18.99	1.33	82.09	--	--	--	--	--	--	--	--					
MW-9	6/22/14	100.02	17.34	0.41	83.01	--	--	--	--	--	--	--	--					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-9	9/20/14	100.02	18.83	1.32	82.25	--	--	--	--	--	--	--	--					
MW-9	12/27/14	100.02	19.79	0.16	80.36	--	--	--	--	--	--	--	--					
MW-9	11/15/15	100.02	19.32	--	80.70	--	--	--	--	--	--	--	--					
MW-10	2/19/90	99.18	--	--	--	**89,400**	--	--	**431**	136	505	**1,990**	--					
MW-10	4/12/91	99.18	--	--	--	**5,000**	--	--	**200**	56	350	**1,200**	--					
MW-10	6/28/91	99.18	--	--	--	**5,700**	--	--	**250**	48	330	910	--					
MW-10	9/18/91	99.18	--	--	--	**6,200**	--	--	**230**	370	300	580	--					
MW-10	12/3/91	99.18	--	--	--	560	--	--	**210**	59	290	870	--					
MW-10	2/25/92	99.18	--	--	--	**5,000**	--	--	**160**	27	200	730	--					
MW-10	5/15/92	99.18	--	--	--	**5,200**	--	--	**190**	37	290	710	--					
MW-10	7/31/92	99.18	15.30	--	83.88	--	--	--	--	--	--	--	--					
MW-10	8/18/92	99.18	15.81	--	83.37	**5,900**	--	--	**180**	25	180	550	--					
MW-10	9/25/92	99.18	15.97	--	83.21	--	--	--	--	--	--	--	--					
MW-10	2/23/93	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	5/12/93	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	8/18/93	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	11/10/93	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	2/3/94	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	4/26/94	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	7/20/94	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	10/18/94	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	2/1/95	99.18	15.98	--	83.20	--	--	--	--	--	--	--	--					
MW-10	7/12/95	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	1/4/96	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	1/7/97	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	2/12/98	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	5/19/03	99.18	14.91	0.10	84.35	--	--	--	--	--	--	--	--					
MW-10	6/26/03	99.18	15.42	0.21	83.93	--	--	--	--	--	--	--	--					
MW-10	8/18/03	99.18	16.23	0.19	83.10	--	--	--	--	--	--	--	--					
MW-10	9/6/03	99.18	16.19	0.17	83.13	--	--	--	--	--	--	--	--					
MW-10	10/14/03	99.18	16.39	0.29	83.02	--	--	--	--	--	--	--	--					
MW-10	11/17/03	99.18	15.95	0.07	83.29	--	--	--	--	--	--	--	--					
MW-10	12/8/03	99.18	16.46	0.24	82.91	--	--	--	--	--	--	--	--					
MW-10	1/7/04	99.18	15.61	0.24	83.76	--	--	--	--	--	--	--	--					
MW-10	2/26/04	99.18	15.05	0.12	84.23	--	--	--	--	--	--	--	--					
MW-10	3/18/04	99.18	15.04	0.22	84.32	--	--	--	--	--	--	--	--					
MW-10	4/21/04	99.18	14.45	0.10	84.81	--	--	--	--	--	--	--	--					
MW-10	5/17/04	99.18	14.41	0.11	84.86	--	--	--	--	--	--	--	--					
MW-10	6/2/04	99.18	14.96	0.09	84.29	--	--	--	--	--	--	--	--					
MW-10	7/1/04	99.18	15.10	0.08	84.14	--	--	--	--	--	--	--	--					
MW-10	8/16/04	99.18	15.02	0.09	84.23	--	--	--	--	--	--	--	--					
MW-10	9/24/04	99.18	16.31	0.09	82.94	--	--	--	--	--	--	--	--					
MW-10	10/15/04	99.18	15.71	0.26	83.68	--	--	--	--	--	--	--	--					
MW-10	10/26/04	99.18	16.40	0.08	82.84	--	--	--	--	--	--	--	--					
MW-10	12/2/04	99.18	16.40	0.08	82.84	--	--	--	--	--	--	--	--					
MW-10	1/5/05	99.18	14.99	0.04	84.22	--	--	--	--	--	--	--	--					
MW-10	2/1/05	99.18	14.64	0.07	84.60	--	--	--	--	--	--	--	--					
MW-10	8/4/05	99.18	14.46	0.04	84.75	--	--	--	--	--	--	--	--					
MW-10	4/5/06	99.18	--	--	--	--	--	--	--	--	--	--	--					
MW-10	7/26/06	99.18	13.42	--	85.76	--	--	--	--	--	--	--	--					
MW-10	7/19/07	99.18	12.82	--	86.36	--	--	--	--	--	--	--	--					
MW-10	7/23/08	99.18	14.54	--	84.64	--	--	--	--	--	--	--	--					
MW-10	7/13/09	99.18	12.01	--	87.17	--	--	--	--	--	--	--	--					
MW-10	12/17-18/09	99.18	11.29	--	87.89	**2,300**	310	<69	**230**	28	2.9	9.3	<2.5					
MW-10	3/17/10	99.18	11.36	--	87.82	**88,000**	**2,200**	200	**4,900**	**16,000**	**1,200**	**7,600**	<500					
MW-10	06/22-23/10	99.18	11.79	--	87.39	**56,000**	**1,500**	<70	**17**	**2,000**	**1,300**	**11,000**	<63					
MW-10	9/13/10	99.18	15.71	--	83.47	**37,000**	**30,000**	<1,700	**490**	**1,400**	**990**	**5,000**	<13					
MW-10	12/20/10	99.18	15.92	--	83.26	**23,000**	**9,900**	<1,400	**330**	650	620	**2,900**	<25					
MW-10	6/16/11	99.18	15.79	--	83.39	**11,000**	**3,800**	<690	**230**	30	370	630	<20					
MW-10	9/23/11	99.18	16.70	--	82.48	**7,700**	**14,000**	<1,300	**250**	25	380	460	<50					
MW-10	1/14/12	99.18	17.20	0.30	82.22	--	--	--	--	--	--	--	--					
MW-10	3/31/12	99.18	16.35	--	82.83	**11,000**	**9,800**	<79	**190**	18	330	450	**29**					
MW-10	6/2/12	99.18	16.20	0.20	83.14	--	--	--	--	--	--	--	--					
MW-10	9/30/12	99.18	17.02	0.07	82.22	--	--	--	--	--	--	--	--					
MW-10	12/15/12	99.18	16.58	0.08	82.66	--	--	--	--	--	--	--	--					
MW-10	3/16/13	99.18	16.42	0.15	82.88	--	--	--	--	--	--	--	--					
MW-10	7/20/13	99.18	17.18	0.48	82.38	--	--	--	--	--	--	--	--					
MW-10	9/28/13	99.18	18.08	0.90	81.82	--	--	--	--	--	--	--	--					
MW-10	12/7/13	99.18	18.84	1.54	81.57	--	--	--	--	--	--	--	--					
MW-10	3/15/14	99.18	19.06	2.19	81.87	--	--	--	--	--	--	--	--					
MW-10	6/22/14	99.18	17.66	1.54	82.75	--	--	--	--	--	--	--	--					
MW-10	9/20/14	99.18	19.18	2.53	82.02	--	--	--	--	--	--	--	--					
MW-10	12/27/14	99.18	18.86	1.53	81.54	--	--	--	--	--	--	--	--					
MW-10	11/15/15	99.18	19.73	2.91	81.78	--	--	--	--	--	--	--	--					
MW-11	2/19/90	98.43	--	--	--	**244,000**	--	--	**342**	**5,430**	**2,150**	**9,020**	--					
MW-11	4/12/91	98.43	--	--	--	ND	--	--	ND	**3,300**	**1,700**	**9,500**	--					
MW-11	6/28/91	98.43	--	--	--	**45,000**	--	--	**220**	**5,400**	**2,200**	**11,000**	--					
MW-11	9/18/91	98.43	--	--	--	**58,000**	--	--	**210**	**4,900**	**2,000**	**9,900**	--					
MW-11	12/3/91	98.43	--	--	--	**41,000**	--	--	**210**	**5,100**	**2,000**	**9,700**	--					
MW-11	2/25/92	98.43	--	--	--	**47,000**	--	--	**190**	**4,500**	**1,700**	**8,400**	--					
MW-11	5/15/92	98.43	--	--	--	**34,000**	--	--	**61**	420	**750**	**4,700**	--					
MW-11	7/31/92	98.43	15.18	--	83.25	--	--	--	--	--	--	--	--					
MW-11	8/18/92	98.43	15.31	--	83.12	**70,000**	--	--	**210**	**6,700**	210	**1,100**	--					
MW-11	9/25/92	98.43	15.00	--	83.43	--	--	--	--	--	--	--	--					
MW-11	2/23/93	98.43	15.15	--	83.28	**52,000**	--	--	**150**	**4,100**	**1,700**	**7,900**	--					
MW-11	5/12/93	98.43	14.76	--	83.67	**57,000**	--	--	**200**	**5,200**	**2,000**	**9,400**	--					
MW-11	8/18/93	98.43	14.79	--	83.64	**52,000**	--	--	**130**	**4,100**	**1,800**	**8,300**	--					
MW-11	11/10/93	98.43	15.19	--	83.24	**51,000**	--	--	**160**	**3,500**	**1,800**	**6,300**	--					
MW-11	2/3/94	98.43	14.81	--	83.62	**33,000**	--	--	**74**	**1,900**	**880**	**3,300**	--					
MW-11	4/26/94	98.43	14.11	--	84.32	**26,000**	--	--	**39**	270	170	**2,600**	--					
MW-11	7/20/94	98.43	14.51	--	83.92	**18,000**	--	--	ND	45	85	540	--					
MW-11	10/18/94	98.43	15.32	--	83.11	**38,000**	--	--	**130**	**3,300**	**830**	**4,200**	--					
MW-11	2/1/95	98.43	15.73	--	82.70	**100,000**	--	--	**170**	**3,600**	**2,000**	**11,000**	--					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-11	7/12/95	98.43	13.98	--	84.45	16,000	--	--	22	260	200	1,200	--					
MW-11	1/4/96	98.43	14.75	--	83.68	52,000	--	--	170	4,700	1,500	7,800	--					
MW-11	1/7/97	98.43	14.00	Sheen	84.43	37,200	--	--	74.9	2,390	1,100	5,760	--					
MW-11	2/12/98	98.43	14.85	--	83.58	13,100	--	--	52.4	184	374	2,150	--					
MW-11	5/31/99	98.43	14.92	--	83.51	17,000	--	--	41.3	137	40.8	2,540	--					
MW-11	6/8/00	98.43	15.56	Sheen	82.87	51,700	--	--	215	4,980	1,850	8,960	ND					
MW-11	1/30/01	98.43	16.30	0.45	81.59	--	--	--	--	--	--	--	--					
MW-11	4/11/01	98.43	15.87	1.01	81.35	--	--	--	--	--	--	--	--					
MW-11	7/28/01	98.43	16.03	0.16	82.21	--	--	--	--	--	--	--	--					
MW-11	10/15/01	98.43	15.68	0.71	81.90	--	--	--	--	--	--	--	--					
MW-11	1/5/02	98.43	15.49	0.11	82.81	--	--	--	--	--	--	--	--					
MW-11	4/2/02	98.43	15.32	--	83.11	71,000	--	--	130	5,100	2,000	11,000	<20					
MW-11	6/26/02	98.43	15.78	0.09	82.72	--	--	--	--	--	--	--	--					
MW-11	7/11/02	98.43	15.90	0.06	82.58	--	--	--	--	--	--	--	--					
MW-11	8/29/02	98.43	16.29	0.08	82.20	--	--	--	--	--	--	--	--					
MW-11	9/7/02	98.43	15.96	0.05	82.51	--	--	--	--	--	--	--	--					
MW-11	10/10/02	98.43	16.94	0.74	82.08	--	--	--	--	--	--	--	--					
MW-11	11/22/02	98.43	15.94	0.06	82.54	--	--	--	--	--	--	--	--					
MW-11	12/11/02	98.43	15.89	0.12	82.64	--	--	--	--	--	--	--	--					
MW-11	1/10/03	98.43	17.61	1.63	82.12	--	--	--	--	--	--	--	--					
MW-11	2/13/03	98.43	16.93	1.04	82.33	--	--	--	--	--	--	--	--					
MW-11	3/5/03	98.43	16.77	0.99	82.45	--	--	--	--	--	--	--	--					
MW-11	4/21/03	98.43	14.91	0.05	83.56	--	--	--	--	--	--	--	--					
MW-11	5/19/03	98.43	14.76	0.03	83.69	--	--	1	--	--	--	--	--					
MW-11	6/5/03	98.43	15.01	0.07	83.48	--	--	--	--	--	--	--	--					
MW-11	6/26/03	98.43	15.20	0.02	83.25	--	--	--	--	--	--	--	--					
MW-11	8/18/03	98.43	16.05	0.04	82.41	--	--	--	--	--	--	--	--					
MW-11	9/6/03	98.43	16.04	0.03	82.41	--	--	--	--	--	--	--	--					
MW-11	10/14/03	98.43	15.90	0.00	82.53	65,000	--	--	72	3,600	1,700	8,600	<100					
MW-11	11/17/03	98.43	15.98	0.16	82.58	--	--	--	--	--	--	--	--					
MW-11	12/8/03	98.43	15.97	0.02	82.48	--	--	--	--	--	--	--	--					
MW-11	1/7/04	98.43	15.49	0.03	82.96	--	--	--	--	--	--	--	--					
MW-11	2/26/04	98.43	14.96	0.03	83.49	--	--	--	--	--	--	--	--					
MW-11	3/18/04	98.43	15.16	0.03	83.29	--	--	--	--	--	--	--	--					
MW-11	4/21/04	98.43	14.66	0.02	83.79	--	--	--	--	--	--	--	--					
MW-11	5/17/04	98.43	14.62	0.02	83.83	--	--	--	--	--	--	--	--					
MW-11	6/2/04	98.43	15.22	0.02	83.23	--	--	--	--	--	--	--	--					
MW-11	7/1/04	98.43	15.01	0.00	83.42	59,000	--	--	44	2,200	980	9,000	<25					
MW-11	8/16/04	98.43	15.33	0.02	83.12	--	--	--	--	--	--	--	--					
MW-11	9/24/04	98.43	16.05	0.02	82.40	--	--	--	--	--	--	--	--					
MW-11	10/15/04	98.43	15.35	0.00	83.08	53,000	--	--	72	2,900	1,400	8,400	<200					
MW-11	10/26/04	98.43	16.02	0.02	82.43	--	--	--	--	--	--	--	--					
MW-11	12/2/04	98.43	15.89	0.03	82.56	--	--	--	--	--	--	--	--					
MW-11	1/5/05	98.43	15.14	0.03	83.31	--	--	--	--	--	--	--	--					
MW-11	2/1/05	98.43	15.08	0.03	83.37	--	--	--	--	--	--	--	--					
MW-11	8/4/05	98.43	15.48	0.03	82.97	--	--	--	--	--	--	--	--					
MW-11	4/5/06	98.43	--	--	--	--	--	--	--	--	--	--	--					
MW-11	7/26/06	98.43	13.42	--	85.01	<48	--	--	1.0	<0.5	0.6	2.0	<2.5					
MW-11	7/19/07	98.43	12.31	--	86.12	<50	--	--	1.5	<0.5	<0.5	<1.5	<10					
MW-11	7/23/08	98.43	14.45	--	83.98	530	--	--	<0.5	<2.0	1.5	8.0	<2.5					
MW-11	7/13/09	98.43	11.64	--	86.79	4,500	--	--	530	95	170	640	<5.0					
MW-11	12/17-18/09	98.43	11.40	--	87.03	3,800	230	<70	510	610	23	95	<13					
MW-11	3/17/10	98.43	11.31	--	87.12	57,000	400	430	2,900	9,700	840	6,200	<63					
MW-11	06/22-23/10	98.43	11.64	--	86.79	41,000	870	<68	64	1,600	940	6,700	<25					
MW-11	9/13/10	98.43	15.16	--	83.27	42,000	25,000	<1,700	99	1,200	760	5,300	<25					
MW-11	12/21/10	98.43	15.33	--	83.10	40,000	1,600	<350	390	2,700	720	4,900	59					
MW-11	6/16/11	98.43	15.08	--	83.35	33,000	3,800	<680	490	1,800	600	3,000	<25					
MW-11	9/23/11	98.43	16.00	--	82.43	21,000	600	<68	630	1,200	610	2,200	74					
MW-11	1/14/12	98.43	16.50	0.25	82.13	--	--	--	--	--	--	--	--					
MW-11	3/31/12	98.43	15.60	0.00	82.83	26,000	1,800	<69	340	690	320	1,300	93					
MW-11	6/2/12	98.43	15.55	0.20	83.04	--	--	--	--	--	--	--	--					
MW-11	9/30/12	98.43	16.18	--	82.25	18,000	2,900	120	260	290	490	1,400	87/<5[c]					
MW-11	12/15/12	98.43	16.18	0.16	82.38	--	--	--	--	--	--	--	--					
MW-11	3/16/13	98.43	15.66	0.02	82.79	--	--	--	--	--	--	--	--					
MW-11	7/20/13	98.43	16.15	0.02	82.30	--	--	--	--	--	--	--	--					
MW-11	9/28/13	98.43	17.10	0.45	81.69	--	--	--	--	--	--	--	--					
MW-11	12/7/13	98.43	18.56	1.96	81.44	--	--	--	--	--	--	--	--					
MW-11	3/15/14	98.43	18.94	2.72	81.67	--	--	--	--	--	--	--	--					
MW-11	6/22/14	98.43	16.00	0.28	82.65	--	--	--	--	--	--	--	--					
MW-11	9/20/14	98.43	17.44	1.14	81.90	--	--	--	--	--	--	--	--					
MW-11	12/27/14	98.43	18.29	1.58	81.40	--	--	--	--	--	--	--	--					
MW-11	11/15/15	98.43	18.52	2.13	81.61	--	--	--	--	--	--	--	--					
MW-12	2/25/92	100.50	--	--	--	130,000	--	--	16,000	31,000	2,800	20,000	--					
MW-12	5/15/92	100.50	--	--	--	109,000	--	--	12,000	28,000	2,100	16,000	--					
MW-12	7/31/92	100.50	15.54	--	84.96	--	--	--	--	--	--	--	--					
MW-12	8/18/92	100.50	15.80	--	84.70	210,000	--	--	24,000	40,000	2,800	17,000	--					
MW-12	9/25/92	100.50	15.64	--	84.86	--	--	--	--	--	--	--	--					
MW-12	2/23/93	100.50	15.99	--	84.51	140,000	--	--	20,000	31,000	1,600	12,000	--					
MW-12	5/12/93	100.50	15.55	--	84.95	120,000	--	--	19,000	29,000	1,700	15,000	--					
MW-12	8/18/93	100.50	15.57	--	84.93	160,000	--	--	21,000	39,000	2,500	18,000	--					
MW-12	11/10/93	100.50	16.12	--	84.38	160,000	--	--	21,000	35,000	3,000	14,000	--					
MW-12	2/3/94	100.50	15.76	--	84.74	130,000	--	--	21,000	43,000	2,100	13,000	--					
MW-12	4/26/94	100.50	15.29	--	85.21	200,000	--	--	20,000	37,000	3,100	16,000	--					
MW-12	7/20/94	100.50	16.39	--	84.11	240,000	--	--	26,000	41,000	4,000	24,000	--					
MW-12	10/18/94	100.50	21.89	2.24	80.40	--	--	--	--	--	--	--	--					
MW-12	2/1/95	100.50	20.75	1.75	81.15	--	--	--	--	--	--	--	--					
MW-12	7/12/95	100.50	16.48	--	84.02	100,000	--	--	12,000	21,000	1,500	12,000	--					
MW-12	1/4/96	100.50	15.01	--	85.49	1,100,000	--	--	ND	ND	1,800	37,000	--					
MW-12	1/7/97	100.50	16.70	Sheen	83.80	471,000	--	--	9,700	21,500	3,210	34,600	--					
MW-12	2/12/98	100.50	16.30	--	84.20	176,000	--	--	17,200	27,700	2,270	21,400	--					
MW-12	5/31/99	100.50	16.33	--	84.17	131,000	--	--	4,680	14,500	1,510	22,400	--					
MW-12	6/8/00	100.50	17.19	Sheen	83.31	153,000	--	--	12,500	24,300	2,680	25,800	ND					
MW-12	1/30/01	100.50	18.31	0.03	82.21	--	--	--	--	--	--	--	--					
MW-12	4/11/01	100.50	17.11	--	83.39	219,000	--	--	15,200	23,700	2,420	27,900	--					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-12	7/28/01	100.50	16.78	--	83.72	170,000	--	--	12,400	23,100	2,370	27,100	--					
MW-12	10/15/01	100.50	16.96	--	83.54	168,000	--	--	12,300	21,200	2,010	25,300	--					
MW-12	1/5/02	100.50	15.54	--	84.96	131,000	--	--	9,870	17,500	1,810	24,300	--					
MW-12	12/17-18/09	100.50	16.69	--	83.81	200,000	9,300	1,700	4,100	4,700	620	18,000	<50					
MW-12	3/17/10	100.50	15.98	--	84.52	200,000	25,000	<3,500	4,300	7,200	980	19,000	<50					
MW-12	06/22-23/10	100.50	15.29	--	85.21	140,000	48,000	6,500	3,000	5,300	610	18,000	<130					
MW-12	9/13/10	100.50	17.29	--	83.21	130,000	7,500	<730	10,000	17,000	1,800	17,000	<500					
MW-12	12/20/10	100.50	17.27	--	83.23	120,000	3,900	<360	8,800	12,000	1,600	12,000	230					
MW-12	6/16/11	100.50	17.11	--	83.39	110,000	2,800	<350	7,400	13,000	1,500	15,000	<500					
MW-12	9/23/11	100.50	18.17	--	82.33	130,000	1,300	460	14,000	21,000	2,400	17,000	270					
MW-12	1/14/12	100.50	18.62	0.22	82.06	--	--	--	--	--	--	--	--					
MW-12	3/31/12	100.50	17.75	--	82.75	110,000	3,800	640	11,000	12,000	2,300	15,000	400					
MW-12	6/2/12	100.50	20.90	--	79.60	--	--	--	--	--	--	--	--					
MW-12	9/30/12	100.50	18.45	--	82.05	130,000	2,200	660	14,000	20,000	2,700	18,000	240/<10[6]					
MW-12	12/15/12	100.50	17.81	--	82.69	96,000	2,100	210	11,000	17,000	2,700	16,000	310/<5[6]					
MW-12	3/16/13	100.50	17.49	--	83.01	130,000	1,900	230	9,200	18,000	2,600	18,000	250/<5[6]					
MW-12	7/20/13	100.50	18.07	--	82.43	170,000	930	210	14,000	25,000	3,200	23,000	300/<10[6]					28.5
MW-12	9/28/13	100.50	18.86	0.19	81.79	--	--	--	--	--	--	--	--					
MW-12	12/7/13	100.50	19.40	0.07	81.16	--	--	--	--	--	--	--	--					
MW-12	3/15/14	100.50	18.58	0.31	82.17	--	--	--	--	--	--	--	--					
MW-12	6/22/14	100.50	17.70	0.02	82.82	--	--	--	--	--	--	--	--					
MW-12	9/20/14	100.50	19.08	0.72	82.00	--	--	--	--	--	--	--	--					
MW-12	12/27/14	100.50	17.82	0.04	82.71	--	--	--	--	--	--	--	--					
MW-12	11/15/15	100.50	18.65	1.43	82.99	--	--	--	--	--	--	--	--					
MW-13	2/19/90	99.01	--	--	--	ND	--	--	ND	45	78	176	--					
MW-13	4/12/91	99.01	--	--	--	3,100	--	--	5.9	13	79	140	--					
MW-13	6/28/91	99.01	--	--	--	2,300	--	--	30	6.9	100	120	--					
MW-13	9/18/91	99.01	--	--	--	3,700	--	--	14	6.9	50	94	--					
MW-13	12/3/91	99.01	--	--	--	2,500	--	--	26	5.6	110	85	--					
MW-13	2/25/92	99.01	--	--	--	2,400	--	--	27	ND	91	89	--					
MW-13	5/15/92	99.01	--	--	--	650	--	--	6.3	0.83	24	15	--					
MW-13	7/31/92	99.01	15.38	--	83.63	--	--	--	--	--	--	--	--					
MW-13	8/18/92	99.01	15.35	--	83.66	2,900	--	--	1.9	2.1	35	15	--					
MW-13	9/25/92	99.01	15.68	--	83.33	--	--	--	--	--	--	--	--					
MW-13	2/23/93	99.01	15.38	--	83.63	2,100	--	--	4.6	3.6	31	35	--					
MW-13	5/13/93	99.01	15.01	--	84.00	2,400	--	--	21	ND	160	140	--					
MW-13	8/18/93	99.01	14.92	--	84.09	1,800	--	--	3.5	1.9	25	20	--					
MW-13	11/10/93	99.01	15.45	--	83.56	1,700	--	--	7.8	2.0	14	21	--					
MW-13	2/3/94	99.01	15.27	--	83.74	2,300	--	--	4.7	4.2	47	53	--					
MW-13	4/26/94	99.01	14.75	--	84.26	3,100	--	--	15	5.2	73	45	--					
MW-13	7/20/94	99.01	15.23	--	83.78	3,200	--	--	5.3	6.4	140	88	--					
MW-13	10/18/94	99.01	16.17	--	82.84	4,600	--	--	8.3	8.9	160	64	--					
MW-13	2/1/95	99.01	15.86	--	83.15	4,900	--	--	26	17	120	120	--					
MW-13	7/12/95	99.01	15.45	--	83.56	2,800	--	--	20	3.6	98	23	--					
MW-13	1/4/96	99.01	15.01	--	84.00	4,700	--	--	36	7.9	170	82	--					
MW-13	1/7/97	99.01	14.25	--	84.76	474	--	--	ND	ND	ND	2.86	--					
MW-13	2/12/98	99.01	15.09	--	83.92	ND	--	--	ND	ND	ND	ND	--					
MW-13	5/31/99	99.01	15.27	--	83.74	ND	--	--	0.518	ND	ND	ND	--					
MW-13	6/8/00	99.01	15.89	--	83.12	--	--	--	--	--	--	--	--					
MW-13	1/30/01	99.01	16.41	--	82.60	4,060	--	--	12.2	5.29	88.2	53.9	--					
MW-13	4/11/01	99.01	16.44	--	82.57	4,630	--	--	7.09	3.32	116	87.0	--					
MW-13	7/28/01	99.01	16.49	--	82.52	4,580	--	--	8.08	5.39	99.6	72.2	--					
MW-13	10/15/01	99.01	16.77	--	82.24	4,120	--	--	4.74	2.88	38.0	37.3	--					
MW-13	1/5/02	99.01	15.66	--	83.35	4,620	--	--	3.40	3.68	61.2	34.3	--					
MW-13	4/2/02	99.01	15.33	--	83.68	4,000	--	--	<0.50	<1.0	26	7.2	<5.0					
MW-13	7/11/02	99.01	15.91	--	83.10	10,000	--	--	1.5	6.0	31	110	<2.5					
MW-13	10/10/02	99.01	16.48	--	82.53	4,600	--	--	2.8	9.9	15	110	<20					
MW-13	1/10/03	99.01	16.23	--	82.78	2,500	--	--	<5.0	0.73	0.75	2.2	<20					
MW-13	4/21/03	99.01	14.81	--	84.20	2,200	--	--	<5.0	1	1.6	<3.0	<10					
MW-13	6/26/03	99.01	15.20	0.02	83.83	--	--	--	--	--	--	--	--					
MW-13	10/14/03	99.01	16.12	--	82.89	2,300	--	--	2.1	<1.0	9.3	4.1	<10					
MW-13	1/7/04	99.01	15.22	--	83.79	2,300	--	--	<2.0	0.5	3.1	2.1	<5.0					
MW-13	4/21/04	99.01	14.88	--	84.13	2,100	--	--	2.5	1.8	48	25	<50					
MW-13	7/1/04	99.01	15.20	--	83.81	2,600	--	--	<5.0	1.4	28	14	<5.0					
MW-13	10/15/04	99.01	15.60	--	83.41	1,700	--	--	1.8	<1.0	7.9	<9.0	<10					
MW-13	1/5/05	99.01	15.27	--	83.74	1,600	--	--	<5.0	0.6	7.0	<3.0	<5.0					
MW-13	8/4/05	99.01	14.72	--	84.29	1,200	--	--	1.6	<0.5	1.7	<3.0	<2.5					
MW-13	7/26/06	99.01	13.90	--	85.11	54	--	--	1.8	<0.5	<0.5	<1.5	<2.5					
MW-13	7/19/07	99.01	13.30	--	85.71	93	--	--	1.9	<0.5	<0.5	<1.5	<10					
MW-13	7/23/08	99.01	14.71	--	84.30	100	--	--	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-13	7/13/09	99.01	12.67	--	86.34	<50	--	--	16	<0.5	<0.5	<1.5	<2.5					
MW-13	12/17-18/09	99.01	12.22	--	86.79	93	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-13	3/17/10	99.01	12.13	--	86.88	4,100	2,200	630	58	<10	5.7	15	4.3					
MW-13	06/22-23/10	99.01	12.27	--	86.74	23,000	700	<70	70	91	470	4,000	<25					
MW-13	9/13/10	99.01	15.57	--	83.44	4,400	2,000	<340	450	300	82	100	<13					
MW-13	12/21/10	99.01	15.77	--	83.24	3,900	910	270	290	55	69	68	34					
MW-13	6/16/11	99.01	15.43	--	83.58	4,900	2,000	<350	210	12	74	89	<50					
MW-13	9/23/11	99.01	16.25	--	82.76	4,500	730	<69	190	8.8	80	85	<50					
MW-13	1/14/12	99.01	16.55	--	82.46	4,300	1,700	140	160	8.2	78	60	38					
MW-13	3/31/12	99.01	15.90	--	83.11	4,500	4,300	89	200	8.5	100	80	36					
MW-13	6/2/12	99.01	15.60	--	83.41	4,200	3,300	240	140	7.8	110	83	33					
MW-13	9/30/12	99.01	16.54	--	82.47	3,400	500	96	110	8.3	96	84	19/<0.5[6]					
MW-13	12/15/12	99.01	16.20	--	82.81	14,000	17,000	380	100	8.5	99	100	17/<3[6]					
MW-13	3/16/13	99.01	16.06	--	82.95	9,000	2,100	<76	83	8.0	100	97	18/<3[6]					
MW-13	7/20/13	99.01	16.43	0.02	82.60	--	--	--	--	--	--	--	--					
MW-13	9/28/13	99.01	17.54	0.50	81.87	--	--	--	--	--	--	--	--					
MW-13	12/7/13	99.01	17.88	0.56	81.58	--	--	--	--	--	--	--	--					
MW-13	3/15/14	99.01	17.28	0.33	81.99	--	--	--	--	--	--	--	--					
MW-13	6/22/14	99.01	16.44	0.35	82.85	--	--	--	--	--	--	--	--					
MW-13	9/20/14	99.01	17.36	0.55	82.09	--	--	--	--	--	--	--	--					
MW-13	12/27/14	99.01	17.93	0.55	81.52	--	--	--	--	--	--	--	--					
MW-13	11/15/15	99.01	17.15	--	81.86	--	--	--	--	--	--	--	--					
MW-14	2/19/90	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-14	4/12/91	99.53	--	--	--	ND	--	--	7.2	13	75	130	--					
MW-14	6/28/91	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-14	9/18/91	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-14	12/3/91	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-14	2/25/92	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-14	5/15/92	99.53	--	--	--	ND	--	--	ND	ND	ND	ND	--					
MW-14	7/31/92	99.53	18.08	--	81.45	--	--	--	--	--	--	--	--					
MW-14	8/18/92	99.53	18.19	--	81.34	ND	--	--	ND	ND	ND	ND	--					
MW-14	9/25/92	99.53	18.10	--	81.43	--	--	--	--	--	--	--	--					
MW-14	2/23/93	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	5/12/93	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	8/18/93	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	11/10/93	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	2/3/94	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	4/26/94	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	7/20/94	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	10/18/94	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	2/1/95	99.53	18.72	--	80.81	--	--	--	--	--	--	--	--					
MW-14	7/12/95	99.53	18.54	--	80.99	ND	--	--	ND	ND	ND	ND	--					
MW-14	1/4/96	99.53	18.28	--	81.25	ND	--	--	ND	ND	ND	ND	--					
MW-14	1/7/97	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	2/12/98	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	5/31/99	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	6/8/00	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	1/30/01	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	4/11/01	99.53	18.75	--	80.78	<50.0	--	--	<0.500	<0.500	0.520	2.22	--					
MW-14	7/28/01	99.53	19.23	--	80.30	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--					
MW-14	10/15/01	99.53	19.45	--	80.08	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--					
MW-14	1/5/02	99.53	17.21	--	82.32	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--					
MW-14	4/2/02	99.53	16.63	--	82.90	--	--	--	--	--	--	--	--					
MW-14	7/11/02	99.53	18.52	--	81.01	--	--	--	--	--	--	--	--					
MW-14	10/10/02	99.53	18.96	--	80.57	--	--	--	--	--	--	--	--					
MW-14	1/10/03	99.53	18.55	--	80.98	--	--	--	--	--	--	--	--					
MW-14	4/21/03	99.53	17.13	--	82.40	--	--	--	--	--	--	--	--					
MW-14	6/26/03	99.53	17.52	--	82.01	--	--	--	--	--	--	--	--					
MW-14	10/14/03	99.53	18.42	--	81.11	--	--	--	--	--	--	--	--					
MW-14	1/7/04	99.53	17.51	--	82.02	--	--	--	--	--	--	--	--					
MW-14	4/21/04	99.53	17.11	--	82.42	--	--	--	--	--	--	--	--					
MW-14	7/1/04	99.53	17.50	--	82.03	--	--	--	--	--	--	--	--					
MW-14	10/15/04	99.53	17.53	--	82.00	--	--	--	--	--	--	--	--					
MW-14	1/5/05	99.53	17.41	--	82.12	--	--	--	--	--	--	--	--					
MW-14	8/4/05	99.53	17.12	--	82.41	--	--	--	--	--	--	--	--					
MW-14	7/26/06	99.53	17.00	--	82.53	--	--	--	--	--	--	--	--					
MW-14	7/19/07	99.53	16.98	--	82.55	--	--	--	--	--	--	--	--					
MW-14	7/23/08	99.53	16.56	--	82.97	--	--	--	--	--	--	--	--					
MW-14	7/13/09	99.53	15.57	--	83.96	--	--	--	--	--	--	--	--					
MW-14	12/17-18/09	99.53	15.56	--	83.97	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	3/17/10	99.53		--	--	--	--	--	--	--	--	--	--					
MW-14	06/22-23/10	99.53		--	--	--	--	--	--	--	--	--	--					
MW-14	9/13/10	99.53	17.79	--	81.74	<50	<29	130	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	12/21/10	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	6/16/11	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	9/23/11	99.53	18.55	--	80.98	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	1/14/12	99.53	18.90	--	80.63	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	3/31/12	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-14	6/2/12	99.53	18.20	--	81.33	3,700	79	<72	500	18	280	31	48					
MW-14	9/30/12	99.53	18.76	--	80.77	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	12/15/12	99.53	15.94	--	83.59	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	3/16/13	99.53	18.23	--	81.30	<50	<30	<69	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	7/21/13	99.53	15.23	--	84.30	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	9/28/13	99.53	15.80	--	83.73	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	12/7/13	99.53	15.91	--	83.62	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	3/15/14	99.53	16.11	--	83.42	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	6/22/14	99.53	12.32	--	87.21	<50	<15	<34	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	9/20/14	99.53	18.58	--	80.95	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	12/27/14	99.53	15.54	--	83.99	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-14	11/15/15	99.53	--	--	--	--	--	--	--	--	--	--	--					
MW-15	3/8/01	98.83	16.80	--	82.03	--	--	--	--	--	--	--	--					
MW-15	4/11/01	98.83	17.09	--	81.74	<50.0	--	--	0.714	<0.500	<0.500	<1.00	--					
MW-15	7/28/01	98.83	16.99	--	81.84	<50.0	--	--	0.655	<0.500	<0.500	<1.00	--					
MW-15	10/15/01	98.83	17.10	--	81.73	<50.0	--	--	0.589	<0.500	<0.500	<1.00	--					
MW-15	1/5/02	98.83	16.26	--	82.57	62.3	--	--	1.24	<0.500	<0.500	<1.00	--					
MW-15	4/2/02	98.83	15.70	--	83.13	--	--	--	--	--	--	--	--					
MW-15	7/11/02	98.83	16.06	--	82.77	--	--	--	--	--	--	--	--					
MW-15	10/10/02	98.83	16.46	--	82.37	--	--	--	--	--	--	--	--					
MW-15	1/10/03	98.83	16.14	--	82.69	--	--	--	--	--	--	--	--					
MW-15	4/21/03	98.83	15.63	--	83.20	--	--	--	--	--	--	--	--					
MW-15	6/26/03	98.83	16.07	--	82.76	--	--	--	--	--	--	--	--					
MW-15	10/14/03	98.83	16.11	--	82.72	--	--	--	--	--	--	--	--					
MW-15	1/7/04	98.83	15.23	--	83.60	--	--	--	--	--	--	--	--					
MW-15	4/21/04	98.83	15.60	--	83.23	--	--	--	--	--	--	--	--					
MW-15	7/1/04	98.83	16.04	--	82.79	--	--	--	--	--	--	--	--					
MW-15	10/15/04	98.83	16.09	--	82.74	--	--	--	--	--	--	--	--					
MW-15	1/5/05	98.83	15.92	--	82.91	--	--	--	--	--	--	--	--					
MW-15	8/4/05	98.83	15.59	--	83.24	--	--	--	--	--	--	--	--					
MW-15	7/26/06	98.83	15.46	--	83.37	--	--	--	--	--	--	--	--					
MW-15	7/19/07	98.83	16.30	--	82.53	--	--	--	--	--	--	--	--					
MW-15	7/23/08	98.83	16.38	--	82.45	--	--	--	--	--	--	--	--					
MW-15	7/13/09	98.83	15.35	--	83.48	--	--	--	--	--	--	--	--					
MW-15	12/17-18/09	98.83	15.58	--	83.25	<50	400	320	0.8	<0.5	<0.5	<1.5	5.6					
MW-15	3/17/10	98.83	15.25	--	83.58	<50	48	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	06/22-23/10	98.83	14.69	--	84.14	<50	42	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	9/13/10	98.83	16.54	--	82.29	<50	<29	91	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	12/21/10	98.83	16.58	--	82.25	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-15	6/16/11	98.83	16.66	--	82.17	<50	47	110	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	9/23/11	98.83	17.37	--	81.46	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	1/14/12	98.83	17.60	--	81.23	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	3/31/12	98.83	17.05	--	81.78	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	6/2/12	98.83	16.80	--	82.03	<50	<30	<70	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	9/30/12	98.83	17.58	--	81.25	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	12/15/12	98.83	16.95	--	81.88	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	3/16/13	98.83	16.85	--	81.98	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	7/21/13	98.83	17.16	--	81.67	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	9/28/13	98.83	13.83	--	85.00	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	12/7/13	98.83	17.68	--	81.15	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	3/15/14	98.83	17.41	--	81.42	<50	<29	<67	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	6/22/14	98.83	17.03	--	81.80	<50	<15	<34	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	9/20/14	98.83	17.50	--	81.33	<50	<29	<68	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	12/28/14	98.83	18.20	--	80.63	<50	<28	<66	<0.5	<0.5	<0.5	<1.5	<2.5					
MW-15	11/15/15	98.83	17.60	--	81.23	--	--	--	--	--	--	--	--					
MW-16	3/8/01	97.80	16.40	--	81.40	--	--	--	--	--	--	--	--					
MW-16	4/11/01	97.80	--	--	--	--	--	--	--	--	--	--	--					
MW-16	6/14/01	97.80	16.71	--	81.09	**2,950**	--	--	**52.7**	14.4	217	123	34.1/<5.00[6]					
MW-16	7/28/01	97.80	16.81	--	80.99	**1,620**	--	--	**46.5**	13.5	122	112	--/<5.0[6]					
MW-16	10/15/01	97.80	17.00	--	80.80	**3,380**	--	--	**111**	28.5	257	211	--/<0.500[6]					
MW-16	1/5/02	97.80	16.46	--	81.34	**3,300**	--	--	**109**	18.2	247	214	--/<5.00[6]					
MW-16	4/2/02	97.80	16.32	--	81.48	**3,900**	--	--	**97**	17	230	190	<2.5					
MW-16	7/11/02	97.80	16.50	--	81.30	**2,900**	--	--	**54**	12	160	120	<6.0					
MW-16	10/10/02	97.80	16.89	--	80.91	**2,500**	--	--	**55**	7.6	140	88	<20					
MW-16	1/10/03	97.80	16.84	--	80.96	**3,000**	--	--	**61**	8.2	140	92	<50					
MW-16	4/21/03	97.80	15.82	--	81.98	**2,500**	--	--	**57**	6.6	110	97	<5.0					
MW-16	6/26/03	97.80	16.11	--	81.69	**3,900**	--	--	**86**	10	180	160	<10					
MW-16	10/14/03	97.80	16.49	--	81.31	**3,800**	--	--	**60**	9.0	150	130	<10					
MW-16	1/7/04	97.80	--	--	--	--	--	--	--	--	--	--	--					
MW-16	4/21/04	97.80	15.81	--	81.99	**2,200**	--	--	**54**	9.9	110	120	<10					
MW-16	7/1/04	97.80	16.09	--	81.71	**3,900**	--	--	**92**	16	190	180	<10					
MW-16	10/15/04	97.80	16.11	--	81.69	**2,000**	--	--	**61**	7.1	120	100	<20					
MW-16	1/5/05	97.80	15.98	--	81.82	**2,300**	--	--	**65**	8.4	120	110	<10					
MW-16	8/4/05	97.80	15.81	--	81.99	**3,900**	--	--	**89**	17	220	200	<5.0					
MW-16	7/26/06	97.80	14.95	--	82.85	**9,100**	--	--	**19**	13	290	560	<50					
MW-16	7/19/07	97.80	14.28	--	83.52	140	--	--	2.0	0.5	1.5	3.8	<10					
MW-16	7/23/08	97.80	15.11	--	82.69	230	--	--	1.5	0.6	15	2.1	<2.5					
MW-16	7/13/09	97.80	13.50	--	84.30	490	--	--	1.9	0.8	2.3	10	<5.0					
MW-16	12/17-18/09	97.80	13.24	--	84.56	**6,600**	77	<71	**11**	8.5	200	320	<20					
MW-16	3/17/10	97.80	13.26	--	84.54	**2,100**	<140	390	**9.2**	5.2	41	77	13					
MW-16	06/22-23/10	97.80	13.15	--	84.65	**3,000**	91	<69	**53**	12	98	130	<20					
MW-16	9/13/10	97.80	15.50	--	82.30	**6,500**	380	170	**150**	48	260	120	<20					
MW-16	12/21/10	97.80	15.54	--	82.26	**6,000**	200	<71	**300**	68	350	95	**66**					
MW-16	6/16/11	97.80	15.34	--	82.46	**4,800**	230	180	**370**	57	350	70	<50					
MW-16	9/23/11	97.80	16.00	--	81.80	**4,400**	62	<71	**580**	80	390	120	**31**					
MW-16	1/14/12	97.80	16.25	--	81.55	**4,000**	32	<68	**500**	27	360	46	**53**					
MW-16	3/31/12	97.80	15.80	--	82.00	**3,300**	54	<70	**490**	21	310	33	**45**					
MW-16	6/2/12	97.80	16.45	--	81.35	**3,600**	56	<68	**530**	18	270	28	**46**					
MW-16	9/30/12	97.80	16.18	--	81.62	**2,800**	50	<70	**370**	14	310	42	39/<0.5[6]					
MW-16	12/15/12	97.80	15.98	--	81.82	**2,900**	60	<69	**330**	12	280	34	<39					
MW-16	3/16/13	97.80	15.77	--	82.03	**3,200**	57	<71	**290**	11	250	28	37/<3[6]					
MW-16	7/21/13	97.80	16.13	--	81.67	**3,000**	95	<67	**290**	10	250	25	32/<1[6]					
MW-16	9/28/13	97.80	16.60	--	81.20	**2,500**	31	<67	**230**	7.6	230	20	<29/<0.5[6]					
MW-16	12/7/13	97.80	16.83	--	80.97	**2,100**	--	--	**230**	6.4	210	16	<29					
MW-16	3/15/14	97.80	16.66	--	81.14	**1,200**	33	<67	**200**	4.8	150	11	<2.5					<0.085
MW-16	6/22/14	97.80	16.80	--	81.00	**1,300**	22	<33	**150**	4.5	110	8.5	<15/<0.5[6]					0.14
MW-16	9/20/14	97.80	16.40	--	81.40	**1,100**	31	<67	**160**	3.8	120	8.0	<18/<0.5[6]					0.00012
MW-16	12/28/14	97.80	17.70	--	80.10	**2,000**	49	<66	**170**	5.8	190	14	<24					1.7
MW-16	11/15/15	97.80	16.70	--	81.10	--	--	--	--	--	--	--	--					--
RW-1	7/21/13	--	19.11	--	--	**1,100**	<29	<68	**49**	220	23	110	2.8/<0.5[6]					
RW-1	9/28/13	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	12/7/13	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	3/15/14	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	6/22/14	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	9/20/14	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	12/27/14	--	--	--	--	--	--	--	--	--	--	--	--					
RW-1	11/15/15	--	--	--	--	--	--	--	--	--	--	--	--					
MW-17	12/26/2019	215.40	18.09	0.00	197.31	240	**610**	<360	3.7	<0.39	6.6	1.2 J	<0.44	<0.0020	**9.50**	3.70	**<0.22**	<2.7
MW-17	2/18/2020	215.40	17.15	0.00	198.25	**822**	**1930**	267	**9.92**	0.489 J	25.2	32.6	<0.102	<0.0024	4.05	**5.10**	<0.118	<1.9
MW-17	4/29/2020									Well abandoned to accommodate utility installation during construction								
MW-18	12/26/2019	215.95	18.70	0.00	197.25	<100	<66	<97	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	3.80	<0.85	**<0.22**	<2.7
MW-18	2/18/2020	215.95	17.84	0.00	198.11	38.5 BJ	<66	<83	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	2.94	<0.153	<0.118	<1.9
MW-18	4/29/2020	215.95	17.87	0.00	198.08	79.4 BJ	--	--	<0.0941	<0.278	<0.137	0.335	<0.101	<0.00636	3.90	<0.190	**<0.234**	<2.9
MW-18	09/03/2020	215.95	18.03	0.00	197.92	57.8 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	4.53	0.056	<0.100	<6.00
MW-18	12/09/2020	215.95	18.05	0.00	197.90	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	2.23	<0.0400	<0.100	<6.00
MW-18	03/03/2021	215.95	17.63	0.00	198.32	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	**5.42**	<0.0400	<0.100	<2.00
MW-18	06/16/2021	215.95	19.31	0.00	196.64	<100	--	--	0.0290 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	2.34	0.07	<0.100	<2.00
MW-19	12/26/2019	216.36	18.97	0.00	197.39	<100	<63	<93	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	<0.85	**<0.22**	<2.7
MW-19	2/18/2020	216.36	18.39	0.00	197.97	42.4 BJ	<66	114 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	<0.153	<0.118	<1.9
MW-19	4/29/2020	216.36	18.58	0.00	197.78	49 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	<0.190	**<0.234**	<2.9
MW-19	09/03/2020	216.36	18.58	0.00	197.78	51.2 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.138	<0.0400	<0.100	<6.00
MW-19	12/09/2020	216.36	18.05	0.00	198.31	34.5 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0830 J	<0.0400	<0.100	<6.00
MW-19	03/03/2021	216.36	16.69	0.00	199.67	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.131	<0.0400	<0.100	<2.00
MW-19	06/16/2021	216.36	21.14	0.00	195.22	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0750 J	<0.0400	<0.100	<2.00
MW-19	09/22/2021	216.36	20.21	0.00	196.15	<100 [84.2 J]	--	--	<0.0400 [<0.0400]	0.0750 J [0.0770 J]	0.0620 J [0.0610 J]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0690 J [0.122]	<0.0400 [<0.0400]	<0.100 [<0.100]	<2.00 [<2.00]
MW-19	12/14/2021	216.36	19.50	0.00	196.86	<31.6	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00568	0.12	<0.0160	<0.0273	1.75 B J
MW-19	03/31/2022	216.36	19.59	0.00	196.77	68.0 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00557	0.240 C5	<0.0160	<0.0273	<0.849
MW-19	06/13/2022	216.36	19.40	0.00	196.96	51.6 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00574	0.172	<0.0160	<0.0273	<0.849

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-19	08/18/2022	216.50	19.25	0.00	197.25	<31.6	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.0210	0.182	<0.0160	<0.0273	<0.849
MW-20	12/26/2019	215.87	18.46	0.00	197.41	<100	<60	<89	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	100	20	**<0.22**	<2.7
MW-20	2/18/2020	215.87	17.51	0.00	198.36	62.3 BJ	<66	95.2 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	52	21.6	<0.118	<1.9
MW-20	4/29/2020	215.87	17.54	0.00	198.33	76.4 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	107	13.7	**<0.234**	<2.9
MW-20	09/03/2020	215.87	17.76	0.00	198.11	100 BJ	--	--	0.0280 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	116	7.19	<0.100	<6.00
MW-20	12/09/2020	215.87	18.74	0.00	197.13	71.0 BJ	--	--	0.0280 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	138	9.47	<0.100	<6.00
MW-20	03/03/2021	215.87	15.49	0.00	200.38	82.3 BJ	--	--	0.0210 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	135	12.9	<0.100	<2.00
MW-20	06/16/2021	215.87	18.73	0.00	197.14	42.8 J	--	--	0.0300 J	<0.200	<0.100	<0.260	<0.0400	<0.0200	142	7.36	<0.100	<2.00
MW-20	09/22/2021	215.87	19.05	0.00	196.82	49.8 J	--	--	0.0240 J	0.0760 J	<0.100	<0.260	<0.0400	<0.0200	133 E	6.66	<0.100	<2.00
MW-20	12/14/2021	215.87	18.37	0.00	197.50	110 B	--	--	0.0240 J	<0.0500	<0.0212	<0.191	<0.0118	<0.00536	137	15.4	<0.0273	<0.849
MW-20	03/31/2022	215.87	18.21	0.00	197.66	104 B [102 B]	-- [--]	-- [--]	0.0210 J [<0.0160]	<0.0500 [<0.0500]	<0.0212 [<0.0212]	<0.191 [<0.191]	<0.0118 [<0.0118]	<0.00536 [<0.00552]	117 [128]	15.3 [15.2]	<0.0273 [<0.0273]	<0.849 [<0.849]
MW-20	06/13/2022	215.87	18.11	0.00	197.76	111 B	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00536	125	13.3	<0.0273	<0.849
MW-20	08/18/2022	216.01	19.40	0.00	196.61	<31.6	--	--	<0.0800	<0.250	<0.106	<0.955	<0.0590	<0.105	0.275 J	<0.0800	<0.137	<0.849
MW-21	12/26/2019	213.89	17.32	0.00	196.57	<100	<64	<95	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	<0.85	**<0.22**	<2.7
MW-21	2/18/2020	213.89	16.42	0.00	197.47	<31.6	<66	114 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	<0.153	<0.118	<1.9
MW-21	4/29/2020	213.89	16.52	0.00	197.37	37.0 BJ	--	--	<0.0941	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	<0.190	**<0.234**	<2.9
MW-21	09/02/2020	213.89	16.02	0.00	197.87	68.2 BJ [47.2 BJ]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.124 [0.12]	0.093 [0.078]	<0.100 [<0.100]	<6.00 [<6.00]
MW-21	12/08/2020	213.89	16.39	0.00	197.50	<100 [<100]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0420 J [0.0464 J]	<0.0400 [<0.0400]	<0.100 [<0.100]	<6.00 [<6.00]
MW-21	03/03/2021	213.89	15.49	0.00	198.40	<100 [47.3 BJ]	--	--	<0.0400 [<0.0400]	<0.200 [<0.200]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0420 J [0.0510 J]	0.0400 J [0.0390 J]	<0.100 [<0.100]	<2.00 [<2.00]
MW-21	06/17/2021	213.89	16.51	0.00	197.38	36.1 BJ [115 B]	--	--	<0.0400 [<0.0400]	0.0550 J [0.0670 J]	<0.100 [<0.100]	<0.260 [<0.260]	<0.0400 [<0.0400]	<0.0200 [<0.0200]	0.0730 J [0.0610 J]	0.0310 J [0.0340 J]	<0.100 [<0.100]	<2.00 [<2.00]
MW-21	09/22/2021	213.89	17.23	0.00	196.66	<100	--	--	<0.0400	0.127 J	0.0560 J	0.226 J	<0.0400	<0.0200	<0.100	0.0320 J	<0.100	<2.00
MW-21	12/14/2021	213.89	16.86	0.00	197.03	48.6 BJ	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00563	0.128	0.712	<0.0273	<0.849
MW-21	03/31/2022	213.89	16.31	0.00	197.58	54.7 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.00547	<0.0280	<0.0160	<0.0273	<0.849
MW-21	06/13/2022	213.89	16.31	0.00	197.58	51.5 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118 C3	<0.00563	<0.0280	<0.0160	<0.0273	<0.849
MW-21	08/18/2022	214.00	16.58	0.00	197.42	32.9 B J	--	--	<0.0160	<0.0500	<0.0212	<0.191	<0.0118	<0.0210	<0.0280	<0.0160	<0.0273	<0.849
MW-22	12/26/2019	212.93	16.80	0.00	196.13	<100	73 J	<91	10	<0.39	<0.50	<0.75	<0.44	<0.0020	1.1 J	410	6.4	<2.7
MW-22	2/18/2020	212.93	16.22	0.00	196.71	536	92.2 J	110 J	9.33	<0.412	<0.158	<0.316	<0.102	<0.0024	1.11	447	5.13	1.98 J
MW-22	4/29/2020	212.93	16.25	0.00	196.68	549 B	--	--	8.3	<0.278	<0.137	<0.174	<0.101	<0.00536	<3.00	384	5.00	<2.9
MW-22	09/02/2020	212.93	16.12	0.00	196.81	412 B	--	--	3.2	<0.200	<0.100	<2.60	<0.400	<0.0200	1.99	233	1.57	<6.00
MW-22	12/07/2020	212.93	16.07	0.00	196.86	188 B	--	--	2.24	<0.200	<0.100	<2.60	<0.400	<0.0200	2.29	158	1.00	<6.00
MW-22	03/03/2021	212.93	15.40	0.00	197.53	127 B	--	--	2.66	<0.200	<0.100	<2.60	<0.400	<0.0200	1.54	168	1.23	<2.00
MW-22	06/17/2021	212.93	16.18	0.00	196.75	440	--	--	6.39	<2.00	<1.00	<2.60	<0.400	<0.0200	0.430 J	306	2.94	<2.00
MW-22	09/22/2021	212.93	16.50	0.00	196.43	570	--	--	5.75	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	421	7.22	<2.00
MW-22	12/14/2021	212.93	16.87	0.00	196.06	673 B	--	--	6.98	0.560 J	<0.212	<1.91	0.53	<0.00547	0.800 J	482	7.5	<0.849
MW-22	12/14/2021	212.93	--	--	--	832 B	--	--	7.17	0.0860 J	<0.0212	<0.191	<0.0118	<0.00536	1.05	547	9.57	<0.849
MW-22	03/31/2022	212.93	16.11	0.00	196.82	533 B	--	--	5.10	<0.500	<0.212	<1.91	<0.118	<0.00547	0.510 J	356	5.09	<0.849
MW-22	06/13/2022	212.93	16.23	0.00	196.70	555 B	--	--	5.37	<0.500	<0.212	<1.91	<0.118 C3	<0.00541	0.510 J	296	2.99	<0.849
MW-22	08/18/2022	213.09	16.30	0.00	196.79	555 [409]	--	--	5.92 [<1.60]	<0.500 [<5.00]	<0.212 [<2.12]	<1.91 [<19.1]	<0.118 [<1.18]	<0.0210 [<0.00547]	0.690 J [<2.80]	352 [304]	4.70 [<2.73]	<0.849 [<0.849]
MW-23	12/26/2019	211.72	16.15	0.00	195.57	<100	<66	<98	16	<0.39	<0.50	<0.75	<0.44	<0.0020	<0.41	130	22	<2.7
MW-23	2/18/2020	211.72	15.82	0.00	195.90	246	67.2 J	159 J	8.69	<0.412	<0.158	<0.316	<0.102	<0.0024	<0.199	59.8	7.85	<1.9
MW-23	4/29/2020	211.72	15.69	0.00	196.03	148	--	--	4.1 J	<0.278	<0.137	<0.174	<0.101	<0.00536	<0.300	14.0	4.24 J	4.59 J
MW-23	09/02/2020	211.72	15.69	0.00	196.03	626	--	--	6.95	<2.00	<1.00	<2.60	<0.400	<0.0200	0.360 J	12.8	8.2	<6.00
MW-23	12/07/2020	211.72	15.54	0.00	196.18	209 B	--	--	5.92	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	6.68	5.48	<6.00
MW-23	03/02/2021	211.72	14.95	0.00	196.77	103 B	--	--	4.28	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	7.45	5.02	<2.00
MW-23	09/22/2021	211.72	15.82	0.00	195.90	334	--	--	4.2	<2.00	<1.00	<2.60	<0.400	<0.0200	<1.00	28.9	9.08	<2.00
MW-23	12/14/2021	211.72	15.44	0.00	196.28	353 B	--	--	5.75	<0.500	<0.212	<1.91	<0.118	<0.00547	<0.280	205	7.81	1.88 BJ
MW-23	03/31/2022	211.72	15.90	0.00	195.82	261 B	--	--	2.90	<0.500	<0.212	<1.91	<0.118	<0.00547	<0.280	74.2	4.87	<0.849
MW-23	06/13/2022	211.72	15.52	0.00	196.20	382 B	--	--	4.05	<0.500	<0.212	<1.91	<0.118	<0.00536	<0.280	43.2	3.75 C3	<0.849
MW-23	08/18/2022	211.90	15.90	0.00	196.00	296 B	--	--	5.59	<0.500	<0.212	<1.91	<0.118	<0.0210	<0.280	34.4	11.4	<0.849
MW-25	12/26/2019	212.81	16.62	0.00	196.19	210 J	110 J	<100	53	3.4	7	2.8 J	<0.44	<0.0020	16	600	180	<2.7
MW-25	2/18/2020	212.81	15.98	0.00	196.83	1,500	107 J	122 J	42.2	2.82	2.1	1.58	<0.102	<0.0024	4.49	530	92.7	<1.9
MW-25	5/5/2020	212.81	16.03	0.00	196.78	1,630	--	--	28.10	<5.56	<2.74	<3.48	<2.02	<0.00536	22.8	496	53.7	<2.9
MW-25	09/02/2020	212.81	16.04	0.00	196.77	1,810	--	--	24.1	1.54 J	1.26 J	<5.20	<0.800	<0.0200	15.6	695	47.3	<6.00
MW-25	12/08/2020	212.81	16.05	0.00	196.76	1,480	--	--	21.1	<4.00	0.860 J	<5.20	<0.800	<0.0200	29.2	837	27.7	<6.00
MW-25	03/02/2021	212.81	15.21	0.00	197.60	620	--	--	13.5	<4.00	<2.00	<5.20	<0.800	<0.0200	27.8	570	27.4	<2.00
MW-25	06/16/2021	212.81	16.01	0.00	196.80	218	--	--	2.52	<4.00	<2.00	<5.20	<0.800	<0.0200	50.1	225	3.54	<2.00
MW-25	12/14/2021	212.81	16.11	0.00	196.70	1,700	--	--	20.2	<1.00	<0.424	<3.82	<0.236	<0.00552	<0.560	366	62	1.71 BJ
MW-25	03/31/2022	212.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	08/18/2022	212.97	16.10	0.00	196.87	638	--	--	48.4	0.633	0.146	<0.191	<0.0118	<0.0210	6.30	147	55.4	<0.849
MW-27	12/26/2019	214.43	17.32	0.00	197.11	3,600	5,300	190 J	6.5	2.0	140	38	<0.44	<0.0020	0.53 J	830	18	<2.7
MW-27	2/18/2020	214.43	16.46	0.00	197.97	3,860	7,010	172 J	7.9	<10.3	116	30.3	<0.102	<0.0024	<4.98	1,050	11.4	<1.9
MW-27	4/29/2020	214.43	16.64	0.00	197.79	3,320	--	--	4.95	<6.95	<3.43	<4.35	<2.53	<0.00536	<7.5	1,170	12.6	<2.9
MW-27	09/02/2020	214.43	16.77	0.00	197.66	2,470	--	--	4.00	<5.00	131	8.45	<1.00	<0.0200	2.50	346	5.7	<6.00
MW-27	12/08/2020	214.43	16.78	0.00	197.65	2,550	--	--	2.53	<5.00	64.8	6.50	<1.00	<0.0200	3.9	638	9.85	<6.00
MW-27	03/02/2021	214.43	15.83	0.00	198.60	2,120	--	--	1.55	<5.00	38.6	9.15	<1.00	<0.0200	2.50	281	3.53	<2.00
MW-27	06/17/2021	214.43	17.27	0.00	197.16	2,580	--	--	2.3	<5.00	51.1	<6.50	<1.00	<0.0200	<2.50	748	7.72	<2.00
MW-27	09/22/2021	214.43	17.69	0.00	196.74	1,460	--	--	2.02	<5.00	45.9	<6.50	<1.00	<0.0200	<2.50	455	7.12	<2.00
MW-27	12/14/2021	214.43	17.14	0.00	197.29	2,100	--	--	1.78	<1.25	30.3	<4.78	<0.295	<0.00536	<0.700	534	5.98	4.58 B
MW-27	03/31/2022	214.43	16.93	0.00	197.50	2,030	--	--	2.65	<1.25	14.0	<4.78	<0.295	<0.00536	<0.700	1,110	16.3	<0.849
MW-27	06/13/2022	214.43	16.82	0.00	197.61	2,160 [2,240]	--	--	2.05 [2.02]	1.43 J [0.380]	9.40 [9.87]	<4.78 [1.08]	<0.295 [<0.0118]	<0.00536 [<0.00584]	<0.700 [0.166]	762 [842]	7.57 C3 [9.29 C3]	<0.849 [<0.849]
MW-27	08/18/2022	214.53	16.25	0.00	198.28	2,140	--	--	7.90	1.93 J	152	15.9	<0.295	<0.525	324	1,010	<0.682	<0.849
MW-28	12/26/2019	214.44	17.30	0.00	197.14	2,800	2,200	160 J	8.10	1.1 J	170	38	<0.44	<0.0020	410	1,800	12	<2.7
MW-28	2/18/2020	214.44	16.40	0.00	198.04	3,960	3,020	152 J	14.6	2.820	295	153	<0.102	<0.0024	64.30	158	2.17	<1.9
MW-28	4/29/2020	214.44	16.57	0.00	197.87	3,670	--	--	10.4	<1.39	224	58.3	<0.505	<0.00536	238	713	4.01	3.05 J
MW-28	09/02/2020	214.44	16.69	0.00	197.75	2,830	--	--	13.5	1.88	259	48.8	<0.200	<0.0200	212	325	2.62	<6.00
MW-28	12/08/2020	214.44	16.78	0.00	197.66	3,350	--	--	7.97	1.27	166	35.8	<0.200	<0.0200	301	638	0.50	<6.00
MW-28	03/02/2021	214.44	15.80	0.00	198.64	2,470	--	--	5.52	1.02	137	24.9	<0.200	<0.0200	298	902	2.58	<2.00
MW-28	06/17/2021	214.44	17.27	0.00	197.17	3,680	--	--	14.6	3.45 J	195	26.3	<2.00	<0.0200	348	615	<5.00	<2.00
MW-28	09/22/2021	214.44	17.70	0.00	196.74	4,400	--	--	17.3	3.98 J	284	19.9	<0.800	<0.0200	136	449	4.36	<2.00
MW-28	12/14/2021	214.44	17.19	0.00	197.25	3,540	--	--	5.78	1.86 J	136	14.3	<0.236	<0.00536	75.3	571	<0.546	3.13 B
MW-28	03/31/2022	214.44	16.95	0.00	197.49	2,590	--	--	4.80	1.26 J	133	15.6	<0.236	<0.00536	261 C5	1,120	2.22	<0.849
MW-28	06/13/2022	214.44	16.83	0.00	197.61	2,460	--	--	4.54	1.42 J	96.5	13.0	<0.236	<0.00541	97.6	623	<0.546 C3	<0.849
MW-28	08/18/2022	214.58	17.03	0.00	197.55	2,100	--	--	6.12	1.64 J	129	10.4	<0.236	<0.420	309	1,030	2.94	<0.849
MW-29	12/26/2019	217.26	19.63	0.00	197.63	<100	<76	<110	<0.53	<0.39	<0.50	<0.75	<0.44	<0.0200	<0.41	<0.85	**<0.22**	<2.7
MW-29	2/18/2020	217.26	19.55	0.00	197.71	95.4 BJ	<66	155 J	<0.089	<0.412	<0.158	<0.316	<0.102	<0.0200	<0.199	<0.153	<0.118	<1.9
MW-29	4/29/2020	217.26	19.62	0.00	197.64	92.5 BJ	--	--	<0.941	<0.278	<0.137	<0.174	<0.101	<0.0200	<0.300	0.216	**<0.234**	<2.9
MW-29	09/03/2020	217.26	20.22	0.00	197.04	46.6 BJ	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	0.0440 J	<0.0400	<0.100	<6.00

Table 2. Groundwater Gauging Data and Select Analytical Results
Chevron Service Station No. 90129
4700 Brooklyn Avenue Northeast
Seattle, Washington

Well	Date	TOC	DTW	NAPL	GWE	GRO	DRO	HO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	PCE	TCE	Vinyl Chloride	Total Lead
		MTCA Method A CULs				800/1,000	500	500	5	1,000	700	1,000	20	0.01	5.00	5.00	0.20	15
MW-29	12/09/2020	217.26	19.61	0.00	197.65	<100	--	--	<0.0400	<0.200	<0.100	<0.260	<0.0400	<0.0200	<0.100	<0.0400	<0.100	<6.00
MW-29											Well decommissioned							
MW-30	08/18/2022	210.23	15.35	0.00	194.88	43.1 B J	--	--	0.0220 J	0.0810 J	<0.0212	<0.191	<0.0118	<0.0210	2.24	0.172	0.996	<0.849
MW-31	06/13/2022	212.21	15.74	0.00	196.47	594	--	--	**37.7**	0.300	0.0450 J	<0.191	<0.0118	<0.00536	0.0760 J	**60.8**	**32.0 C3**	<0.849
MW-31	08/18/2022	212.21	15.72	0.00	196.49	599	--	--	**40.3**	<1.00	0.700 J	<3.82	<0.236	<0.420	**9.28**	**213**	**41.0**	<0.849

Notes:
800/1,000 = GRO MTCA Method A CUL with benzene present is 800 µg/L and without is 1,000 µg/L
BOLD and highlighted values are greater than their respective MTCA Method A cleanup level
BOLD values are non-detect below the laboratory method detection limit (MDL), but the MDL is greater than the MTCA Method A cleanup level
Results reported in micrograms per liter (µg/L)
Well TOC for 08/18/2022 used as per the updated survey on 06/05/2022
EDB result for 08/18/2022 as per U.S. Environmental Protection Agency (EPA) method 8260D.

Abbreviations:
TOC = Top of Casing
DTW = Depth to water in feet below TOC
GWE = Groundwater elevation in feet relative to NAVD88
-- = Not applicable, not available, or not analyzed
MTCA = Model Toxics Control Act Cleanup
CUL = Cleanup Level
PCE = Tetrachloroethene
TCE = Trichloroethene
EDB = 1,2-Dibromoethane (Ethylene dibromide)
MTBE = Methyl tertiary butyl ether
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
HO = Heavy Oil Range Organics
EPA = U.S. Environmental Protection Agency

Laboratory Qualifiers:
< = Not detected at or above the Repored Detection Limit (RDL) for data prior to 12/2021 and not detected at or above the Method Detection Limit (MDL) for subsequent data
J = Estimated value; result is greater than the laboratory Method Detection Limit (MDL) but less than the Reported Detection Limit (RDL) or Reporting Limit (RL) or Limit of Quantification (LOQ)
B = The same analyte is found in the associated blank
C3 = The reported concentration is an estimate. The continuing calibration standard associated with this data responded low.Method sensitivity check is acceptable.
C5 = The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.

QA/QC: AL 7/28/2022

Location ID	Sample Date	Sample Location	APH EC5-8 Aliphatics (µg/m^3)	APH EC9-12 Aliphatics (µg/m^3)	APH EC9-10 Aromatics (µg/m^3)	Total Petroleum Hydrocarbons	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethylbenzene (µg/m^3)	m,p-Xylenes (µg/m^3)	o-Xylene (µg/m^3)	Total Xylenes (µg/m^3)	Naphthalene (µg/m^3)	Oxygen (%)	Methane (%)	Carbon Dioxide (%)
MTCA Method B Sub-Slab Soil Vapor Screening Level (µg/m^3)[3]						**1,500**	**10.6**	**76,190**	**15,238**	**--**	**--**	**1,524**	**2.45**	**--**	**--**	**--**
Site-Specific TPH Sub-Slab Soil Gas Screening Level						**6,957**										
SVP-1 [DUP-1]	6/3/2022	Sidewalk of NE 47th Street	410 [<340]	380 [300]	<110 [<110]	845 [525]	<1.4 [<1.5]	<81 [<87]	<1.9 [<2]	<3.7 [<4]	<1.9 [<2]	--	<1.1 [<1.2]	26.7 [28.1]	<0.114 [<0.114]	2.97 [2.72]
SVP-1 [DUP-1]	2/14/2023	Sidewalk of NE 47th Street	<400 [<400]	<130 [<130]	<130 [<130]	<330 [<330]	<1.7 [<1.7]	<100 [<100]	<2.3 [<2.3]	<4.6 [<4.7]	<2.3 [<2.3]	--	<1.4 [<1.4]	24.3 [23.1]	<0.107 [<0.0945]	<0.107 [<0.0945]
SVP-3	6/3/2022	Sidewalk of University Avenue	730	1100	<110	1,885	<1.4	<85	<2	<3.9	<2	--	<1.2	30.7	<0.114	3.39
SVP-3	2/14/2023	Sidewalk of University Avenue	<380	<130	<130	<320	<1.6	<96	<2.2	<4.4	<2.2	--	<1.3	23.2	<0.0975	1.07
EB-1	6/3/2022	Equipment Blank	<340	380	<110	605	<1.4	<85	<2	<3.9	<2	--	<1.2	4.86	<0.107	<0.107
EB-1	2/14/2023	Equipment Blank	<370	<120	<120	<305	<1.6	<92	<2.1	<4.3	<2.1	--	<1.3	2.65	<0.0920	<0.0920

Notes:
1. Analytical concentrations are in micrograms per cubic meter.
2. The sum of EC5-8 aliphatics, EC9-12 aliphatics, and EC9-10 aromatics is compared to the Generic Sub-Slab Soil Gas Screening Level provided in Implementation Memorandum
No. 18 (Washington State Department of Ecology [Ecology] 2018). When a fraction is reported as nondetect, a value of one-half the detection limit is assumed for the purpose of
3. Ecology allows for sub-slab soil vapor concentrations to be adjusted by using a generic indoor air attenuation factor (0.03) to create a site-specific cleanup level for soil vapor
3. **Bold** indicates the analyte detection exceeded MTCA Method B sub-slab soil gas screening levels, but did not exceed the site-specific cleanup level (CUL) for calculated for TPH in indoor air.
4. A site-specific CUL for TPH in indoor air was calculated in accordance with calculated in accordance with Ecology's 2022 Vapor Intrusion Guidance (Ecology 2022). The calculation of this CUL is presented in Table 4.

Acronyms and Abbreviations:
-- = Not available
< = Analyte was not detected at the indicated reporting limit
µg/m^3 = micrograms per cubic meter
% = percent

DUP = Duplicate sample
MTCA = Model Toxics Control Act

Reference:
Ecology. 2018. Ecology Implementation Memorandum No. 18, Draft Petroleum Vapor Intrusion (VI): Updated Screening Levels, Cleanup Levels, and Sampling Considerations. August 7.
Ecology. 2022. Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Actions. March.

Table 4. Site Specific Cleanup Levels for TPH
90129 4700 Brooklyn
Seattle, Washington

Calculating Site Specific Cleanup Levels for TPH In Indoor Air and Soil Vapor

As discussed in Washington State Department of Ecology's 2022 Vapor Intrusion Guidance

	Input results from highest soil vapor sample on site	Calculated Indoor Air Concentration (AF = 0.03)	Auto Calculated	From CLARC (confirm prior to use)	Auto Calculated
Petroleum Fraction or Compound	Measured Concentration Site - Specific Sample ($\mu g/m^3$)	Calculated Concentration Site - Specific Sample ($\mu g/m^3$)	Fraction of Total Concentration (F_i)	MTCA Method B Non-carcinogenic CUL ($\mu g/m^3$)	Fi / CULi
Aliphatics EC>5-8	730	21.9	0.38	2.72E+03	1.38E-04
Aliphatics EC>9-12	1110	33.3	0.57	1.36E+02	4.20E-03
Aromatics EC>9-10	55	1.65	0.03	1.82E+02	1.55E-04
Benzene[1]	0.8	0.024	0.00	1.37E+01	3.00E-05
Toluene[1]	43	1.29	0.02	2.24E+03	9.88E-06
Ethylbenzene[1]	1	0.03	0.00	4.58E+02	1.12E-06
Xylenes	3	0.09	0.00	4.64E+01	3.33E-05
Naphthalene[1]	0.6	0.018	0.00	1.38E+00	2.24E-04
TOTAL TPH	**1943.4**	**58.302**		**SITE-SPECIFIC TPH SOIL VAPOR CLEANUP LEVEL**	**6,957**

This value can be compared to Ecology's generic indoor air cleanup level of 46 $\mu g/m^3$. If it is <46 $\mu g/m^3$, a site specific cleanup level does not need to be calculated.

Additionally, compounds with a carcinogenic cleanup level must be lower than the MTCA Method B Carcinogenic CUL

Compound with carcinogenic CUL	Measured Concentration - Linked ($\mu g/m^3$)	MTCA Method B Carcinogenic CUL ($\mu g/m^3$)
Benzene	0.024	3.21E-01
Naphthalene	0.018	7.35E-02

[1]Compound was not detected in soil vapor samples collected. Half the laboratory reporting limit was used for calculation.

Figures

SOURCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., SEATTLE NORTH, WA 2017.

N

AREA LOCATION

WASHINGTON

0 2,000' 4,000'

APPROXIMATE SCALE : 1 in. = 2,000 ft.

FORMER CHEVRON FACILITY #90129
4700 BROOKLYN AVENUE NE
SEATTLE, WA 98105

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

LEGEND:

APPROXIMATE PROPERTY BOUNDARY

N

0 100' 200'

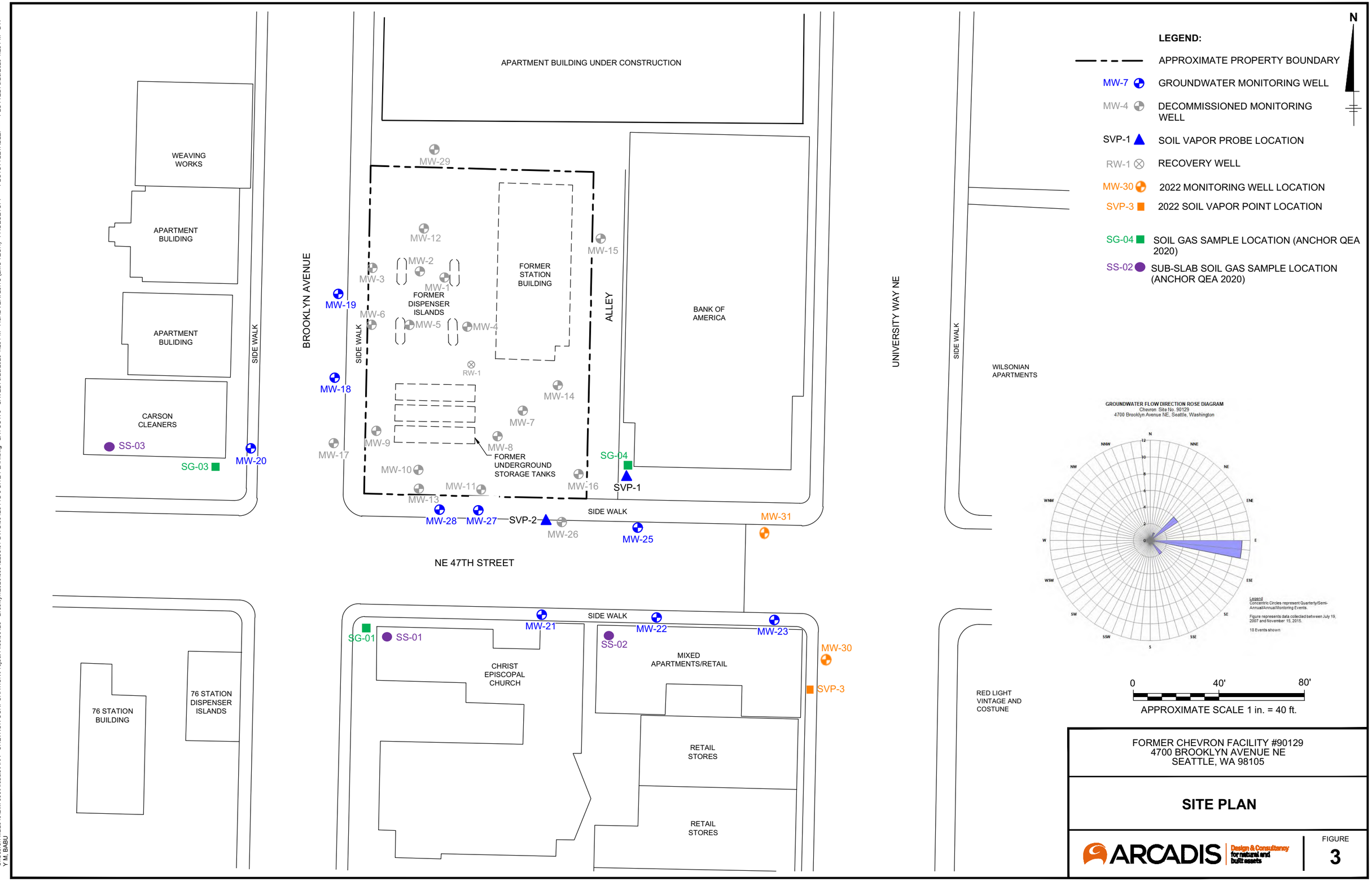
APPROXIMATE SCALE 1 in. = 100 ft.

FORMER CHEVRON FACILITY #90129
4700 BROOKLYN AVENUE NE
SEATTLE, WA 98105

AERIAL MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

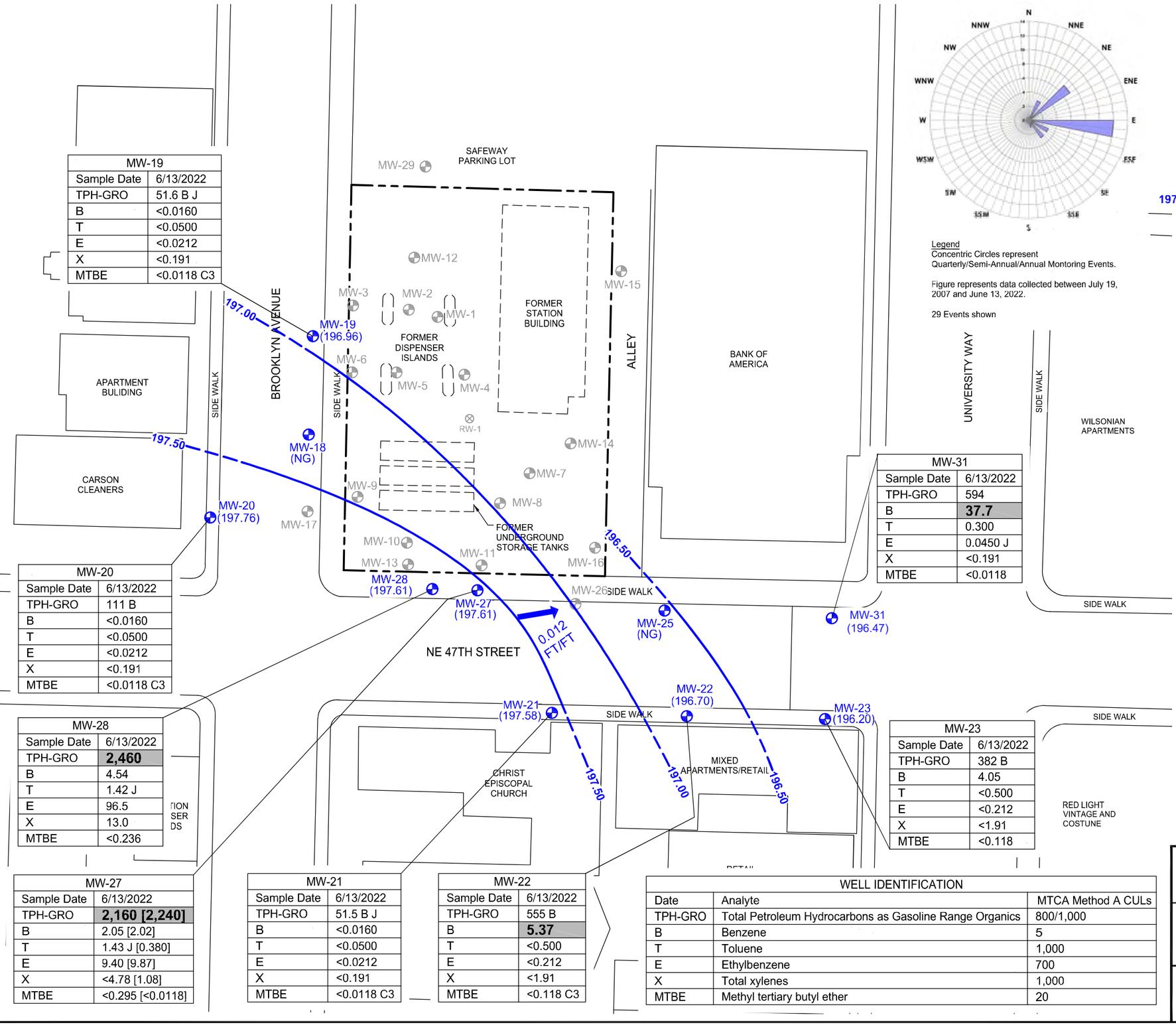


FORMER CHEVRON FACILITY #90129
4700 BROOKLYN AVENUE NE
SEATTLE, WA 98105

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3



MW-20	
Sample Date	6/13/2022
TPH-GRO	111 B
B	<0.0160
T	<0.0500
E	<0.0212
X	<0.191
MTBE	<0.0118 C3

MW-28	
Sample Date	6/13/2022
TPH-GRO	**2,460**
B	4.54
T	1.42 J
E	96.5
X	13.0
MTBE	<0.236

MW-27	
Sample Date	6/13/2022
TPH-GRO	**2,160 [2,240]**
B	2.05 [2.02]
T	1.43 J [0.380]
E	9.40 [9.87]
X	<4.78 [1.08]
MTBE	<0.295 [<0.0118]

MW-21	
Sample Date	6/13/2022
TPH-GRO	51.5 B J
B	<0.0160
T	<0.0500
E	<0.0212
X	<0.191
MTBE	<0.0118 C3

MW-22	
Sample Date	6/13/2022
TPH-GRO	555 B
B	**5.37**
T	<0.500
E	<0.212
X	<1.91
MTBE	<0.118 C3

MW-23	
Sample Date	6/13/2022
TPH-GRO	382 B
B	4.05
T	<0.500
E	<0.212
X	<1.91
MTBE	<0.118

MW-31	
Sample Date	6/13/2022
TPH-GRO	594
B	**37.7**
T	0.300
E	0.0450 J
X	<0.191
MTBE	<0.0118

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

Figure represents data collected between July 19, 2007 and June 13, 2022.

29 Events shown

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- MW-7 — GROUNDWATER MONITORING WELL
- MW-4 — DECOMMISSIONED MONITORING WELL
- RW-1 — RECOVERY WELL
- (197.66) — GROUNDWATER ELEVATION (FEET)
- 197.50 — GROUNDWATER ELEVATION CONTOUR (FEET)
- GROUNDWATER FLOW DIRECTION
- 0.012 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET PER FOOT)
- (NG) — NOT GAUGED
- * — WEL NOT USED FOR CONTOURING
- **BOLD** — VALUES ARE GREATER THAN THEIR RESPECTIVE MTCA METHOD A CULs
- <1.25 — NOT DETECTED AT OR ABOVE THE LABORATORY METHOD DETECTION LIMIT (MDL)
- B — THE SAME ANALYTE IS FOUND IN THE ASSOCIATED BLANK
- J — ESTIMATED VALUE; RESULT IS ≥ THE MDL AND < THE REPORTED DETECTION LIMIT
- [ ] — DUPLICATE SAMPLE RESULTS
- C3 — THE REPORTED CONCENTRATION IS AN ESTIMATE. THE CONTINUING CALIBRATION STANDARD ASSOCIATED WITH THIS DATA RESPONDED LOW. METHOD SENSITIVITY CHECK IS ACCEPTABLE
- MTCA — METHOD TOXICS CONTROL ACT CLEANUP
- CULs — CLEANUP LEAVELS

NOTE:
ALL VALUES REPORTED IN MICROGRAMS PER LITER (µg/L)

0 40' 80'

APPROXIMATE SCALE 1 in. = 40 ft.

WELL IDENTIFICATION		
Date	Analyte	MTCA Method A CULs
TPH-GRO	Total Petroleum Hydrocarbons as Gasoline Range Organics	800/1,000
B	Benzene	5
T	Toluene	1,000
E	Ethylbenzene	700
X	Total xylenes	1,000
MTBE	Methyl tertiary butyl ether	20

FORMER CHEVRON FACILITY #90129
4700 BROOKLYN AVENUE NE
SEATTLE, WA 98105

GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL MAP JUNE 13, 2022

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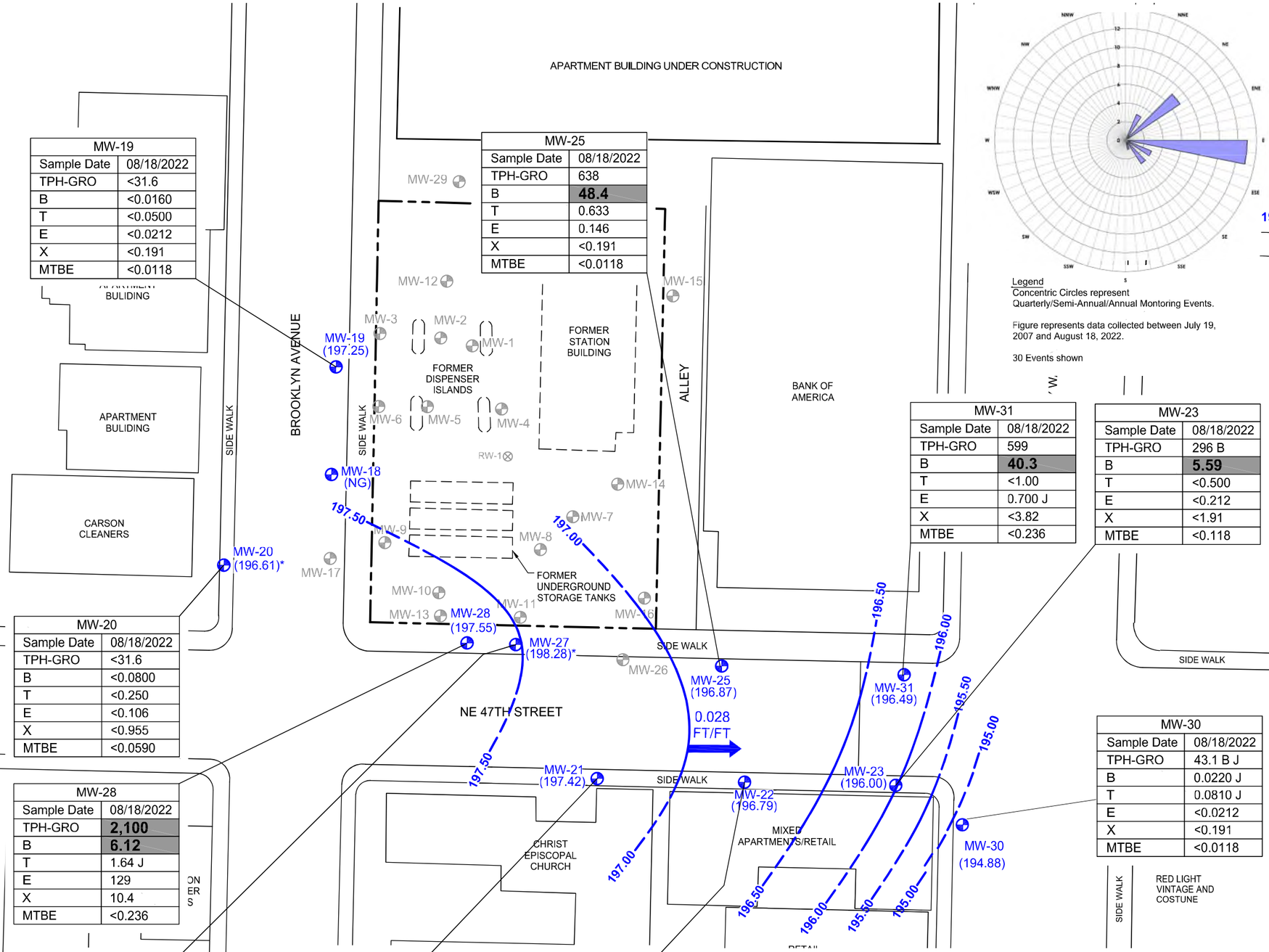
FIGURE 4



MW-19	
Sample Date	08/18/2022
TPH-GRO	<31.6
B	<0.0160
T	<0.0500
E	<0.0212
X	<0.191
MTBE	<0.0118

MW-25	
Sample Date	08/18/2022
TPH-GRO	638
B	**48.4**
T	0.633
E	0.146
X	<0.191
MTBE	<0.0118

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

Figure represents data collected between July 19, 2007 and August 18, 2022.

30 Events shown

MW-31	
Sample Date	08/18/2022
TPH-GRO	599
B	**40.3**
T	<1.00
E	0.700 J
X	<3.82
MTBE	<0.236

MW-23	
Sample Date	08/18/2022
TPH-GRO	296 B
B	**5.59**
T	<0.500
E	<0.212
X	<1.91
MTBE	<0.118

MW-20	
Sample Date	08/18/2022
TPH-GRO	<31.6
B	<0.0800
T	<0.250
E	<0.106
X	<0.955
MTBE	<0.0590

MW-28	
Sample Date	08/18/2022
TPH-GRO	**2,100**
B	**6.12**
T	1.64 J
E	129
X	10.4
MTBE	<0.236

MW-27	
Sample Date	08/18/2022
TPH-GRO	**2,140**
B	**7.90**
T	1.93 J
E	152
X	15.9
MTBE	<0.295

MW-21	
Sample Date	08/18/2022
TPH-GRO	32.9 B J
B	<0.0160
T	<0.0500
E	<0.0212
X	<0.191
MTBE	<0.0118

MW-22	
Sample Date	08/18/2022
TPH-GRO	555 [409]
B	**5.92** [<1.60]
T	<0.500 [<5.00]
E	<0.212 [<2.12]
X	<1.91 [<19.1]
MTBE	<0.118 [<1.18]

MW-30	
Sample Date	08/18/2022
TPH-GRO	43.1 B J
B	0.0220 J
T	0.0810 J
E	<0.0212
X	<0.191
MTBE	<0.0118

WELL IDENTIFICATION		
Date	Analyte	MTCA Method A CULs
TPH-GRO	Total Petroleum Hydrocarbons as Gasoline Range Organics	800/1,000
B	Benzene	5
T	Toluene	1,000
E	Ethylbenzene	700
X	Total xylenes	1,000
MTBE	Methyl tertiary butyl ether	20

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- MW-7 — GROUNDWATER MONITORING WELL
- MW-4 — DECOMMISSIONED MONITORING WELL
- RW-1 — RECOVERY WELL
- (197.55) — GROUNDWATER ELEVATION (FEET)
- 197.50 — GROUNDWATER ELEVATION CONTOUR (FEET)
- GROUNDWATER FLOW DIRECTION
- 0.028 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET PER FOOT)
- (NG) — NOT GAUGED
- * — WEL NOT USED FOR CONTOURING
- **BOLD** — VALUES ARE GREATER THAN THEIR RESPECTIVE MTCA METHOD A CULs
- <1.00 — NOT DETECTED AT OR ABOVE THE LABORATORY METHOD DETECTION LIMIT (MDL)
- B — THE SAME ANALYTE IS FOUND IN THE ASSOCIATED BLANK
- J — ESTIMATED VALUE; RESULT IS ≥ THE MDL AND < THE REPORTED DETECTION LIMIT
- [ ] — DUPLICATE SAMPLE RESULTS
- MTCA — METHOD TOXICS CONTROL ACT CLEANUP
- CULs — CLEANUP LEAVELS

N

NOTE:
ALL VALUES REPORTED IN MICROGRAMS PER LITER (µg/L)

0 40' 80'

APPROXIMATE SCALE 1 in. = 40 ft.

FORMER CHEVRON FACILITY #90129
4700 BROOKLYN AVENUE NE
SEATTLE, WA 98105

GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL MAP AUGUST 18, 2022

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FIGURE 5

Appendix A

Property Details

King County Parcel Map. Source: https://gismaps.kingcounty.gov/iMap

PARCEL DATA

Parcel	881640-0985
Name	GEDR BROOKYLN LLC
Site Address	4700 BROOKLYN AVE NE 98105
Geo Area	17-50
Spec Area	101-110
Property Name	THE 'M' - HIGHRISE STUDENT APARTMENTS

Jurisdiction	SEATTLE
Levy Code	0010
Property Type	C
Plat Block / Building Number	7
Plat Lot / Unit Number	16 THRU 19
Quarter-Section-Township-Range	SE-8 -25-4

Legal Description

UNIVERSITY HEIGHTS ADD LESS POR FOR ALLEY PER DEED REC #20160711000108
PLat Block: 7
Plat Lot: 16 THRU 19

LAND DATA

Click the camera to see more pictures.

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING
Highest & Best Use As Improved	PRESENT USE
Present Use	Apartment
Land SqFt	16,000
Acres	0.37

Percentage Unusable	
Restrictive Size Shape	NO
Zoning	SM-U 75-240 (M1)
Water	WATER DISTRICT
Sewer/Septic	PUBLIC
Road Access	PUBLIC
Parking	ADEQUATE
Street Surface	PAVED

Views

Rainier	
Territorial	GOOD
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	0
Lot Depth Factor	0
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	NO
Proximity Influence	NO

Designations

Historic Site	
Current Use	(none)
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO

Nuisances

Topography	
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

DNR Lease	NO

BUILDING

Building Number	1
Building Description	THE 'M' - HIGHRISE STUDENT APARTMENTS
Number Of Buildings Aggregated	1
Predominant Use	APARTMENT (300)
Shape	Rect or Slight Irreg
Construction Class	REINFORCED CONCRETE
Building Quality	EXCELLENT
Stories	24
Building Gross Sq Ft	194,719
Building Net Sq Ft	137,500
Year Built	2019
Eff. Year	2019
Percentage Complete	100
Heating System	WARMED AND COOLED AIR
Sprinklers	Yes
Elevators	Yes

Click the camera to see more pictures.

Picture of Building 1

Section(s) Of Building Number: 1

Section Number	Section Use	Description	Stories	Height	Floor Number	Gross Sq Ft	Net Sq Ft
2	MIXED USE RETAIL (830)	Floor 1	1	15		5,800	5,800
3	APARTMENT (300)	Floors 2-23	23	9		173,654	131,700
1	UNDERGROUND PARKING STRUCTURE (388)	Bsmt. Level	1	9		15,265	0

Accessory

Accessory Type	Picture	Description	Qty	Unit Of Measure	Size	Grade	Eff Yr	%	Value	Date Valued
Pkg: Covrd, Sec			37			(unknown)				
Sports Court		Indoor Basketball	1			(unknown)				
Recreation Bldg		rooftop gym	1			(unknown)				

Apartment / Condo Complex Data

Complex Type	Mixed Res Apt and Cml Use Condo
Complex Description	230 Highrise Luxury Apartments
Value Distribution Method	
# of Bldgs	1
# of Stories	24
# of Units	230
Avg Unit Size	573
Land Per Unit	0
Project Location	EXCELLENT
Project Appeal	EXCELLENT
% With View	66
Construction Class	REINFORCED CONCRETE
Building Quality	EXCELLENT
Condition	Average
Year Built	2019
Eff Year	2019
% Complete	100
Elevators	Y
Security System	Y
FirePlace	N
Laundry	PRIVATE
Kitchens	Y
# of Meals	0
Founder's Fee	N
Apt Conversion	N
Condo Land Type	Fee Simple

Unit Breakdown

Unit Type	Number of This Type	Sq Ft	# of Bedrooms	# of Baths
Townhouse	2	1,092	3	2.5
Flat	60	898	4	2
Flat	80	295	S	1
Flat	40	655	2	2
Townhouse	6	942	2	2
Flat	40	449	1	1
Townhouse	2	1,132	3	3.5

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value ($)	Appraised Imps Value ($)	Appraised Total Value ($)	New Dollars ($)	Taxable Land Value ($)	Taxable Imps Value ($)	Taxable Total Value ($)	Tax Value Reason
881640098508	2022	2023		0010	9,600,000	114,786,000	124,386,000	21,957,300	9,600,000	114,786,000	124,386,000	
881640098508	2021	2022		0010	9,600,000	90,705,000	100,305,000	0	9,600,000	90,705,000	100,305,000	
881640098508	2020	2021		0010	9,600,000	88,988,700	98,588,700	78,426,900	9,600,000	88,988,700	98,588,700	
881640098508	2019	2020		0010	5,760,000	14,401,800	20,161,800	14,401,800	5,760,000	14,401,800	20,161,800	
881640098508	2018	2019		0010	4,480,000	1,000	4,481,000	0	4,480,000	1,000	4,481,000	
881640098508	2017	2018		0010	4,120,000	246,100	4,366,100	0	4,120,000	246,100	4,366,100	
881640098508	2016	2017		0010	4,120,000	180,000	4,300,000	0	4,120,000	180,000	4,300,000	
881640098508	2015	2016		0010	3,378,400	470,300	3,848,700	0	3,378,400	470,300	3,848,700	
881640098508	2014	2015		0010	2,472,000	476,700	2,948,700	0	2,472,000	476,700	2,948,700	
881640098508	2013	2014		0010	1,895,200	487,400	2,382,600	0	1,895,200	487,400	2,382,600	
881640098508	2012	2013		0010	1,895,200	489,400	2,384,600	0	1,895,200	489,400	2,384,600	
881640098508	2011	2012		0010	1,895,200	497,600	2,392,800	0	1,895,200	497,600	2,392,800	
881640098508	2010	2011		0010	1,895,200	492,800	2,388,000	0	1,895,200	492,800	2,388,000	
881640098508	2009	2010		0010	1,895,200	508,500	2,403,700	0	1,895,200	508,500	2,403,700	
881640098508	2008	2009		0010	1,895,200	503,500	2,398,700	0	1,895,200	503,500	2,398,700	
881640098508	2007	2008		0010	1,648,000	506,800	2,154,800	0	1,648,000	506,800	2,154,800	
881640098508	2006	2007		0010	1,483,200	501,500	1,984,700	0	1,483,200	501,500	1,984,700	
881640098508	2005	2006		0010	1,400,800	499,400	1,900,200	0	1,400,800	499,400	1,900,200	
881640098508	2004	2005		0010	1,400,800	490,300	1,891,100	0	1,400,800	490,300	1,891,100	
881640098508	2003	2004		0010	1,400,800	491,600	1,892,400	0	1,400,800	491,600	1,892,400	
881640098508	2002	2003		0010	1,318,400	337,600	1,656,000	0	1,318,400	337,600	1,656,000	
881640098508	2001	2002		0010	1,153,600	341,600	1,495,200	0	1,153,600	341,600	1,495,200	
881640098508	2000	2001		0010	824,000	341,100	1,165,100	0	824,000	341,100	1,165,100	
881640098508	1999	2000		0010	741,600	289,600	1,031,200	0	741,600	289,600	1,031,200	
881640098508	1998	1999		0010	576,800	173,200	750,000	0	576,800	173,200	750,000	
881640098508	1997	1998		0010	0	0	0	0	494,400	240,600	735,000	
881640098508	1996	1997		0010	0	0	0	0	494,400	240,600	735,000	
881640098508	1994	1995		0010	0	0	0	0	494,400	240,600	735,000	
881640098508	1992	1993		0010	0	0	0	0	494,400	1,000	495,400	
881640098508	1990	1991		0010	0	0	0	0	494,400	115,600	610,000	
881640098508	1988	1989		0010	0	0	0	0	412,000	160,000	572,000	
881640098508	1986	1987		0010	0	0	0	0	424,300	1,000	425,300	
881640098508	1984	1985		0010	0	0	0	0	395,500	86,400	481,900	
881640098508	1982	1983		0010	0	0	0	0	395,500	86,400	481,900	

SALES HISTORY

Excise Number	Recording Number	Document Date	Sale Price	Seller Name	Buyer Name	Instrument	Sale Reason
3146856	20210921000693	9/17/2021	$137,728,629.00	FH BROOKLYN LLC	GEDR BROOKLYN LLC	Warranty Deed	None
2808189	20160711000108	6/13/2016	$0.00	FH BROOKLYN LLC	SEATTLE CITY OF	DEED	Other
2750834	20150820001734	8/14/2015	$5,600,000.00	WASU INC	FH BROOKLYN LLC	Statutory Warranty Deed	None
2276134	20070405001270	4/3/2007	$2,400,000.00	H&S OIL LLC	WASU INC	Statutory Warranty Deed	None
2060844	20040806001308	8/3/2004	$2,400,000.00	BEDROCK NORTHWEST INC	H & S OIL L L C	Statutory Warranty Deed	None
1998990	20031030002395	10/28/2003	$2,235,604.00	CHEVRON USA INC	BEDROCK NORTHWEST INC	Statutory Warranty Deed	None

REVIEW HISTORY

PERMIT HISTORY

Permit Number	Permit Description	Type	Issue Date	Permit Value	Issuing Jurisdiction	Reviewed Date
6796451-CN	Change of use from General Retail to Restaurant and construct initial tenant improvements for a restaurant, per plans,	Remodel	2/12/2021	$273,188	SEATTLE	10/4/2021
6747682-CN	Initial tenant improvements for bank at the southwest of mixed use building, occupy per plan. Mechanical included.,	Remodel	2/25/2020	$1,000,000	SEATTLE	7/2/2021
6499919-CN	Shoring and excavation, including removal of contaminated soil and replacement with clean fill, for future construction of a mixed use building with below grade parking, per plan.,	Building, New	5/21/2018	$1,000,000	SEATTLE	6/28/2019
6500031	Phased project: Construct a new residential and retail building with below grade parking, and occupy per plan.,	Building, New	9/22/2017	$12,203,082	SEATTLE	7/2/2021
6502207	Demolish existing gas station, per plan,	Demolition	6/20/2017	$0	SEATTLE	5/29/2018
6294524	Remove existing canopy and construct new canopy accessory to existing gas station per plan.,	Remodel	10/24/2011	$41,000	SEATTLE	10/10/2012

HOME IMPROVEMENT EXEMPTION

Appendix B

Boring Logs

ARCADIS

Soil Boring and Construction Log

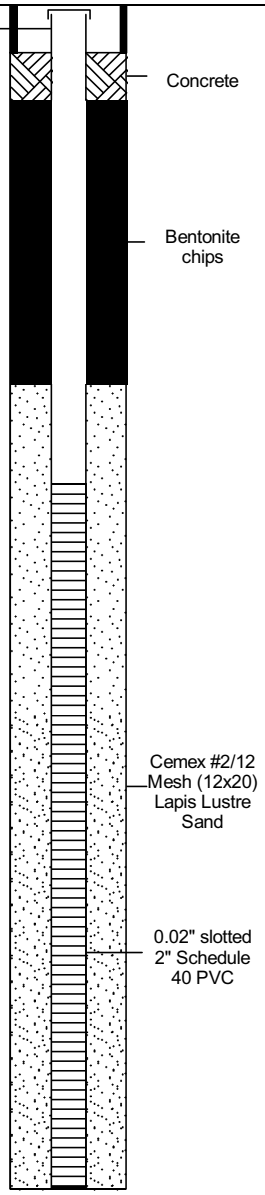
Boring No.: MW-30

Sheet: 1 of 1

Client Name: Chevron Environmental Management Company
Project Number: 30064302
Project Name: Retail Outlet 90129
Date Started: 06-02-2022
Date Completed: 06-02-2022
Total Depth: 25.5 ft bgs
Logger: Brian Pauley
Reviewer:

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	USCS Code	Graphic	Description
1		1		CONC		(0-1 ft) NOTE: Concrete.
2						
3			0.7			
4		3		SP		(2.5-5.5 ft) SAND, medium, subangular to subround; well sorted; moist; loose; 10YR 5/3 - brown; no odor.
5						
6	MW-30-5		0.2			
7						
8						
9						
10						
11	MW-30-10	1.5	0.4	SP		(10-11.5 ft) SAND, medium, subangular to subround; well sorted; moist; loose; 10YR 5/3 - brown; no odor. NOTE: Some reddish mottling.
12						
13						
14						
15						
16	MW-30-15	1.0		SP		(15-16 ft) SAND, fine to medium, subangular to subround; well sorted; moist; 10YR 4/3 - brown; no odor.
17		0.5		SP		(16-16.5 ft) SAND, fine to medium, subangular to subround; well sorted; moist; 10YR 5/2 - grayish brown; no odor.
18						
19						
20						
21	MW-30-20	1.5	0.6			(20-25.5 ft) SAND, medium to very coarse, subangular to subround; little small pebbles, subangular to subround; poorly sorted; wet; loose; 10YR 4/1 - dark gray; no odor.
22						
23				SW		
24						
25						
	MW-30-25	1.5	0.5			
26						25.5 ft. bgs End of Boring
27						
28						
29						
30						

Construction Details



Drilling Co.: Cascade Environmental Drilling
Driller: Scott Busby
Drilling Method: Hollow Stem Auger
Drill Rig: Limited Access Auger Rig
Remarks:

Sampling Method: Split Spoon
Sampling Dimensions: 1.5 ft
First Encountered Water (ft bgs): NA
Static Water Level (ft bgs):
Top of Casing Elev: 210.2300000
Surface Elev: 210.59
North Coor: 245320.7700000
East Coor: 1275783.44000000

ARCADIS

Soil Boring and Construction Log

Boring No.: MW-31

Sheet: 1 of 1

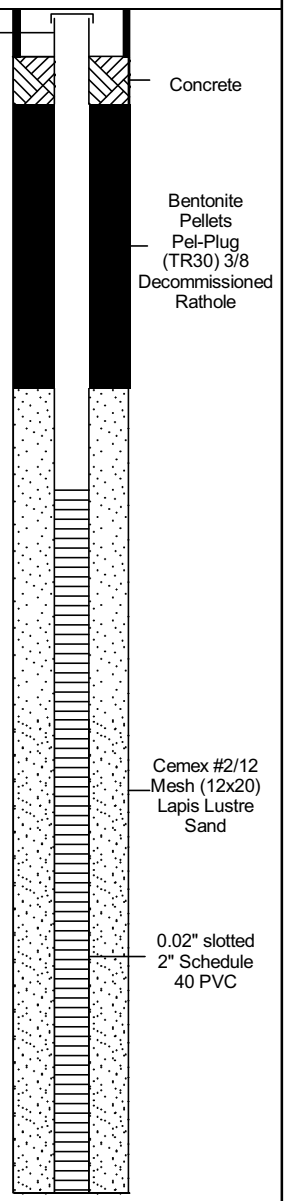
Client Name: Chevron Environmental Management Company
Project Number: 30064302
Project Name: Retail Outlet 90129

Date Started: 06-01-2022
Date Completed: 06-01-2022
Total Depth: 26.5 ft bgs

Logger: Brian Pauley
Reviewer:

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	USCS Code	Graphic	Description
1		1		CONC		(0-1 ft) NOTE: Concrete.
3		0.5	2.9	SM		(2.5-3 ft) SAND and SILT, fine to medium, subangular to subround, low plasticity, no dilatancy; poorly sorted; moist; loose; 10YR 4/3 - brown; no odor.
6	MW-31-5	0.5	2.5	ML		(5-5.5 ft) SILT and SAND, very fine to fine, subangular to subround, low plasticity, no dilatancy; poorly sorted; moist; loose; 10YR 4/3 - brown; no odor.
11	MW-31-10	1.5	0.2	SM		(10-11.5 ft) SAND, very fine to coarse, subangular to subround; little silt, low plasticity, no dilatancy; poorly sorted; moist; loose; 10YR 5/2 - grayish brown; no odor.
16	MW-31-15	1.5	0.7	SM		(15-16.5 ft) SAND, very fine to coarse, subangular to subround; little silt, low plasticity, no dilatancy; poorly sorted; moist to wet; loose; 10YR 5/2 - grayish brown; no odor.
21	MW-31-20	1.5	8.2	SW		(20-21.5 ft) SAND, very fine to coarse, subangular to subround; poorly sorted; moist to wet; loose; 10YR 5/1 - gray; mild odor.
26	MW-31-25	1.5	12.5	SW		(25-26.5 ft) SAND, very fine to coarse, subangular to subround; poorly sorted; moist to wet; loose; 2.5Y 4/1 - dark gray; mild odor. NOTE: Approx 30 gallons pumped, 3x surged.
27						26.5 ft. bgs End of Boring

Construction Details



Drilling Co.: Cascade Environmental Drilling
Driller: Scott Busby
Drilling Method: Hollow Stem Auger
Drill Rig: Limited Access Auger Rig
Remarks:

Sampling Method: Split Spoon
Sampling Dimensions: 1.5 ft
First Encountered Water (ft bgs): NA
Static Water Level (ft bgs):
Top of Casing Elev: 212.2100000
Surface Elev: 212.72
North Coor: 245200.6000000
East Coor: 1275740.43000000

SOIL BORING AND CONSTRUCTION LOG C:\USERS\SPARRY\ONEDRIVE - ARCADIS\DESKTOP\90129 BROOKLYN SRP 11.23.22.GPJ GINT DATA TEMPLATE.GDT 11/23/22

ARCADIS

Soil Boring and Construction Log

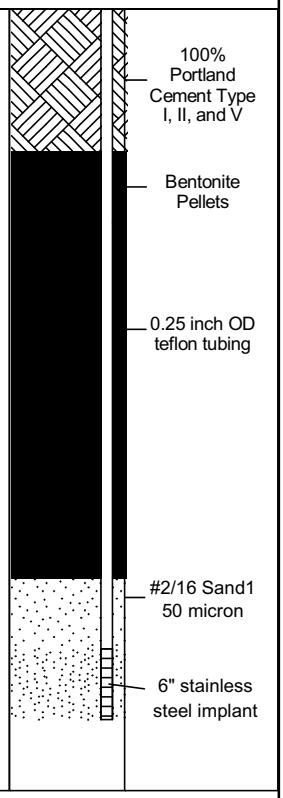
Boring No.: SVP-3

Sheet: 1 of 1

Client Name: Chevron Environmental Management Company
Project Number: 30064302
Project Name: 90129
Date Started: 06-01-2022
Date Completed: 06-01-2022
Total Depth: 5.5 ft bgs
Logger: Trevor Bryant
Reviewer:

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	USCS Code	Graphic	Description
0						(0-0.5 ft) NOTE: Asphalt .
0.5						(0.5-5.5 ft) SAND, fine to coarse, subangular; trace small pebbles, round; well sorted; dry; very loose; 10YR 5/4 - yellowish brown; no odor.
2	SVP-3-2.5		0.3			
4	SVP-3-5		2.9			
5.5						5.5 ft. bgs End of Boring

Construction Details



Drilling Co.: Cascade
Driller: Curtis Askew
Drilling Method: Hand Auger
Drill Rig: Hand Auger
Remarks:

Sampling Method: Hand Auger
Sampling Dimensions: 0.5 ft
First Encountered Water (ft bgs): NA
Static Water Level (ft bgs):
Top of Casing Elev: NA
Surface Elev: 210.98
North Coor: 245322.9700000
East Coor: 1275771.84000000

SOIL BORING AND CONSTRUCTION LOG C:\USERS\SPARRY\DOWNLOADS\90129 6.21.22 BORING LOGS.GPJ GINT DATA TEMPLATE.GDT 11/23/22

Appendix C

Groundwater Sampling Field Forms

Groundwater Gauging Log

Project Number	30064302
Client:	Chevron
Site ID:	90129
Site Location:	Seattle, Washington
Measuring Point:	Top of Casing
Date(s):	06/13/2022
Sampler(s):	Lee Bures
Gauging Equipment:	Water Level Meter

Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-19	06/13/2022	09:12	19.4	ND	27.90	--	--	--
MW-20	06/13/2022	09:07	18.11	ND	27.82	--	--	--
MW-21	06/13/2022	09:46	16.31	ND	24.62	--	--	--
MW-22	06/13/2022	09:43	16.23	ND	25.82	--	--	--
MW-23	06/13/2022	09:40	15.52	ND	24.95	--	--	--
MW-27	06/13/2022	09:27	16.82	ND	23.60	--	--	--
MW-28	06/13/2022	09:24	16.83	ND	25.31	--	--	--

ft-bmp = feet below measuring point ND = Not Detected PID = Photoionization Detector Reading

ppm = parts per million -- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-19	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	19.4	**Total Depth (ft-bmp)**	27.9	**Water Column (ft)**	8.50	**Gallons in Well**	1.38
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**	Grab		
Sample Time	10:27	**Well Volumes Purged**	0.57	**Sample ID**	MW-19-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	10:09	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	10:24	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:12	200	19.42	6.67	0.345	113	5.26	14.20	170.6	Clear	--
10:15	200	19.46	6.34	0.345	58.0	5.32	14.20	187	Clear	--
10:18	200	19.48	6.24	0.275	42.0	5.25	14.10	196.7	Clear	--
10:21	200	19.48	6.18	0.275	40.0	5.18	14.10	205	Clear	--
10:24	200	19.48	6.16	0.275	40.0	5.20	14.10	200.1	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-19-W-20220613 Sample Time: 10:27 Sample Depth (ft-bmp): 23

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-20	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	18.11	**Total Depth (ft-bmp)**	27.82	**Water Column (ft)**	9.71	**Gallons in Well**	1.58
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**	Grab		
Sample Time	11:14	**Well Volumes Purged**	0.50	**Sample ID**	MW-20-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	10:56	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	11:11	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:59	200	18.17	6.30	0.219	15.0	2.93	14.60	238.5	Clear	--
11:02	200	18.20	6.32	0.210	13.0	2.97	14.80	238.5	Clear	--
11:05	200	18.22	6.32	0.209	11.0	2.87	14.80	238.5	Clear	--
11:08	200	18.22	6.32	0.210	10.0	2.87	14.80	238.8	Clear	--
11:11	200	18.22	6.33	0.209	10.0	2.88	14.80	238.9	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-20-W-20220613 Sample Time: 11:14 Sample Depth (ft-bmp): 24

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-21	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.31	**Total Depth (ft-bmp)**	24.62	**Water Column (ft)**	8.31	**Gallons in Well**	1.35
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	11:57	**Well Volumes Purged**	0.59	**Sample ID**	MW-21-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	11:39	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	11:54	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:42	200	16.34	6.57	0.485	107	0.41	15.80	246.2	Clear	--
11:45	200	16.36	6.63	0.488	98.0	0.42	15.80	210	Clear	--
11:48	200	16.38	6.64	0.488	91.0	0.42	15.80	180.2	--	--
11:51	200	16.39	6.65	0.487	90.0	0.41	15.80	176.1	--	--
11:54	200	16.40	6.66	0.488	90.0	0.49	15.80	176	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-21-W-20220613 Sample Time: 11:57 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-22	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.23	**Total Depth (ft-bmp)**	25.82	**Water Column (ft)**	9.59	**Gallons in Well**	1.56
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	12:27	**Well Volumes Purged**	0.51	**Sample ID**	MW-22-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	12:09	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	12:27	**Total Purge Time (h:m)**	0:18				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:12	200	16.30	6.73	0.710	440	0.48	15.30	29.8	Clear	--
12:15	200	16.32	6.72	0.714	350	0.43	15.40	0.1	Clear	--
12:18	200	16.34	6.72	0.718	339	0.39	15.60	-18.9	Clear	--
12:21	200	16.35	6.73	0.717	337	0.38	15.60	-18.7	Clear	--
12:24	200	16.35	6.74	0.720	335	0.39	15.70	-18	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-22-W-20220613 Sample Time: 12:27 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-23	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	15.52	**Total Depth (ft-bmp)**	24.95	**Water Column (ft)**	9.43	**Gallons in Well**	1.53
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	12:57	**Well Volumes Purged**	0.52	**Sample ID**	MW-23-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	12:39	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	12:57	**Total Purge Time (h:m)**	0:18				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:42	200	15.55	6.75	0.779	66.0	0.48	16.00	1.5	Clear	--
12:45	200	15.55	6.67	0.784	44.0	0.35	16.20	12.8	Clear	--
12:48	200	15.55	6.66	0.779	36.0	0.30	16.20	20.8	Clear	--
12:51	200	15.55	6.64	0.775	37.0	0.27	16.30	25.2	Clear	--
12:54	200	15.55	6.63	0.775	37.0	0.26	16.30	25	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-23-W-20220613 Sample Time: 12:57 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-27	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.82	**Total Depth (ft-bmp)**	23.6	**Water Column (ft)**	6.78	**Gallons in Well**	1.1
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	15:16	**Well Volumes Purged**	0.72	**Sample ID**	MW-27-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	14:58	**Gallons Purged**	0.79	**Duplicate ID**	BD-W-20220613		
Purge End	15:13	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
15:01	200	20.00	6.49	0.479	57.0	0.21	16.70	-4.6	--	--
15:04	200	16.89	6.45	0.480	43.0	0.17	17.00	-6.9	--	--
15:07	200	16.89	6.43	0.476	35.0	0.16	16.80	-9.3	--	--
15:10	200	16.90	6.42	0.474	34.0	0.16	16.70	-9	--	--
15:13	200	16.90	6.40	0.476	34.0	0.16	16.60	-9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-27-W-20220613 Sample Time: 15:16 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-28	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.83	**Total Depth (ft-bmp)**	25.31	**Water Column (ft)**	8.48	**Gallons in Well**	1.38
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	15:52	**Well Volumes Purged**	0.57	**Sample ID**	MW-28-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	15:34	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	15:49	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
15:37	200	16.85	6.39	0.419	83.0	0.39	16.10	-17.5	--	--
15:40	200	16.87	6.34	0.419	51.0	0.23	16.50	-20.3	--	--
15:43	200	16.89	6.33	0.420	39.0	0.20	16.60	-22.7	--	--
15:46	200	16.90	6.32	0.418	37.0	0.20	16.60	-25	--	--
15:49	200	16.90	6.33	0.416	37.0	0.20	16.50	-26.9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-28-W-20220613 Sample Time: 15:52 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected:

Please Circle: PT MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Andrew Wuser

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately
Packed on Ice N____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 MTBE/EDC 40mlAmb-HCl	8260 PCE/TCE/VC 40mlAmb-HCl	8260 cis/trans12DCE 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD - Diss Pb 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Pb 6020 250mlHDPE-HNO3			Remarks	Sample # (lab only)
MW-19-W-20220613	Grab	GW	—	6/13/22	1027	11		X	X	X	X	X	X	X				
MW-20-W-20220613	Grab	GW	—	6/13/22	1114	11		X	X	X	X	X	X	X				
MW-21-W-20220613	Grab	GW	—	6/13/22	1157	11		X	X	X	X	X	X	X				
MW-22-W-20220613	Grab	GW	—	6/13/22	1227	11		X	X	X	X	X	X	X				
MW-23-W-20220613	Grab	GW	—	6/13/22	1257	11		X	X	X	X	X	X	X				
MW-27-W-20220613	Grab	GW	—	6/13/22	1516	11		X	X	X	X	X	X	X				
MW-28-W-20220613	Grab	GW	—	6/13/22	1552	11		X	X	X	X	X	X	X				
MW-31-W-20220613	Grab	GW	—	6/13/22	~~1145~~ 1145	11		X	X	X	X	X	X	X				
BD-W-20220613	Grab	GW	—	6/13/22	1200	11		X	X	X	X	X	X	X				
TB-1-20220613	Grab	GW	—	6/13/22	0900	3	X											

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **CHEVARCWA**
Template:**T205068**
Prelogin: **P910519**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

WELLHEAD INSPECTION FORM

Client: Arcadis Site: 4700 Brooklyn Ave NE, Seattle, WA Date: 6/13/22

Job #: 220613-AW1 Technician: Andrew Luser Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
MW-19				X											
MW-20				X											
MW-21				X											
MW-22				X											
MW-23				X											
MW-25				X											unable to access
MW-27				X											
MW-28				X											
MW-30				X											unable to access
MW-31				X											

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 4700 Brooklyn Ave NE, Seattle, WA				PROJECT NUMBER ~~22060~~ 220613-AW1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556	13C100603	6/13/22 0635	DO 100% pH 4.00 7.00	98.2% 3.99 7.04	✓	20°C	AW
			10.00 ORP 237.3 Cond 3410	10.11 241.6 3924	✓	20°C	AW

CHEVRON-WASHINGTON/OREGON TYPE **A** BILL OF LADING

SOURCE RECORD **BILL OF LADING**

FOR PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF WASHINGTON AND OREGON. THE PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN KENT, WASHINGTON FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 22727 72ND Ave South, Suite D – 102, Kent, WA 98032. BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

90129 — CHEVRON #

Ada Hamilton — Chevron Project Manager

4700 — Street number

Brooklyn Ave NE — street name

Seattle — city

WA — state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-19	1		
MW-20	1		
MW-21	1		
MW-22	1		
MW-23	1		
MW-27	1		
MW-28	1		
MW-31	1		
~~AU MW-32~~			

added equip. rinse water / 0.25

any other adjustments /

TOTAL GALS. RECOVERED 8.25

loaded onto BTS vehicle # 90

BTS event # 220613-AU1 — time 1630 — date 6/13/22

signature

Blaine Tech Services, Inc.

Permit To Work

for Chevron EMC Sites

Client: Arcadis Date 6/23/22

Site Address: 4700 Brooklyn Ave NE, Seattle, WA

Job Number: 220613-AW1 Technician(s): Andrew Waser

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed. Reviewed: ☑

2. Special Permit Required Task Review

Are there any conditions or tasks that would require:	**Yes**	**No**
Confined space entry	☐	☒
Working at height	☐	☒
Lock-out/Tag-out	☐	☒
Excavations greater than 4 feet deep	☐	☒
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	☐	☒
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	☐	☒
Hot work	☐	☒

If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.

	Yes	**No**
3. Is a Traffic Control Permit required for today's work?	☐	☒
If so is it in the folder?	☐	☐
Is it current?	☐	☐
Do you understand the Traffic Control Plan and what equipment you will need?	☐	☐

On site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	☒
2. Route to hospital understood.	☒
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	☒
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	☒
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	☒
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	☒
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	☒
8. After lunch tailgate safety meeting refresher conducted.	☒

If Checklist Task cannot be completed, explain:

Permit To Work Authority: Andrew Waser (Name) Field Tech (Title) 6/13/22 (Date) 0851 (Time)

Groundwater Gauging Log

Project Number	30064302
Client:	Chevron
Site ID:	90129
Site Location:	Seattle, Washington
Measuring Point:	Top of Casing
Date(s):	06/13/2022
Sampler(s):	Lee Bures
Gauging Equipment:	Water Level Meter

Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-19	06/13/2022	09:12	19.4	ND	27.90	--	--	--
MW-20	06/13/2022	09:07	18.11	ND	27.82	--	--	--
MW-21	06/13/2022	09:46	16.31	ND	24.62	--	--	--
MW-22	06/13/2022	09:43	16.23	ND	25.82	--	--	--
MW-23	06/13/2022	09:40	15.52	ND	24.95	--	--	--
MW-27	06/13/2022	09:27	16.82	ND	23.60	--	--	--
MW-28	06/13/2022	09:24	16.83	ND	25.31	--	--	--

ft-bmp = feet below measuring point ND = Not Detected PID = Photoionization Detector Reading

ppm = parts per million -- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-19	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	19.4	**Total Depth (ft-bmp)**	27.9	**Water Column (ft)**	8.50	**Gallons in Well**	1.38
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**	Grab		
Sample Time	10:27	**Well Volumes Purged**	0.57	**Sample ID**	MW-19-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	10:09	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	10:24	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:12	200	19.42	6.67	0.345	113	5.26	14.20	170.6	Clear	--
10:15	200	19.46	6.34	0.345	58.0	5.32	14.20	187	Clear	--
10:18	200	19.48	6.24	0.275	42.0	5.25	14.10	196.7	Clear	--
10:21	200	19.48	6.18	0.275	40.0	5.18	14.10	205	Clear	--
10:24	200	19.48	6.16	0.275	40.0	5.20	14.10	200.1	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-19-W-20220613 Sample Time: 10:27 Sample Depth (ft-bmp): 23

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-20	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	18.11	**Total Depth (ft-bmp)**	27.82	**Water Column (ft)**	9.71	**Gallons in Well**	1.58
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**	Grab		
Sample Time	11:14	**Well Volumes Purged**	0.50	**Sample ID**	MW-20-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	10:56	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	11:11	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:59	200	18.17	6.30	0.219	15.0	2.93	14.60	238.5	Clear	--
11:02	200	18.20	6.32	0.210	13.0	2.97	14.80	238.5	Clear	--
11:05	200	18.22	6.32	0.209	11.0	2.87	14.80	238.5	Clear	--
11:08	200	18.22	6.32	0.210	10.0	2.87	14.80	238.8	Clear	--
11:11	200	18.22	6.33	0.209	10.0	2.88	14.80	238.9	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-20-W-20220613 Sample Time: 11:14 Sample Depth (ft-bmp): 24

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-21	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.31	**Total Depth (ft-bmp)**	24.62	**Water Column (ft)**	8.31	**Gallons in Well**	1.35
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	11:57	**Well Volumes Purged**	0.59	**Sample ID**	MW-21-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	11:39	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	11:54	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:42	200	16.34	6.57	0.485	107	0.41	15.80	246.2	Clear	--
11:45	200	16.36	6.63	0.488	98.0	0.42	15.80	210	Clear	--
11:48	200	16.38	6.64	0.488	91.0	0.42	15.80	180.2	--	--
11:51	200	16.39	6.65	0.487	90.0	0.41	15.80	176.1	--	--
11:54	200	16.40	6.66	0.488	90.0	0.49	15.80	176	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-21-W-20220613 Sample Time: 11:57 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-22	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.23	**Total Depth (ft-bmp)**	25.82	**Water Column (ft)**	9.59	**Gallons in Well**	1.56
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	12:27	**Well Volumes Purged**	0.51	**Sample ID**	MW-22-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	12:09	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	12:27	**Total Purge Time (h:m)**	0:18				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:12	200	16.30	6.73	0.710	440	0.48	15.30	29.8	Clear	--
12:15	200	16.32	6.72	0.714	350	0.43	15.40	0.1	Clear	--
12:18	200	16.34	6.72	0.718	339	0.39	15.60	-18.9	Clear	--
12:21	200	16.35	6.73	0.717	337	0.38	15.60	-18.7	Clear	--
12:24	200	16.35	6.74	0.720	335	0.39	15.70	-18	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-22-W-20220613 Sample Time: 12:27 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-23	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	15.52	**Total Depth (ft-bmp)**	24.95	**Water Column (ft)**	9.43	**Gallons in Well**	1.53
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	12:57	**Well Volumes Purged**	0.52	**Sample ID**	MW-23-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	12:39	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	12:57	**Total Purge Time (h:m)**	0:18				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:42	200	15.55	6.75	0.779	66.0	0.48	16.00	1.5	Clear	--
12:45	200	15.55	6.67	0.784	44.0	0.35	16.20	12.8	Clear	--
12:48	200	15.55	6.66	0.779	36.0	0.30	16.20	20.8	Clear	--
12:51	200	15.55	6.64	0.775	37.0	0.27	16.30	25.2	Clear	--
12:54	200	15.55	6.63	0.775	37.0	0.26	16.30	25	Clear	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-23-W-20220613 Sample Time: 12:57 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-27	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.82	**Total Depth (ft-bmp)**	23.6	**Water Column (ft)**	6.78	**Gallons in Well**	1.1
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	15:16	**Well Volumes Purged**	0.72	**Sample ID**	MW-27-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	14:58	**Gallons Purged**	0.79	**Duplicate ID**	BD-W-20220613		
Purge End	15:13	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
15:01	200	20.00	6.49	0.479	57.0	0.21	16.70	-4.6	--	--
15:04	200	16.89	6.45	0.480	43.0	0.17	17.00	-6.9	--	--
15:07	200	16.89	6.43	0.476	35.0	0.16	16.80	-9.3	--	--
15:10	200	16.90	6.42	0.474	34.0	0.16	16.70	-9	--	--
15:13	200	16.90	6.40	0.476	34.0	0.16	16.60	-9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-27-W-20220613 Sample Time: 15:16 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-28	**Date**	6/13/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Clear	**Sampled by**	Lee Bures
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.83	**Total Depth (ft-bmp)**	25.31	**Water Column (ft)**	8.48	**Gallons in Well**	1.38
Water Quality Meter Make/Model	Hach 2100Q,YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	15:52	**Well Volumes Purged**	0.57	**Sample ID**	MW-28-W-20220613	**Evacuation Equipment**	Peristaltic
Purge Start	15:34	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	15:49	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
15:37	200	16.85	6.39	0.419	83.0	0.39	16.10	-17.5	--	--
15:40	200	16.87	6.34	0.419	51.0	0.23	16.50	-20.3	--	--
15:43	200	16.89	6.33	0.420	39.0	0.20	16.60	-22.7	--	--
15:46	200	16.90	6.32	0.418	37.0	0.20	16.60	-25	--	--
15:49	200	16.90	6.33	0.416	37.0	0.20	16.50	-26.9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-28-W-20220613 Sample Time: 15:52 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected:

Please Circle: PT MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Andrew Wuser

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately
Packed on Ice N____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 MTBE/EDC 40mlAmb-HCl	8260 PCE/TCE/VC 40mlAmb-HCl	8260 cis/trans12DCE 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD - Diss Pb 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Pb 6020 250mlHDPE-HNO3			Remarks	Sample # (lab only)
MW-19-W-20220613	Grab	GW	—	6/13/22	1027	11		X	X	X	X	X	X	X				
MW-20-W-20220613	Grab	GW	—	6/13/22	1114	11		X	X	X	X	X	X	X				
MW-21-W-20220613	Grab	GW	—	6/13/22	1157	11		X	X	X	X	X	X	X				
MW-22-W-20220613	Grab	GW	—	6/13/22	1227	11		X	X	X	X	X	X	X				
MW-23-W-20220613	Grab	GW	—	6/13/22	1257	11		X	X	X	X	X	X	X				
MW-27-W-20220613	Grab	GW	—	6/13/22	1516	11		X	X	X	X	X	X	X				
MW-28-W-20220613	Grab	GW	—	6/13/22	1552	11		X	X	X	X	X	X	X				
MW-31-W-20220613	Grab	GW	—	6/13/22	~~1145~~ 1145	11		X	X	X	X	X	X	X				
BD-W-20220613	Grab	GW	—	6/13/22	1200	11		X	X	X	X	X	X	X				
TB-1-20220613	Grab	GW	—	6/13/22	0900	3	X											

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **CHEVARCWA**
Template:**T205068**
Prelogin: **P910519**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

WELLHEAD INSPECTION FORM

Client: Arcadis Site: 4700 Brooklyn Ave NE, Seattle, WA Date: 6/13/22

Job #: 220613-AW1 Technician: Andrew Luser Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
MW-19				X											
MW-20				X											
MW-21				X											
MW-22				X											
MW-23				X											
MW-25				X											unable to access
MW-27				X											
MW-28				X											
MW-30				X											unable to access
MW-31				X											

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 4700 Brooklyn Ave NE, Seattle, WA				PROJECT NUMBER ~~22060~~ 220613-AW1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556	13C100603	6/13/22 0635	DO 100% pH 4.00 7.00	98.2% 3.99 7.04	✓	20°C	AW
			10.00 ORP 237.3 Cond 3410	10.11 241.6 3924	✓	20°C	AW

CHEVRON-WASHINGTON/OREGON TYPE **A** BILL OF LADING

SOURCE RECORD **BILL OF LADING**

FOR PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF WASHINGTON AND OREGON. THE PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN KENT, WASHINGTON FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 22727 72ND Ave South, Suite D – 102, Kent, WA 98032. BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

90129 — CHEVRON #

Ada Hamilton — Chevron Project Manager

4700 — Street number

Brooklyn Ave NE — street name

Seattle — city

WA — state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-19	1		
MW-20	1		
MW-21	1		
MW-22	1		
MW-23	1		
MW-27	1		
MW-28	1		
MW-31	1		
~~AU MW-32~~			

added equip. rinse water / 0.25

any other adjustments /

TOTAL GALS. RECOVERED 8.25

loaded onto BTS vehicle # 90

BTS event # 220613-AU1 — time 1630 — date 6/13/22

signature

Blaine Tech Services, Inc.

Permit To Work

for Chevron EMC Sites

Client: Arcadis Date 6/23/22

Site Address: 4700 Brooklyn Ave NE, Seattle, WA

Job Number: 220613-AW1 Technician(s): Andrew Waser

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed. Reviewed: ☑

2. Special Permit Required Task Review

Are there any conditions or tasks that would require:	**Yes**	**No**
Confined space entry	☐	☒
Working at height	☐	☒
Lock-out/Tag-out	☐	☒
Excavations greater than 4 feet deep	☐	☒
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	☐	☒
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	☐	☒
Hot work	☐	☒

If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.

	Yes	**No**
3. Is a Traffic Control Permit required for today's work?	☐	☒
If so is it in the folder?	☐	☐
Is it current?	☐	☐
Do you understand the Traffic Control Plan and what equipment you will need?	☐	☐

On site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	☒
2. Route to hospital understood.	☒
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	☒
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	☒
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	☒
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	☒
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	☒
8. After lunch tailgate safety meeting refresher conducted.	☒

If Checklist Task cannot be completed, explain:

Permit To Work Authority: Andrew Waser (Name) Field Tech (Title) 6/13/22 (Date) 0851 (Time)

Groundwater Gauging Log

Project Number	30064302
Client:	Chevron
Site ID:	90129
Site Location:	Seattle, Washington
Measuring Point:	Top of Casing
Date(s):	08/18/2022
Sampler(s):	Bruce Lopez
Gauging Equipment:	Interface Probe

Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-19	08/18/2022	08:12	19.25	ND	27.86	--	--	--
MW-20	08/18/2022	08:16	19.4	ND	27.85	--	--	--
MW-21	08/18/2022	08:41	16.58	ND	24.60	--	--	--
MW-22	08/18/2022	08:38	16.3	ND	25.84	--	--	--
MW-23	08/18/2022	08:34	15.9	ND	24.93	--	--	--
MW-25	08/18/2022	08:26	16.1	ND	30.15	--	--	--
MW-27	08/18/2022	08:23	16.25	ND	23.60	--	--	--
MW-28	08/18/2022	08:20	17.03	ND	25.33	--	--	--

ft-bmp = feet below measuring point ND = Not Detected PID = Photoionization Detector Reading

ppm = parts per million -- = Not Recorded

WELL GAUGING DATA

Project # 220818-501 Date 8/18/22 Client Arcadis

Site 4700 Brooklyn Ave NE Seattle, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-19	0812	2	—	—	—	—	19.25	27.86		
MW-20	0816	2	—	—	—	—	19.40	27.85		
MW-21	0841	2	—	—	—	—	16.58	24.60		
MW-22	0838	2	—	—	—	—	16.30	25.84		
MW-23	0834	2	—	—	—	—	15.90	24.93		
MW-25	0826	2	—	—	—	—	16.10	30.15		
MW-27	0823	2	—	—	—	—	16.25	23.60		
MW-28	0820	2	—	—	—	—	17.03	25.33		
MW-30	0845	2	—	—	—	—	15.35	25.00		
MW-31	0830	2	—	—	—	—	15.72	25.20		

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-19	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	19.25	**Total Depth (ft-bmp)**	27.86	**Water Column (ft)**	8.61	**Gallons in Well**	1.4
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	13:35	**Well Volumes Purged**	0.57	**Sample ID**	MW-19-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	13:19	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	13:34	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
13:22	200	19.31	7.37	0.833	9.0	0.29	20.89	376.6	--	--
13:25	200	19.21	7.33	0.828	8.0	0.25	20.77	377.3	--	--
13:28	200	19.31	7.29	0.825	5.0	0.24	20.73	379.2	--	--
13:31	200	19.31	7.26	0.825	4.0	0.23	20.71	380.1	--	--
13:34	200	19.31	7.23	0.824	3.0	0.22	20.69	380.9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-19-W-20220818 Sample Time: 13:35 Sample Depth (ft-bmp): 23

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-20	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	19.4	**Total Depth (ft-bmp)**	27.85	**Water Column (ft)**	8.45	**Gallons in Well**	1.37
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	14:10	**Well Volumes Purged**	0.58	**Sample ID**	MW-20-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	13:54	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	14:09	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
13:57	200	19.40	7.61	1.16	12.0	0.90	22.80	375.1	--	--
14:00	200	19.40	7.69	1.14	10.0	0.82	22.92	376.9	--	--
14:03	200	19.40	7.75	1.14	8.0	0.77	23.06	378.5	--	--
14:06	200	19.40	7.78	1.13	8.0	0.77	23.08	379.6	--	--
14:09	200	19.40	7.80	1.13	8.0	0.80	23.10	378.2	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-20-W-20220818 Sample Time: 14:10 Sample Depth (ft-bmp): 23

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-21	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.58	**Total Depth (ft-bmp)**	24.6	**Water Column (ft)**	8.02	**Gallons in Well**	1.3
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	10:52	**Well Volumes Purged**	0.61	**Sample ID**	MW-21-W-2022818	**Evacuation Equipment**	Peristaltic
Purge Start	10:36	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	10:51	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:39	200	16.58	7.81	0.488	10.0	0.36	19.85	343.2	--	--
10:42	200	16.58	7.75	0.481	8.0	0.31	19.82	345.4	--	--
10:45	200	16.58	7.70	0.475	5.0	0.27	19.76	346.9	--	--
10:48	200	16.58	7.67	0.472	5.0	0.25	19.75	348.7	--	--
10:51	200	16.58	7.65	0.470	5.0	0.25	19.78	350.1	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-21-W-2022818 Sample Time: 10:52 Sample Depth (ft-bmp): 20.5

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-22	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.3	**Total Depth (ft-bmp)**	25.84	**Water Column (ft)**	9.54	**Gallons in Well**	1.55
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**			Grab
Sample Time	10:16	**Well Volumes Purged**	0.51	**Sample ID**	MW-22-W-20220818BD-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	10:00	**Gallons Purged**	0.79				
Purge End	10:15	**Total Purge Time (h:m)**	0:15	**Duplicate ID**	--		

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:03	200	16.30	7.68	0.925	20.0	0.30	20.71	342.1	--	--
10:06	200	16.30	7.70	0.925	15.0	0.27	20.66	343.5	--	--
10:09	200	16.30	7.76	0.925	10.0	0.24	20.62	344.7	--	--
10:12	200	16.30	7.77	0.925	10.0	0.23	20.60	346.9	--	--
10:15	200	16.30	7.80	0.925	10.0	0.23	20.58	348.1	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-22-W-20220818BD-W-20220818 Sample Time: 10:16 Sample Depth (ft-bmp): 21

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-23	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	15.9	**Total Depth (ft-bmp)**	24.93	**Water Column (ft)**	9.03	**Gallons in Well**	1.47
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	09:39	**Well Volumes Purged**	0.54	**Sample ID**	MW-23-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	09:24	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	09:39	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
09:27	200	15.90	7.83	1.14	13.0	0.43	19.39	341	--	--
09:30	200	15.90	7.86	1.14	12.0	0.36	19.25	339.4	--	--
09:33	200	15.90	7.88	1.13	8.0	0.31	19.12	338.6	--	--
09:36	200	15.90	7.89	1.13	8.0	0.29	19.13	337.5	--	--
09:39	200	15.90	7.92	1.13	8.0	0.28	19.11	336.9	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-23-W-20220818 Sample Time: 09:39 Sample Depth (ft-bmp): 21

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-25	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	15 to 30	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.1	**Total Depth (ft-bmp)**	30.15	**Water Column (ft)**	14.05	**Gallons in Well**	2.28
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**			Grab
Sample Time	11:58	**Well Volumes Purged**	0.35	**Sample ID**	MW-25-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	11:42	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	11:57	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:45	200	16.10	7.81	0.878	18.0	0.58	20.17	363.7	--	--
11:48	200	16.10	7.85	0.873	13.0	0.51	19.93	365.2	--	--
11:51	200	16.10	7.88	0.870	10.0	0.42	19.75	366.9	--	--
11:54	200	16.10	7.91	0.870	10.0	0.41	19.73	368.4	--	--
11:57	200	16.10	7.89	0.871	10.0	0.39	19.70	370.2	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-25-W-20220818 Sample Time: 11:58 Sample Depth (ft-bmp): 23.5

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-27	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	16.25	**Total Depth (ft-bmp)**	23.6	**Water Column (ft)**	7.35	**Gallons in Well**	1.19
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	12:30	**Well Volumes Purged**	0.67	**Sample ID**	MW-27-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	12:14	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	12:29	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:17	200	16.25	7.33	0.777	9.0	0.65	20.66	358.2	--	--
12:20	200	16.25	7.35	0.775	6.0	0.60	20.55	360.7	--	--
12:23	200	16.25	7.38	0.775	5.0	0.58	20.50	363.8	--	--
12:26	200	16.25	7.39	0.774	5.0	0.55	20.46	365	--	--
12:29	200	16.25	7.40	0.775	4.0	0.56	20.44	367.1	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-27-W-20220818 Sample Time: 12:30 Sample Depth (ft-bmp): 20

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30064302	**Well ID**	MW-28	**Date**	8/18/2022		
Site Location	Seattle, Washington	**Site ID**	90129	**Weather (°F)**	Cloudy	**Sampled by**	Bruce Lopez
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	--
Static Water Level (ft-bmp)	17.03	**Total Depth (ft-bmp)**	25.33	**Water Column (ft)**	8.30	**Gallons in Well**	1.35
Water Quality Meter Make/Model	YSI 556 MP5	**Purge Method**	Low-Flow	**Sample Method**		Grab	
Sample Time	13:03	**Well Volumes Purged**	0.59	**Sample ID**	MW-28-W-20220818	**Evacuation Equipment**	Peristaltic
Purge Start	12:47	**Gallons Purged**	0.79	**Duplicate ID**	--		
Purge End	13:02	**Total Purge Time (h:m)**	0:15				

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:50	200	17.03	8.03	0.543	18.0	0.35	21.62	378.4	--	--
12:53	200	17.03	7.94	0.538	15.0	0.33	21.48	380.3	--	--
12:56	200	17.03	7.84	0.533	10.0	0.31	21.37	381.5	--	--
12:59	200	17.03	7.82	0.530	10.0	0.30	21.33	382.9	--	--
13:02	200	17.03	7.79	0.532	10.0	0.30	21.32	384.1	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-28-W-20220818 Sample Time: 13:03 Sample Depth (ft-bmp): 21

Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

LOW FLOW WELL MONITORING DATA SHEET

Project #: 220818-501	Client: Arcadis
Sampler: JD	Gauging Date: 8/18/22
Well I.D.: MW-30	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 25.00	Depth to Water (ft.): 15.35
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: (Dedicated Tubing) New Tubing Other ___

Start Purge Time: 0851 Flow Rate: 200ml/m Pump Depth: 20ft

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0854	19.33	7.67	1.350	44	0.68	340.4	600	15.35
0857	19.17	7.73	1.350	44	0.61	342.3	1200	15.35
0900	19.11	7.80	1.350	37	0.53	344.4	1800	15.35
0903	19.09	7.83	1.350	36	0.51	346.4	2400	15.35
0906	19.06	7.82	1.349	34	0.50	347.1	3000	15.35

Did well dewater? Yes (No) Amount actually evacuated: 3000ml

Sampling Time: 0907 Sampling Date: 8/18/22

Sample I.D.: MW-30-W-20220818 Laboratory: Pace

Analyzed for: TPH-G BTEX MTBE TPH-D (Other): See COC

Equipment Blank I.D.: @ Time Duplicate I.D.: —

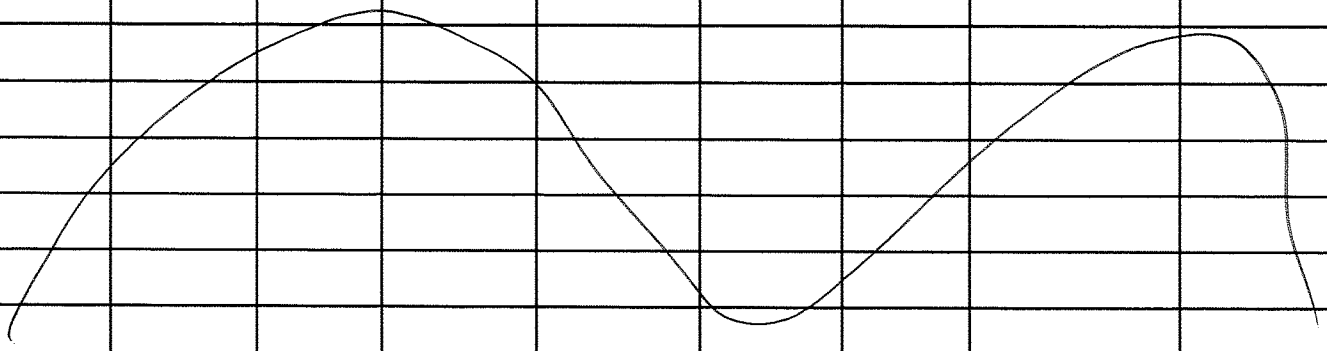
LOW FLOW WELL MONITORING DATA SHEET

Project #: 220818-JD1	Client: Arcadis
Sampler: JD	Gauging Date: 8/18/22
Well I.D.: MW-31	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 25.20	Depth to Water (ft.): 15.72
Depth to Free Product: ~~~	Thickness of Free Product (feet): ~~~
Referenced to: (PVC) Grade	Flow Cell Type: YSI-556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ___

Start Purge Time: 1109 Flow Rate: 200ml/m Pump Depth: 20ft

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1112	18.29	7.37	0.308	10	0.42	355.9	600	15.72
1115	18.45	7.35	0.303	7	0.36	358.7	1200	15.72
1118	18.60	7.29	0.300	5	0.33	360.1	1800	15.72
1121	18.62	7.26	0.300	5	0.31	360.8	2400	15.72
1124	18.63	7.24	0.297	5	0.30	362.7	3000	15.72



Did well dewater? Yes (No)	Amount actually evacuated: 3000ml
Sampling Time: 1125	Sampling Date: 8/18/22
Sample I.D.: MW-31-W-20220818	Laboratory: Pace
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.: ~~~

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle, WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle, WA

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Jonah Davis

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Quote #

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 Full List VOCs 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD-Diss Lead 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Lead 6020 250mlHDPE-HNO3
MW-19-W-20220818	G	GW	—	8/18/22	1335	11	X	X	X	X	X	X
MW-20-W-20220818		GW	—		1410	11	X	X	X	X	X	X
MW-21-W-20220818		GW	—		1052	11	X	X	X	X	X	X
MW-22-W-20220818		GW	—		1016	11	X	X	X	X	X	X
MW-23-W-20220818		GW	—		0939	11	X	X	X	X	X	X
MW-25-W-20220818		GW	—		1158	11	X	X	X	X	X	X
MW-27-W-20220818		GW	—		1230	11	X	X	X	X	X	X
MW-28-W-20220818		GW	—		1303	11	X	X	X	X	X	X
MW-30-W-20220818		GW	—		0907	11	X	X	X	X	X	X
MW-31-W-20220818		GW	—		1125	11	X	X	X	X	X	X

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **CHEVARCWA**
Template: **T213574**
Prelogin: **P940854**
PM: **110 - Brian Ford**
PB:

Shipped Via:

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	8/18/22	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: | Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle, WA

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Jonah Davis

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 Full List VOCs 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD-Diss Lead 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Lead 6020 250mlHDPE-HNO3	Remarks	Sample # (lab only)
BD-W-20220818	G	GW	—	8/18/22	1200	11	X	X	X	X	X	X		
TB-1-20220818	G	GW	—	8/18/22	0900	2	X							

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **CHEVARCWA**
Template: **T213574**
Prelogin: **P940854**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	8/18/22	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

WELLHEAD INSPECTION FORM

Client: Arcadis Site: 4700 Brooklyn Ave NE Seattle, WA Date: 8/18/22

Job #: 220818-J01 Technician: JP Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
MW-19	X														
MW-20	X														
MW-21	X														
MW-22	X														
MW-23	X				1/3										
MW-25	X														
MW-27	X				1/3										
MW-28	X														
MW-30	X														
MW-31	X			M											

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	220818 JD 4700 Brooklyn Ave NE Seattle WA	PROJECT NUMBER	220818-JD1

EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI-556	07K1054Z	8/18/22 0635	pH-7	7.22	—	23.92	JD
			Cond 3400	4188	—	24.03	JD
			ORP 226	230	—	24.03	JD
			DO 100%	103%	—	—	JD

CHEVRON-WASHINGTON/OREGON TYPE **A** BILL OF LADING

SOURCE RECORD **BILL OF LADING**

FOR PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF WASHINGTON AND OREGON. THE PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN KENT, WASHINGTON FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 22727 72ND Ave South, Suite D – 102, Kent, WA 98032. BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

CHEVRON # 90179 Chevron Project Manager

4700 Brooklyn Ave NE Seattle WA

Street number street name city state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-19	1		
MW-20	1		
MW-21	1		
MW-22	1		
MW-23	1		
MW-25	1		
MW-27	1		
MW-28	1		
MW-30	1		
MW-31	1		

added equip. rinse water 0.2

any other adjustments

TOTAL GALS. RECOVERED 10.2

loaded onto BTS vehicle # 135

BTS event # 220818-501 time date 8/18/22

signature

Blaine Tech Services, Inc.

Permit To Work

for Chevron EMC Sites

Client: Arcadis Date 8/18/22

Site Address: 4700 Brooklyn Ave NE Seattle, WA

Job Number: 220818-SP1 Technician(s): JD

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed. Reviewed: ☒

2. Special Permit Required Task Review

Are there any conditions or tasks that would require:	Yes	No
Confined space entry	☐	☒
Working at height	☐	☒
Lock-out/Tag-out	☐	☒
Excavations greater than 4 feet deep	☐	☒
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	☐	☒
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	☐	☒
Hot work	☐	☒

If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.

	Yes	No
3. Is a Traffic Control Permit required for today's work?	☐	☒
If so is it in the folder?	☐	☐
Is it current?	☐	☐
Do you understand the Traffic Control Plan and what equipment you will need?	☐	☐

On site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.	☒
2. Route to hospital understood.	☒
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.	☒
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.	☒
5. Understands procedure to follow, if site circumstances change, to address new site hazards.	☒
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.	☒
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.	☒
8. After lunch tailgate safety meeting refresher conducted.	☒

If Checklist Task cannot be completed, explain:

Permit To Work Authority: Jonah Davis (Name) Environmental Tech (Title) 8/18/22 (Date) 0645 (Time)

Appendix D

Soil Vapor Sampling Collection Logs

COP5_West_90129_WA_Seattle, 30064302, King County, , Seattle, 98105, WA, US, Brooklyn Ave NE, 4700

Created	2022-06-03 15:52:15 UTC by Trevor Bryant
Updated	2022-06-03 18:58:57 UTC by Trevor Bryant
Location	47.66284862071989, -122.31304281402595
Have you read the Quality Procedure (QP) and/or Technical Guidance Instruction (TGI) relevant to this use case?	Yes
Selecting "Yes" confirms your digital signature as having read the QP and/or TGI relevant to this use case.	

General Information

Office Name	Seattle
Office Address	1100 Olive way, Suite 800, Seattle, WA 98101
Select Project Number	30064302, Chevron Environmental Management Company, COP5_West_90129_WA_Seattle
Client	Chevron Environmental Management Company
Project Name	COP5_West_90129_WA_Seattle
Project Number	30064302
Site Address	4700 Brooklyn Ave NE Seattle, WA 98105
Field Manager	Ada Hamilton
Phone Number	111-111-1111
Special Instructions (specific analyte list, site specific instructions, specific contacts, etc.)	None
Email Address for Result Reporting	Ada.Hamilton@arcadis.com
Leak Test Method	Helium Tracer Test
Helium Detector Used	MGD-2002

Sampler Details

Sampler Name	Trevor Bryant
Sampler Phone Number	111-111-1111
Sampler Email Address	trevor.bryant@arcadis.com

Lab Sample Information

Sample Media Type	Summa
Sample Media Size	1 L
Lab	F&B

EB-1

Sample Collection Information

Sample Type	Equipment Blank
When you are entering Dup information into Sample ID, ensure it matches exactly as its parent sample "Duplicate Sample ID" value. This data is essential for reporting to function correctly.	
Sample ID	EB-1
Sample Location Description	By SVP-3
Create a separate child record to enter all the associated information related to Duplicate Sample	
Date	2022-06-03

Sample Media ID	8531
Flow Controller ID	241
Sample Collection Start Time	09:00
Starting Sampling Pressure (inches of Mercury)	-29.5
Ending Sampling Pressure (inches of Mercury)	-5
Sample Collection End Time	09:04
Notes	Shut in pass
Photos	

Leak/Tracer Test

Shroud Helium Concentration should be at least 40% (10% in CA)	
Helium Reading in Purged Vapor should be <10% (<5% in CA) of shroud concentration - 4% (2% in CA) for a 40% shroud concentration.	
Inner Tubing Radius (in)	0.09375
Purge volume = 3 x pi x inner radius of tubing2 xlength of tubing (length of tubing depends on length of sample train, and depth of sample point (for SVMPS, for vapor pins, it only depends on sample train length)	

SVP-3

Sample Collection Information

Sample Type	Regular Sample
Location ID	SVP-3
When you are entering Dup information into Sample ID, ensure it matches exactly as its parent sample "Duplicate Sample ID" value. This data is essential for reporting to function correctly.	
Sample ID	SVP-3
Sample Location Description	In front of costa's on sidewalk. West of MW-31
Is Duplicate associated with this Sample ID	No
Create a separate child record to enter all the associated information related to Duplicate Sample	
Date	2022-06-03
Sampling Depth (feet)	5
Sample Media ID	4178
Flow Controller ID	301

Sample Collection Start Time	09:42
Starting Sampling Pressure (inches of Mercury)	-29.5
Ending Sampling Pressure (inches of Mercury)	-5
Sample Collection End Time	09:46
Notes	None
Photos	 

Leak/Tracer Test

Shut in Test	Pass

Pre-sample Helium Purge Reading (parts per million)	0
Shroud Helium Concentration should be at least 40% (10% in CA)	
Shroud Helium Concentration (%)	60
Helium Reading in Purged Vapor should be <10% (<5% in CA) of shroud concentration - 4% (2% in CA) for a 40% shroud concentration.	
Helium Reading in Purged Vapor (%)	0
Helium Test	Pass
Purge Method	Pump
Tubing Length (in)	84
Inner Tubing Radius (in)	0.09375
Inner Tubing Radius (in)	0.09375
Purge volume = 3 x pi x inner radius of tubing2 xlength of tubing (length of tubing depends on length of sample train, and depth of sample point (for SVMPS, for vapor pins, it only depends on sample train length)	
Tubing Volume (milliliters)	38.02
Purge Volume (milliliters)	114.06
Purge Rate (mL/min)	150
Purge Induced Vacuum	No

Purged Soil Gas Parameters (completed after sample collection)

Which parameter are going to be analyzed	CH4 (%), CO2, O2, PID
CH4 (%) (use carbon filter)	0
CO2 (%)	2
O2 (%)	19.1
PID (parts per million)	0.2

SVP-1

Sample Collection Information

Sample Type	Regular Sample
Location ID	SVP-1
When you are entering Dup information into Sample ID, ensure it matches exactly as its parent sample "Duplicate Sample ID" value. This data is essential for reporting to function correctly.	
Sample ID	SVP-1
Sample Location Description	Bank of America planter
Is Duplicate associated with this Sample ID	Yes
Duplicate Sample ID	DUP-1
Create a separate child record to enter all the associated information related to Duplicate Sample	
Date	2022-06-03
Sampling Depth (feet)	6
Sample Media ID	8346
Flow Controller ID	55
Sample Collection Start Time	10:56
Starting Sampling Pressure (inches of Mercury)	-30
Ending Sampling Pressure (inches of Mercury)	-4
Sample Collection End Time	11:01
Notes	None

Photos

Leak/Tracer Test

Shut in Test	Pass
Pre-sample Helium Purge Reading (parts per million)	0
Shroud Helium Concentration should be at least 40% (10% in CA)	
Shroud Helium Concentration (%)	70
Helium Reading in Purged Vapor should be <10% (<5% in CA) of shroud concentration - 4% (2% in CA) for a 40% shroud concentration.	
Helium Reading in Purged Vapor (%)	0
Helium Test	Pass
Purge Method	Pump
Tubing Length (in)	96
Inner Tubing Radius (in)	0.09375

Inner Tubing Radius (in)	0.09375
Purge volume = 3 x pi x inner radius of tubing2 xlength of tubing (length of tubing depends on length of sample train, and depth of sample point (for SVMPS, for vapor pins, it only depends on sample train length)	
Tubing Volume (milliliters)	43.45
Purge Volume (milliliters)	130.35001
Purge Rate (mL/min)	150
Purge Induced Vacuum	No

Purged Soil Gas Parameters (completed after sample collection)

Which parameter are going to be analyzed	CH4 (%), CO2, O2, PID
CH4 (%) (use carbon filter)	0
CO2 (%)	1.8
O2 (%)	19.2
PID (parts per million)	0.01

DUP-1

Sample Collection Information

Sample Type	Duplicate Sample
When you are entering Dup information into Sample ID, ensure it matches exactly as its parent sample "Duplicate Sample ID" value. This data is essential for reporting to function correctly.	
Sample ID	DUP-1
Sample Location Description	SVP-1
Create a separate child record to enter all the associated information related to Duplicate Sample	
Date	2022-06-03
Sampling Depth (feet)	6
Sample Media ID	4185
Flow Controller ID	61
Is the Start and Stop Time same as its parent sample?	No
Sample Collection Start Time	10:56
Starting Sampling Pressure (inches of Mercury)	-29
Ending Sampling Pressure (inches of Mercury)	-5
Sample Collection End Time	11:00
Notes	None

Photos	
If Leak/Tracer test same as its parent sample?	Yes

Leak/Tracer Test

Shroud Helium Concentration should be at least 40% (10% in CA)	
Helium Reading in Purged Vapor should be <10% (<5% in CA) of shroud concentration - 4% (2% in CA) for a 40% shroud concentration.	
Inner Tubing Radius (in)	0.09375
Purge volume = 3 x pi x inner radius of tubing2 xlength of tubing (length of tubing depends on length of sample train, and depth of sample point (for SVMPS, for vapor pins, it only depends on sample train length)	

2022-06-03, 10:53

Meteorological Data Date	2022-06-03
Time	10:53
Outdoor Temperature (Degree F)	65
Relative Humidity (%)	90
Barometric Pressure (inches of Mercury)	30
Are you connected to the internet via data plan or WiFi?	Yes
Get weather data from National Weather Service Website for your current location?	N/A
The weather source information is captured from NWS. The data in weather field is auto-populated based on your selection "are connected to wifi" = "yes". The data auto- populated comes in below format . Example below.: Temp is 23.6 degree F and Weather Condition is clear. The wind is blowing NE at 23 mph .	
Weather	13.3 wmoUnit:degC and Cloudy. The wind is blowing undefined at 12.96 wmoUnit:km_h-1.
General Notes or Observations	None
Have you performed work in accordance with the applicable QP/TGI?	Yes

Appendix E

Waste Manifest

29

Site Address: 4700 Brooklyn Avenue NE
Seattle, WA 98105

SC PPW 4/1/2022

WORK ORDER NO. DL2108992221

DOCUMENT NO. 1670049 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY	SHIPPER
Clean Harbors Grassy Mountain LLC	ATTN: Waste Management Center Chevron EMC - 90129
FACILITY EPA ID # UTD991301748	SHIPPER EPA ID # NONEREQUIRED
ADDRESS 3 Miles East 7 Miles North of Knolls	ADDRESS Waste Tracking Desk P.O. BOX 6004
CITY Grantsville STATE UT ZIP 84029	CITY San Ramon STATE CA ZIP 94583

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1X55 ~~2X55~~	DM		A. NON DOT REGULATED MATERIAL, (PETROLEUM IMPACTED CONTAMINATED NON-HAZARDOUS)	500	P
4X55	DM		B. NON DOT REGULATED MATERIAL, (PETROLEUM IMPACTED SOIL (NON HAZARDOUS))	1800	P
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 424-9300 GENERATOR: Chevron EMC - 90129
A.CH1963712 B.CH1963734 1) H132 2) H132

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

20220024 99

	PRINT	SIGN	DATE
SHIPPER	Jason Bryant on Behalf of CHEVRON		6/01/22
TRANSPORTER 1	Jim Redden		6/02/22
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	Ashton Matthews		6/2/22

1

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material.

CHI 107

Clean Harbors Manifest Addendum

Generator ID Number:		Sales Order Number:
NONEREQUIRED	BOL1670049	2108992221

Chevron EMC - 90129
4700 Brooklyn Avenue NE
Seattle, WA98105

[redacted]

A.	CH1963712	RETAIL - IMPACTED PURGE/GROUNDWATER (NON HAZ)	
		CH Container #	Customer Container #
		C000000029	
		C000000030	
B.	CH1963734	RETAIL - IMPACTED SOIL (NON HAZARDOUS)	
		CH Container #	Customer Container #
		C000000031	
		C000000032	
		C000000033	
		C000000034	

Appendix F

Soil Lab Data

ANALYTICAL REPORT

June 20, 2022

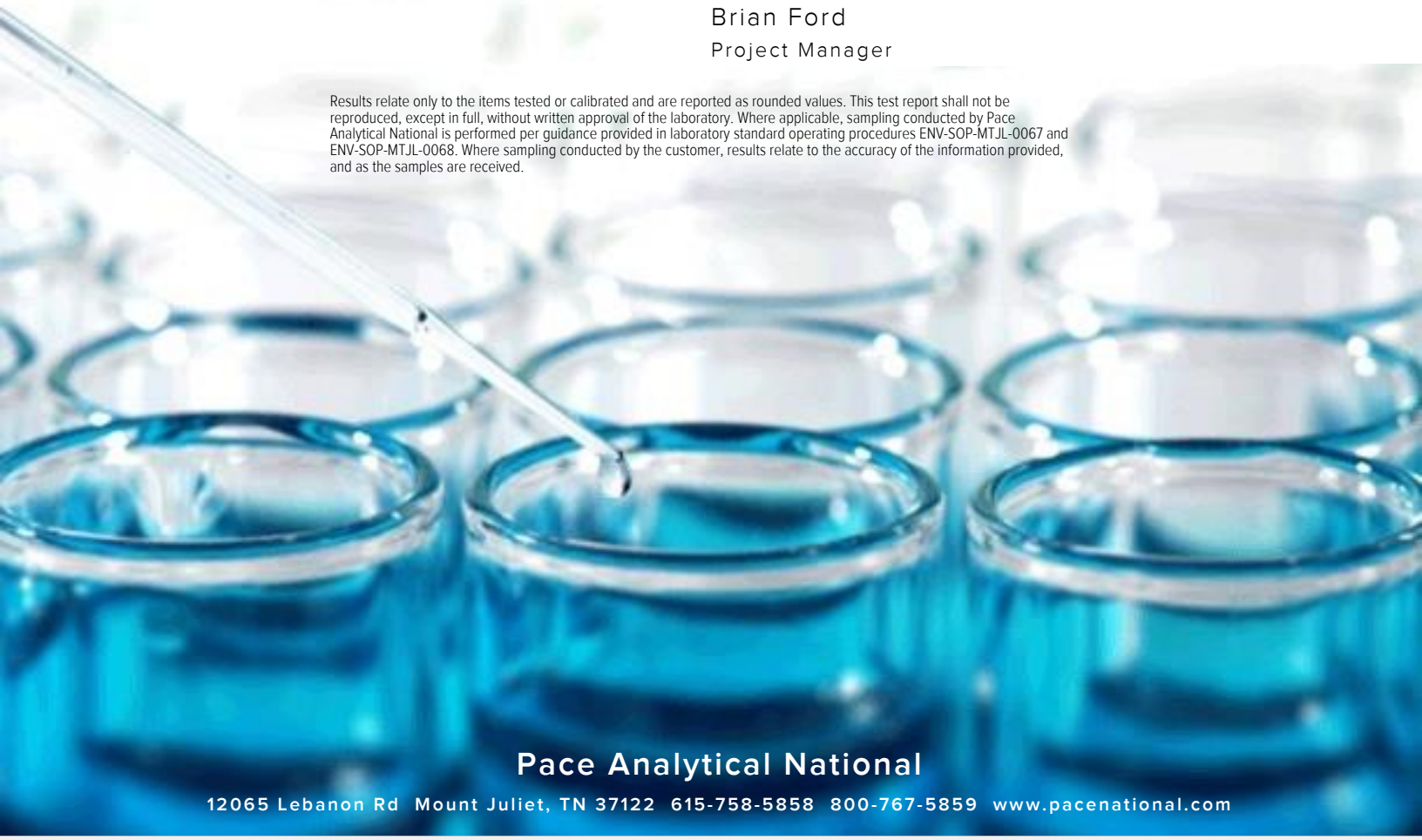
Arcadis - Chevron - WA

Sample Delivery Group:	L1500940
Samples Received:	06/03/2022
Project Number:	30064302 07.41
Description:	90129
Site:	4700 BROOKLYN AVE NE SEATTLE
Report To:	Ada Hamilton 1100 Olive Way Suite 800 Seattle, WA 98101

Entire Report Reviewed By:

Brian Ford

Project Manager



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-31-10_220601 L1500940-01 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 12:00 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:19	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 12:00	06/08/22 11:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 12:00	06/10/22 00:50	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 07:06	JAS	Mt. Juliet, TN

MW-31-5_220601 L1500940-02 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 11:00 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:22	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 11:00	06/08/22 11:55	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 11:00	06/10/22 01:09	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 02:30	JAS	Mt. Juliet, TN

MW-31-15_220601 L1500940-03 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 12:10 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:25	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 12:10	06/08/22 12:18	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 12:10	06/10/22 01:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 02:43	JAS	Mt. Juliet, TN

MW-31-20_220601 L1500940-04 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 12:40 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:33	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 12:40	06/08/22 12:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 12:40	06/10/22 01:48	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 02:56	JAS	Mt. Juliet, TN

MW-31-25_220601 L1500940-05 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 12:50 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:35	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 12:50	06/08/22 13:04	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 12:50	06/10/22 02:07	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 04:16	JAS	Mt. Juliet, TN

SVP-3-2.5_220601 L1500940-06 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 12:55 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:07	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 12:55	06/08/22 13:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 12:55	06/10/22 02:25	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 04:29	JAS	Mt. Juliet, TN

SVP-3-5_220601 L1500940-07 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 13:00 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:38	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 13:00	06/08/22 13:50	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 13:00	06/10/22 02:45	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 04:42	JAS	Mt. Juliet, TN

MW-30-5_220602 L1500940-08 Solid

Collected by: Brian Pauley | Collected date/time: 06/02/22 09:35 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:40	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/02/22 09:35	06/08/22 14:13	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/02/22 09:35	06/10/22 03:03	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879850	1	06/15/22 23:56	06/16/22 11:28	JAS	Mt. Juliet, TN

MW-30-10_220602 L1500940-09 Solid

Collected by: Brian Pauley | Collected date/time: 06/02/22 10:30 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:43	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/02/22 10:30	06/08/22 14:35	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/02/22 10:30	06/10/22 03:22	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879850	1	06/15/22 23:56	06/16/22 10:42	JAS	Mt. Juliet, TN

MW-30-15_220602 L1500940-10 Solid

Collected by: Brian Pauley | Collected date/time: 06/02/22 10:45 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876096	1	06/09/22 13:28	06/09/22 13:35	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:46	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/02/22 10:45	06/08/22 14:58	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/02/22 10:45	06/10/22 03:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879850	1	06/15/22 23:56	06/16/22 10:56	JAS	Mt. Juliet, TN

MW-30-20_220602 L1500940-11 Solid

Collected by: Brian Pauley | Collected date/time: 06/02/22 10:50 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876097	1	06/09/22 11:13	06/09/22 11:19	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:48	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/02/22 10:50	06/08/22 15:21	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/02/22 10:50	06/10/22 04:00	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879850	1	06/15/22 23:56	06/16/22 11:15	JAS	Mt. Juliet, TN

MW-30-25_220602 L1500940-12 Solid

Collected by: Brian Pauley | Collected date/time: 06/02/22 11:00 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876097	1	06/09/22 11:13	06/09/22 11:19	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:51	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/02/22 11:00	06/08/22 15:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/02/22 11:00	06/10/22 04:19	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879850	1	06/15/22 23:56	06/16/22 11:15	JAS	Mt. Juliet, TN

FD-1_220601 L1500940-13 Solid

Collected by: Brian Pauley | Collected date/time: 06/01/22 00:00 | Received date/time: 06/03/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1876097	1	06/09/22 11:13	06/09/22 11:19	CMK	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1876897	1	06/16/22 11:20	06/17/22 16:53	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1875992	25	06/01/22 00:00	06/08/22 17:49	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1877111	1	06/01/22 00:00	06/10/22 04:39	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1879138	1	06/14/22 23:00	06/15/22 04:55	JAS	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.78		0.231	0.556	1	06/17/2022 16:19	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.31	B J	1.05	3.09	25	06/08/2022 11:32	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 11:32*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000578	0.00124	1	06/10/2022 00:50	WG1877111
Toluene	0.00587	J	0.00161	0.00619	1	06/10/2022 00:50	WG1877111
Ethylbenzene	U		0.000912	0.00309	1	06/10/2022 00:50	WG1877111
Total Xylenes	0.00524	J	0.00109	0.00805	1	06/10/2022 00:50	WG1877111
Methyl tert-butyl ether	U		0.000433	0.00124	1	06/10/2022 00:50	WG1877111
1,2-Dichloroethane	U		0.000803	0.00309	1	06/10/2022 00:50	WG1877111
Naphthalene	U		0.00604	0.0155	1	06/10/2022 00:50	WG1877111
(S) Toluene-d8	*96.6*			*75.0-131*		*06/10/2022 00:50*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 00:50*	WG1877111
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/10/2022 00:50*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.48	4.45	1	06/15/2022 07:06	WG1879138
Residual Range Organics (RRO)	6.23	J	3.70	11.1	1	06/15/2022 07:06	WG1879138
(S) o-Terphenyl	*67.6*			*18.0-148*		*06/15/2022 07:06*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.3		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.53		0.244	0.586	1	06/17/2022 16:22	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.24	3.66	25	06/08/2022 11:55	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 11:55*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000683	0.00146	1	06/10/2022 01:09	WG1877111
Toluene	U		0.00190	0.00731	1	06/10/2022 01:09	WG1877111
Ethylbenzene	U		0.00108	0.00366	1	06/10/2022 01:09	WG1877111
Total Xylenes	U		0.00129	0.00951	1	06/10/2022 01:09	WG1877111
Methyl tert-butyl ether	U		0.000512	0.00146	1	06/10/2022 01:09	WG1877111
1,2-Dichloroethane	U		0.000949	0.00366	1	06/10/2022 01:09	WG1877111
Naphthalene	U		0.00714	0.0183	1	06/10/2022 01:09	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 01:09*	WG1877111
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/10/2022 01:09*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*06/10/2022 01:09*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.56	4.69	1	06/15/2022 02:30	WG1879138
Residual Range Organics (RRO)	U		3.90	11.7	1	06/15/2022 02:30	WG1879138
(S) o-Terphenyl	*53.3*			*18.0-148*		*06/15/2022 02:30*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.33		0.254	0.611	1	06/17/2022 16:25	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.26	3.71	25	06/08/2022 12:18	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 12:18*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000693	0.00148	1	06/10/2022 01:29	WG1877111
Toluene	U		0.00193	0.00742	1	06/10/2022 01:29	WG1877111
Ethylbenzene	U		0.00109	0.00371	1	06/10/2022 01:29	WG1877111
Total Xylenes	0.00224	J	0.00131	0.00965	1	06/10/2022 01:29	WG1877111
Methyl tert-butyl ether	U		0.000520	0.00148	1	06/10/2022 01:29	WG1877111
1,2-Dichloroethane	U		0.000964	0.00371	1	06/10/2022 01:29	WG1877111
Naphthalene	U		0.00725	0.0186	1	06/10/2022 01:29	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 01:29*	WG1877111
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*06/10/2022 01:29*	WG1877111
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/10/2022 01:29*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.62	4.89	1	06/15/2022 02:43	WG1879138
Residual Range Organics (RRO)	U		4.07	12.2	1	06/15/2022 02:43	WG1879138
(S) o-Terphenyl	*59.0*			*18.0-148*		*06/15/2022 02:43*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.4		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.76		0.256	0.614	1	06/17/2022 16:33	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.93	B J	1.26	3.71	25	06/08/2022 12:41	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 12:41*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0404		0.000693	0.00148	1	06/10/2022 01:48	WG1877111
Toluene	0.00587	J	0.00193	0.00742	1	06/10/2022 01:48	WG1877111
Ethylbenzene	U		0.00109	0.00371	1	06/10/2022 01:48	WG1877111
Total Xylenes	0.00147	J	0.00131	0.00964	1	06/10/2022 01:48	WG1877111
Methyl tert-butyl ether	U		0.000519	0.00148	1	06/10/2022 01:48	WG1877111
1,2-Dichloroethane	U		0.000963	0.00371	1	06/10/2022 01:48	WG1877111
Naphthalene	U		0.00724	0.0185	1	06/10/2022 01:48	WG1877111
(S) Toluene-d8	*98.2*			*75.0-131*		*06/10/2022 01:48*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 01:48*	WG1877111
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*		*06/10/2022 01:48*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.63	4.91	1	06/15/2022 02:56	WG1879138
Residual Range Organics (RRO)	U		4.09	12.3	1	06/15/2022 02:56	WG1879138
(S) o-Terphenyl	*66.3*			*18.0-148*		*06/15/2022 02:56*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.82		0.256	0.616	1	06/17/2022 16:35	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.47	B J	1.29	3.82	25	06/08/2022 13:04	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:04*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0858		0.000713	0.00153	1	06/10/2022 02:07	WG1877111
Toluene	0.0146		0.00198	0.00763	1	06/10/2022 02:07	WG1877111
Ethylbenzene	U		0.00112	0.00382	1	06/10/2022 02:07	WG1877111
Total Xylenes	U		0.00134	0.00992	1	06/10/2022 02:07	WG1877111
Methyl tert-butyl ether	U		0.000534	0.00153	1	06/10/2022 02:07	WG1877111
1,2-Dichloroethane	U		0.000991	0.00382	1	06/10/2022 02:07	WG1877111
Naphthalene	U		0.00745	0.0191	1	06/10/2022 02:07	WG1877111
(S) Toluene-d8	*97.2*			*75.0-131*		*06/10/2022 02:07*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 02:07*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 02:07*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.64	4.93	1	06/15/2022 04:16	WG1879138
Residual Range Organics (RRO)	U		4.10	12.3	1	06/15/2022 04:16	WG1879138
(S) o-Terphenyl	*51.1*			*18.0-148*		*06/15/2022 04:16*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.65		0.225	0.542	1	06/17/2022 16:07	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		0.999	2.94	25	06/08/2022 13:27	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:27*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000550	0.00118	1	06/10/2022 02:25	WG1877111
Toluene	U		0.00153	0.00589	1	06/10/2022 02:25	WG1877111
Ethylbenzene	U		0.000868	0.00294	1	06/10/2022 02:25	WG1877111
Total Xylenes	U		0.00104	0.00765	1	06/10/2022 02:25	WG1877111
Methyl tert-butyl ether	U		0.000412	0.00118	1	06/10/2022 02:25	WG1877111
1,2-Dichloroethane	U		0.000764	0.00294	1	06/10/2022 02:25	WG1877111
Naphthalene	U		0.00575	0.0147	1	06/10/2022 02:25	WG1877111
(S) Toluene-d8	*97.2*			*75.0-131*		*06/10/2022 02:25*	WG1877111
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*06/10/2022 02:25*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 02:25*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.44	4.33	1	06/15/2022 04:29	WG1879138
Residual Range Organics (RRO)	U		3.61	10.8	1	06/15/2022 04:29	WG1879138
(S) o-Terphenyl	*60.3*			*18.0-148*		*06/15/2022 04:29*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.2		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.17		0.231	0.554	1	06/17/2022 16:38	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.04	3.08	25	06/08/2022 13:50	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:50*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000575	0.00123	1	06/10/2022 02:45	WG1877111
Toluene	U		0.00160	0.00616	1	06/10/2022 02:45	WG1877111
Ethylbenzene	U		0.000908	0.00308	1	06/10/2022 02:45	WG1877111
Total Xylenes	U		0.00108	0.00801	1	06/10/2022 02:45	WG1877111
Methyl tert-butyl ether	U		0.000431	0.00123	1	06/10/2022 02:45	WG1877111
1,2-Dichloroethane	U		0.000800	0.00308	1	06/10/2022 02:45	WG1877111
Naphthalene	U		0.00601	0.0154	1	06/10/2022 02:45	WG1877111
(S) Toluene-d8	*98.8*			*75.0-131*		*06/10/2022 02:45*	WG1877111
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*06/10/2022 02:45*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*06/10/2022 02:45*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.47	4.43	1	06/15/2022 04:42	WG1879138
Residual Range Organics (RRO)	U		3.69	11.1	1	06/15/2022 04:42	WG1879138
(S) o-Terphenyl	*63.6*			*18.0-148*		*06/15/2022 04:42*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.6		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.95		0.249	0.598	1	06/17/2022 16:40	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.21	3.56	25	06/08/2022 14:13	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:13*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000666	0.00143	1	06/10/2022 03:03	WG1877111
Toluene	U		0.00185	0.00713	1	06/10/2022 03:03	WG1877111
Ethylbenzene	U		0.00105	0.00356	1	06/10/2022 03:03	WG1877111
Total Xylenes	0.00153	J	0.00125	0.00927	1	06/10/2022 03:03	WG1877111
Methyl tert-butyl ether	U		0.000499	0.00143	1	06/10/2022 03:03	WG1877111
1,2-Dichloroethane	U		0.000925	0.00356	1	06/10/2022 03:03	WG1877111
Naphthalene	U		0.00696	0.0178	1	06/10/2022 03:03	WG1877111
(S) Toluene-d8	*96.1*			*75.0-131*		*06/10/2022 03:03*	WG1877111
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*06/10/2022 03:03*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*06/10/2022 03:03*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.59	4.79	1	06/16/2022 11:28	WG1879850
Residual Range Organics (RRO)	U		3.98	12.0	1	06/16/2022 11:28	WG1879850
(S) o-Terphenyl	*62.5*			*18.0-148*		*06/16/2022 11:28*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.85		0.232	0.557	1	06/17/2022 16:43	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.05	B J	1.05	3.09	25	06/08/2022 14:35	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:35*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000576	0.00123	1	06/10/2022 03:22	WG1877111
Toluene	U		0.00160	0.00617	1	06/10/2022 03:22	WG1877111
Ethylbenzene	U		0.000910	0.00309	1	06/10/2022 03:22	WG1877111
Total Xylenes	0.00120	J	0.00109	0.00802	1	06/10/2022 03:22	WG1877111
Methyl tert-butyl ether	U		0.000432	0.00123	1	06/10/2022 03:22	WG1877111
1,2-Dichloroethane	U		0.000801	0.00309	1	06/10/2022 03:22	WG1877111
Naphthalene	U		0.00602	0.0154	1	06/10/2022 03:22	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 03:22*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 03:22*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*06/10/2022 03:22*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.48	4.46	1	06/16/2022 10:42	WG1879850
Residual Range Organics (RRO)	U		3.71	11.1	1	06/16/2022 10:42	WG1879850
(S) o-Terphenyl	*72.8*			*18.0-148*		*06/16/2022 10:42*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.87		0.237	0.569	1	06/17/2022 16:46	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.18	B J	1.10	3.23	25	06/08/2022 14:58	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:58*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000604	0.00129	1	06/10/2022 03:41	WG1877111
Toluene	U		0.00168	0.00647	1	06/10/2022 03:41	WG1877111
Ethylbenzene	U		0.000954	0.00323	1	06/10/2022 03:41	WG1877111
Total Xylenes	U		0.00114	0.00841	1	06/10/2022 03:41	WG1877111
Methyl tert-butyl ether	U		0.000453	0.00129	1	06/10/2022 03:41	WG1877111
1,2-Dichloroethane	U		0.000840	0.00323	1	06/10/2022 03:41	WG1877111
Naphthalene	U		0.00631	0.0162	1	06/10/2022 03:41	WG1877111
(S) Toluene-d8	*96.7*			*75.0-131*		*06/10/2022 03:41*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 03:41*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.1*			*70.0-130*		*06/10/2022 03:41*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.51	4.55	1	06/16/2022 10:56	WG1879850
Residual Range Organics (RRO)	U		3.79	11.4	1	06/16/2022 10:56	WG1879850
(S) o-Terphenyl	*59.4*			*18.0-148*		*06/16/2022 10:56*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.8		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.00		0.240	0.576	1	06/17/2022 16:48	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.14	3.36	25	06/08/2022 15:21	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 15:21*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000627	0.00134	1	06/10/2022 04:00	WG1877111
Toluene	U		0.00175	0.00672	1	06/10/2022 04:00	WG1877111
Ethylbenzene	U		0.000990	0.00336	1	06/10/2022 04:00	WG1877111
Total Xylenes	U		0.00118	0.00873	1	06/10/2022 04:00	WG1877111
Methyl tert-butyl ether	U		0.000470	0.00134	1	06/10/2022 04:00	WG1877111
1,2-Dichloroethane	U		0.000872	0.00336	1	06/10/2022 04:00	WG1877111
Naphthalene	U		0.00655	0.0168	1	06/10/2022 04:00	WG1877111
(S) Toluene-d8	*96.8*			*75.0-131*		*06/10/2022 04:00*	WG1877111
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*06/10/2022 04:00*	WG1877111
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*		*06/10/2022 04:00*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	1.54	J	1.53	4.61	1	06/16/2022 11:15	WG1879850
Residual Range Organics (RRO)	5.91	J	3.84	11.5	1	06/16/2022 11:15	WG1879850
(S) o-Terphenyl	*61.4*			*18.0-148*		*06/16/2022 11:15*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.2		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.35		0.250	0.601	1	06/17/2022 16:51	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.23	3.62	25	06/08/2022 15:44	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 15:44*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000677	0.00145	1	06/10/2022 04:19	WG1877111
Toluene	U		0.00188	0.00725	1	06/10/2022 04:19	WG1877111
Ethylbenzene	U		0.00107	0.00362	1	06/10/2022 04:19	WG1877111
Total Xylenes	U		0.00128	0.00942	1	06/10/2022 04:19	WG1877111
Methyl tert-butyl ether	U		0.000507	0.00145	1	06/10/2022 04:19	WG1877111
1,2-Dichloroethane	U		0.000941	0.00362	1	06/10/2022 04:19	WG1877111
Naphthalene	U		0.00708	0.0181	1	06/10/2022 04:19	WG1877111
(S) Toluene-d8	*98.2*			*75.0-131*		*06/10/2022 04:19*	WG1877111
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*06/10/2022 04:19*	WG1877111
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*		*06/10/2022 04:19*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	2.15	J	1.60	4.81	1	06/16/2022 11:15	WG1879850
Residual Range Organics (RRO)	23.1		4.00	12.0	1	06/16/2022 11:15	WG1879850
(S) o-Terphenyl	*61.5*			*18.0-148*		*06/16/2022 11:15*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.06		0.252	0.607	1	06/17/2022 16:53	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.77	B J	1.25	3.69	25	06/08/2022 17:49	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 17:49*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0442		0.000690	0.00148	1	06/10/2022 04:39	WG1877111
Toluene	0.00607	J	0.00192	0.00739	1	06/10/2022 04:39	WG1877111
Ethylbenzene	U		0.00109	0.00369	1	06/10/2022 04:39	WG1877111
Total Xylenes	U		0.00130	0.00960	1	06/10/2022 04:39	WG1877111
Methyl tert-butyl ether	U		0.000517	0.00148	1	06/10/2022 04:39	WG1877111
1,2-Dichloroethane	U		0.000959	0.00369	1	06/10/2022 04:39	WG1877111
Naphthalene	U		0.00721	0.0185	1	06/10/2022 04:39	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 04:39*	WG1877111
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/10/2022 04:39*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 04:39*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.61	4.85	1	06/15/2022 04:55	WG1879138
Residual Range Organics (RRO)	U		4.04	12.1	1	06/15/2022 04:55	WG1879138
(S) o-Terphenyl	*48.1*			*18.0-148*		*06/15/2022 04:55*	WG1879138

Method Blank (MB)

(MB) R3801582-1 06/09/22 13:35

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1500940-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1500940-07 06/09/22 13:35 • (DUP) R3801582-3 06/09/22 13:35

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.2	90.0	1	0.217		10

Laboratory Control Sample (LCS)

(LCS) R3801582-2 06/09/22 13:35

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3801691-1 06/09/22 11:19

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1500940-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1500940-11 06/09/22 11:19 • (DUP) R3801691-3 06/09/22 11:19

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.8	89.6	1	3.11		10

Laboratory Control Sample (LCS)

(LCS) R3801691-2 06/09/22 11:19

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3804819-7 06/17/22 16:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3804819-8 06/17/22 16:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	101	101	80.0-120	

L1500940-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500940-06 06/17/22 16:07 • (MS) R3804819-11 06/17/22 16:14 • (MSD) R3804819-12 06/17/22 16:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	108	1.65	99.4	99.9	90.3	90.7	1	75.0-125			0.517	20

Method Blank (MB)

(MB) R3801281-2 06/08/22 09:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	1.03	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3801281-1 06/08/22 07:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	4.95	90.0	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

L1500940-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500940-01 06/08/22 11:32 • (MS) R3801281-3 06/08/22 18:11 • (MSD) R3801281-4 06/08/22 18:34

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	152	1.31	134	126	86.9	82.1	25	50.0-150			5.71	27
(S) a,a,a-Trifluorotoluene(FID)					*107*	*106*		*77.0-120*				

Method Blank (MB)

(MB) R3802182-3 06/10/22 00:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
Methyl tert-butyl ether	U		0.000350	0.00100
1,2-Dichloroethane	U		0.000649	0.00250
Naphthalene	U		0.00488	0.0125
(S) Toluene-d8	*97.2*			*75.0-131*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3802182-1 06/09/22 23:13 • (LCSD) R3802182-2 06/09/22 23:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.112	0.120	89.6	96.0	70.0-123			6.90	20
Toluene	0.125	0.107	0.117	85.6	93.6	75.0-121			8.93	20
Ethylbenzene	0.125	0.103	0.115	82.4	92.0	74.0-126			11.0	20
Xylenes, Total	0.375	0.322	0.342	85.9	91.2	72.0-127			6.02	20
Methyl tert-butyl ether	0.125	0.135	0.147	108	118	66.0-132			8.51	20
1,2-Dichloroethane	0.125	0.129	0.138	103	110	65.0-131			6.74	20
Naphthalene	0.125	0.120	0.134	96.0	107	59.0-130			11.0	20
(S) Toluene-d8				*94.7*	*95.7*	*75.0-131*				
(S) 4-Bromofluorobenzene				*106*	*105*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*109*	*111*	*70.0-130*				

L1501373-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1501373-04 06/10/22 06:33 • (MS) R3802182-4 06/10/22 07:12 • (MSD) R3802182-5 06/10/22 07:31

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.119	0.121	95.2	96.8	1	10.0-149			1.67	37
Toluene	0.125	U	0.120	0.123	96.0	98.4	1	10.0-156			2.47	38
Ethylbenzene	0.125	U	0.111	0.118	88.8	94.4	1	10.0-160			6.11	38
Xylenes, Total	0.375	U	0.333	0.357	88.8	95.2	1	10.0-160			6.96	38
Methyl tert-butyl ether	0.125	U	0.113	0.110	90.4	88.0	1	11.0-147			2.69	35
1,2-Dichloroethane	0.125	U	0.121	0.125	96.8	100	1	10.0-148			3.25	35
Naphthalene	0.125	U	0.127	0.136	102	109	1	10.0-160			6.84	36

L1501373-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1501373-04 06/10/22 06:33 • (MS) R3802182-4 06/10/22 07:12 • (MSD) R3802182-5 06/10/22 07:31

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Toluene-d8					*96.8*	*97.8*		*75.0-131*				
(S) 4-Bromofluorobenzene					*104*	*104*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*102*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R3803310-1 06/15/22 02:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*60.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3803310-2 06/15/22 02:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	31.4	62.8	50.0-150	
(S) o-Terphenyl			*68.6*	*18.0-148*	

L1500940-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500940-04 06/15/22 02:56 • (MS) R3803310-3 06/15/22 03:09 • (MSD) R3803310-4 06/15/22 03:22

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	60.1	U	32.6	34.5	54.2	57.5	1	50.0-150			5.86	20
(S) o-Terphenyl					*54.0*	*55.8*		*18.0-148*				

Method Blank (MB)

(MB) R3803772-1 06/16/22 04:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*84.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3803772-2 06/16/22 05:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	35.5	71.0	50.0-150	
(S) o-Terphenyl			*70.6*	*18.0-148*	

L1500768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500768-01 06/16/22 11:38 • (MS) R3803772-3 06/16/22 11:52 • (MSD) R3803772-4 06/16/22 12:06

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	68.6	40.6	133	74.4	135	49.0	1	50.0-150		J3 J6	56.8	20
(S) o-Terphenyl					*52.6*	*32.5*		*18.0-148*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark/Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle WA

Please Circle: (PT) MT CT ET

Phone: 206-325-5254

Client Project #
30064302 07.41

Lab Project #
CHEVARCWA-90129

Collected by (print):
Brian Parby

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):
BP

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # B119
L1500940

Acctnum: CHEVARCWA
Template: T210050
Prelogin: P926560
PM: 110 - Brian Ford
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	BTEXMN/EDC 8260D 40mlAmb/MeOH10ml/Syr	NWTPHDX no silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	Total Lead 6010 8ozClr-NoPres	MTBE	Naphthalene				Remarks	Sample # (lab only)
MW-31-10	G	SS	10	6/1/22	1200	2	X	X	X	X	X	X					-01
MW-31-5	G	SS	5	6/1/22	1100	2	X	X	X	X	X	X					-02
MW-31-15	G	SS	15	6/1/22	1210	2	X	X	X	X	X	X					-03
MW-31-20	G	SS	20	6/1/22	1240	2	X	X	X	X	X	X					-04
MW-31-25	G	SS	25	6/1/22	1250	2	X	X	X	X	X	X					-05
SVP-3-2.5	G	SS	2.5	6/1/22	1255	2	X	X	X	X	X	X					-06
SVP-3-5	G	SS	5	6/1/22	1300	2	X	X	X	X	X	X					-07
MW-30-5	G	SS	5	6/2/22	0935	2	X	X	X	X	X	X					-08
MW-30-10	G	SS	10	6/2/22	1030	2	X	X	X	X	X	X					-09
MW-30-15	G	SS	15	6/2/22	1045	2	X	X	X	X	X	X					-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5433 8382 2832

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: ✓ Y __N
Bottles arrive intact: ✓ Y __N
Correct bottles used: ✓ Y __N
Sufficient volume sent: ✓ Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓ Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
L PA	6/2/22	1530	FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: JAA6 3.5+0=3.5 2p	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Weronika Sistek	Date: 6/3/22 Time: 0845	Hold: Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle, WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark/Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: **Seattle WA**

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302 07.41

Lab Project #
CHEVARCWA-90129

Collected by (print):
Brian Parley

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEXMN/EDC 8260D 40mlAmb/MeOH10ml/Syr	NWTPHDX no silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	Total Lead 6010 8ozClr-NoPres	MTBE	Naphthalene						
MW-30-20	G	SS	20	6/2/22	1050	2	X	X	X	X	X	X						-11
MW-30-25	G	SS	25	6/2/22	1100	2	X	X	X	X	X	X						-12
FD-1	G	SS	—	6/1/22	—	2	X	X	X	X	X	X						-13
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1500940

Table #

Acctnum: **CHEVARCWA**

Template: **T210050**

Prelogin: **P926560**

PM: **110 - Brian Ford**

PB:

Shipped Via:

Remarks | Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5433 8382 2832

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
1 DA	6/2/22	1330	FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: JAA 6.3 5 to 35 26	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/3/22 Time: 0845	Hold: Condition: NCF / OK

6/3-NCF-L1500940 CHEVARCWA

R5

Time estimate: oh **Time spent:** oh

Members

HM Hailey Melson (responsible) Brian Ford

Due on *7 June 2022 8:00 AM* for target *Done*

- [ ] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [x] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [x] PM initials:_____bjf_____
- [ ] Client Contact:_____

Comments

Hailey Melson *3 June 2022 2:29 PM*

Received ID: MW-31-2.5 @ 1100 not listed on COC.

Brian Ford *6 June 2022 11:44 AM*

place MW-31-2.5 @ 1100 on hold

Matthew Shacklock *6 June 2022 1:02 PM*

Done. Placed on -14

Appendix G

Groundwater Lab Data

ANALYTICAL REPORT

July 07, 2022

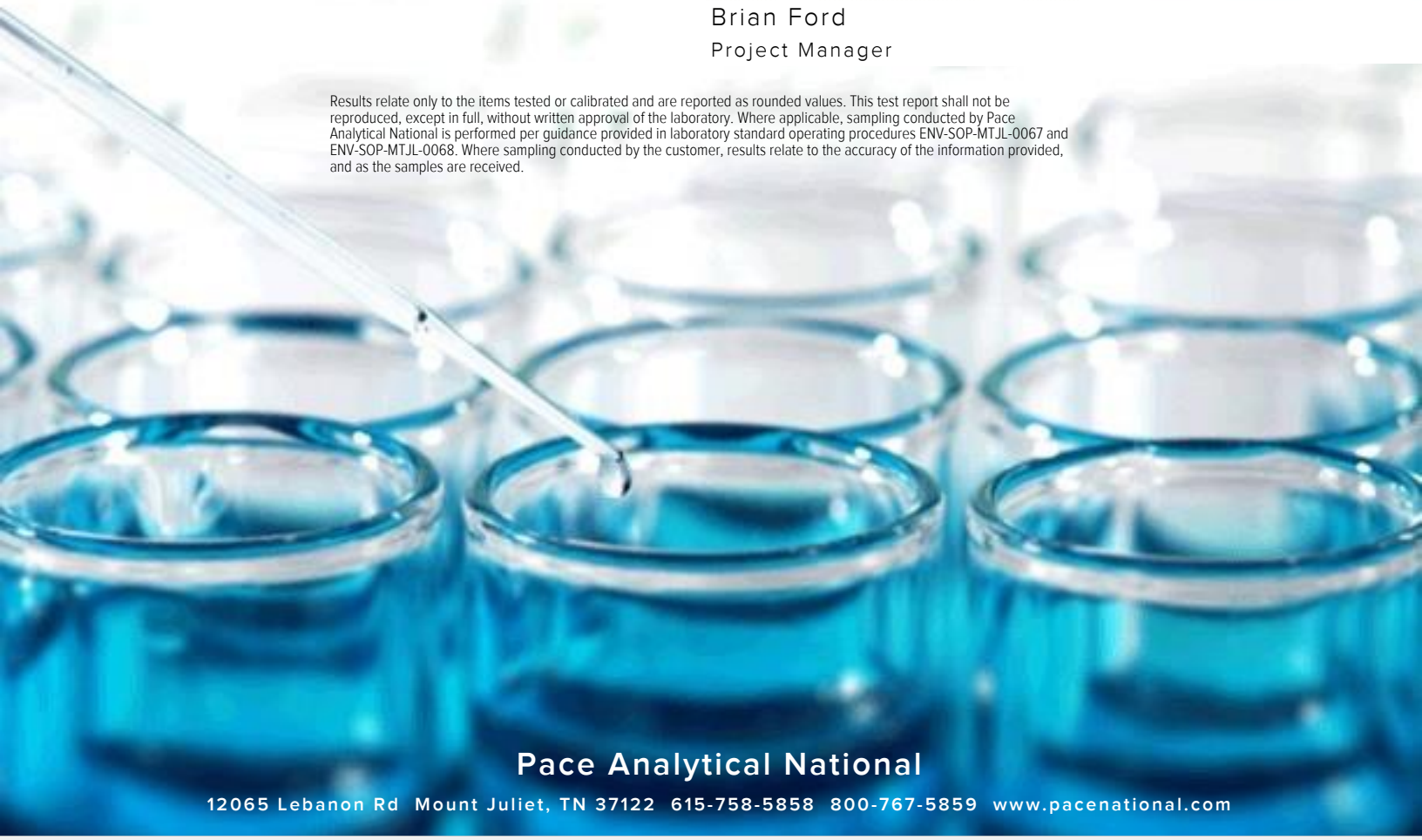
Arcadis - Chevron - WA

Sample Delivery Group:	L1505635
Samples Received:	06/16/2022
Project Number:	30064302.19.45
Description:	90129
Site:	4700 BROOKLYN AVE NE SEATTLE
Report To:	Ada Hamilton 1100 Olive Way Suite 800 Seattle, WA 98101

Entire Report Reviewed By:

Brian Ford

Project Manager



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-19-W-20220613 L1505635-01 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 10:27 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 13:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 17:29	06/20/22 17:29	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1881638	1	06/19/22 17:28	06/19/22 17:28	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1.07	06/20/22 12:55	06/21/22 00:32	HMH	Mt. Juliet, TN

MW-20-W-20220613 L1505635-02 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 11:14 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 13:57	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 17:51	06/20/22 17:51	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1881638	1	06/19/22 20:25	06/19/22 20:25	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883676	5	06/23/22 11:08	06/23/22 11:08	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1	06/20/22 12:55	06/21/22 00:08	HMH	Mt. Juliet, TN

MW-21-W-20220613 L1505635-03 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 11:57 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 14:00	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 18:12	06/20/22 18:12	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1881638	1	06/19/22 17:48	06/19/22 17:48	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1.05	06/20/22 12:55	06/21/22 00:56	HMH	Mt. Juliet, TN

MW-22-W-20220613 L1505635-04 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 12:27 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 14:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 18:34	06/20/22 18:34	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1881638	10	06/19/22 20:45	06/19/22 20:45	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883676	10	06/23/22 11:27	06/23/22 11:27	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1.01	06/20/22 12:55	06/21/22 01:08	HMH	Mt. Juliet, TN

MW-23-W-20220613 L1505635-05 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 12:57 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 14:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 18:55	06/20/22 18:55	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883931	10	06/23/22 16:58	06/23/22 16:58	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1	06/20/22 12:55	06/21/22 01:20	HMH	Mt. Juliet, TN

MW-27-W-20220613 L1505635-06 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 15:16 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 14:10	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 19:16	06/20/22 19:16	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883931	25	06/23/22 17:17	06/23/22 17:17	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1	06/20/22 12:55	06/21/22 01:32	HMH	Mt. Juliet, TN

MW-28-W-20220613 L1505635-07 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 15:52 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886033	1	07/07/22 03:54	07/07/22 14:13	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 19:38	06/20/22 19:38	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883931	20	06/23/22 17:37	06/23/22 17:37	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1.01	06/20/22 12:55	06/21/22 01:44	HMH	Mt. Juliet, TN

MW-31-W-20220613 L1505635-08 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 14:45 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886036	1	07/06/22 13:12	07/06/22 20:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 19:59	06/20/22 19:59	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883931	1	06/23/22 13:24	06/23/22 13:24	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1885163	20	06/24/22 14:53	06/24/22 14:53	JHH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1	06/20/22 12:55	06/21/22 01:56	HMH	Mt. Juliet, TN

BD-W-20220613 L1505635-09 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 12:00 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1886036	1	07/06/22 13:12	07/06/22 20:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1882381	1	06/20/22 20:21	06/20/22 20:21	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883931	1	06/23/22 18:16	06/23/22 18:16	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1885163	100	06/24/22 15:12	06/24/22 15:12	JHH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1882034	1.09	06/20/22 12:55	06/21/22 02:08	HMH	Mt. Juliet, TN

TB-1-20220613 L1505635-10 GW

Collected by: Andrew Waser | Collected date/time: 06/13/22 09:00 | Received date/time: 06/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1883779	1	06/22/22 18:28	06/22/22 18:28	JAH	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 13:53	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	51.6	B J	31.6	100	1	06/20/2022 17:29	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.9*			*78.0-120*		*06/20/2022 17:29*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0160	0.0400	1	06/19/2022 17:28	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 17:28	WG1881638
cis-1,2-Dichloroethene	U		0.0276	0.100	1	06/19/2022 17:28	WG1881638
trans-1,2-Dichloroethene	U		0.0572	0.200	1	06/19/2022 17:28	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 17:28	WG1881638
Methyl tert-butyl ether	U	C3	0.0118	0.0400	1	06/19/2022 17:28	WG1881638
Tetrachloroethene	0.172		0.0280	0.100	1	06/19/2022 17:28	WG1881638
Toluene	U		0.0500	0.200	1	06/19/2022 17:28	WG1881638
Trichloroethene	U		0.0160	0.0400	1	06/19/2022 17:28	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 17:28	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 17:28	WG1881638
(S) Toluene-d8	*110*			*75.0-131*		*06/19/2022 17:28*	WG1881638
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/19/2022 17:28*	WG1881638
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*		*06/19/2022 17:28*	WG1881638

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00574	0.0214	1.07	06/21/2022 00:32	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 13:57	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	111	B	31.6	100	1	06/20/2022 17:51	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*78.0-120*		*06/20/2022 17:51*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0160	0.0400	1	06/19/2022 20:25	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 20:25	WG1881638
cis-1,2-Dichloroethene	5.04		0.0276	0.100	1	06/19/2022 20:25	WG1881638
trans-1,2-Dichloroethene	0.253		0.0572	0.200	1	06/19/2022 20:25	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 20:25	WG1881638
Methyl tert-butyl ether	U	C3	0.0118	0.0400	1	06/19/2022 20:25	WG1881638
Tetrachloroethene	125		0.140	0.500	5	06/23/2022 11:08	WG1883676
Toluene	U		0.0500	0.200	1	06/19/2022 20:25	WG1881638
Trichloroethene	13.3		0.0160	0.0400	1	06/19/2022 20:25	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 20:25	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 20:25	WG1881638
(S) Toluene-d8	*114*			*75.0-131*		*06/19/2022 20:25*	WG1881638
(S) Toluene-d8	*96.1*			*75.0-131*		*06/23/2022 11:08*	WG1883676
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/19/2022 20:25*	WG1881638
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*		*06/23/2022 11:08*	WG1883676
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*06/19/2022 20:25*	WG1881638
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 11:08*	WG1883676

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 00:08	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:00	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	51.5	B J	31.6	100	1	06/20/2022 18:12	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*100*			*78.0-120*		*06/20/2022 18:12*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0160	0.0400	1	06/19/2022 17:48	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 17:48	WG1881638
cis-1,2-Dichloroethene	U		0.0276	0.100	1	06/19/2022 17:48	WG1881638
trans-1,2-Dichloroethene	U		0.0572	0.200	1	06/19/2022 17:48	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 17:48	WG1881638
Methyl tert-butyl ether	U	C3	0.0118	0.0400	1	06/19/2022 17:48	WG1881638
Tetrachloroethene	U		0.0280	0.100	1	06/19/2022 17:48	WG1881638
Toluene	U		0.0500	0.200	1	06/19/2022 17:48	WG1881638
Trichloroethene	U		0.0160	0.0400	1	06/19/2022 17:48	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 17:48	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 17:48	WG1881638
(S) Toluene-d8	*110*			*75.0-131*		*06/19/2022 17:48*	WG1881638
(S) 4-Bromofluorobenzene	*95.0*			*67.0-138*		*06/19/2022 17:48*	WG1881638
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*06/19/2022 17:48*	WG1881638

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00563	0.0210	1.05	06/21/2022 00:56	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:03	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	555	B	31.6	100	1	06/20/2022 18:34	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*78.0-120*		*06/20/2022 18:34*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	5.37		0.160	0.400	10	06/19/2022 20:45	WG1881638
1,2-Dichloroethane	U		0.190	1.00	10	06/19/2022 20:45	WG1881638
cis-1,2-Dichloroethene	504		0.276	1.00	10	06/19/2022 20:45	WG1881638
trans-1,2-Dichloroethene	7.28		0.572	2.00	10	06/19/2022 20:45	WG1881638
Ethylbenzene	U		0.212	1.00	10	06/19/2022 20:45	WG1881638
Methyl tert-butyl ether	U	C3	0.118	0.400	10	06/19/2022 20:45	WG1881638
Tetrachloroethene	0.510	J	0.280	1.00	10	06/23/2022 11:27	WG1883676
Toluene	U		0.500	2.00	10	06/19/2022 20:45	WG1881638
Trichloroethene	296		0.160	0.400	10	06/19/2022 20:45	WG1881638
Vinyl chloride	2.99		0.273	1.00	10	06/19/2022 20:45	WG1881638
Xylenes, Total	U		1.91	2.60	10	06/19/2022 20:45	WG1881638
(S) Toluene-d8	*109*			*75.0-131*		*06/19/2022 20:45*	WG1881638
(S) Toluene-d8	*96.5*			*75.0-131*		*06/23/2022 11:27*	WG1883676
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*06/19/2022 20:45*	WG1881638
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*06/23/2022 11:27*	WG1883676
(S) 1,2-Dichloroethane-d4	*88.5*			*70.0-130*		*06/19/2022 20:45*	WG1881638
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*06/23/2022 11:27*	WG1883676

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	06/21/2022 01:08	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:06	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	382	B	31.6	100	1	06/20/2022 18:55	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*78.0-120*		*06/20/2022 18:55*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	4.05		0.160	0.400	10	06/23/2022 16:58	WG1883931
1,2-Dichloroethane	U		0.190	1.00	10	06/23/2022 16:58	WG1883931
cis-1,2-Dichloroethene	436		0.276	1.00	10	06/23/2022 16:58	WG1883931
trans-1,2-Dichloroethene	16.3		0.572	2.00	10	06/23/2022 16:58	WG1883931
Ethylbenzene	U		0.212	1.00	10	06/23/2022 16:58	WG1883931
Methyl tert-butyl ether	U		0.118	0.400	10	06/23/2022 16:58	WG1883931
Tetrachloroethene	U		0.280	1.00	10	06/23/2022 16:58	WG1883931
Toluene	U		0.500	2.00	10	06/23/2022 16:58	WG1883931
Trichloroethene	43.2		0.160	0.400	10	06/23/2022 16:58	WG1883931
Vinyl chloride	3.75	C3	0.273	1.00	10	06/23/2022 16:58	WG1883931
Xylenes, Total	U		1.91	2.60	10	06/23/2022 16:58	WG1883931
(S) Toluene-d8	*96.6*			*75.0-131*		*06/23/2022 16:58*	WG1883931
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*06/23/2022 16:58*	WG1883931
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*06/23/2022 16:58*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:20	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:10	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2160		31.6	100	1	06/20/2022 19:16	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*06/20/2022 19:16*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	2.05		0.400	1.00	25	06/23/2022 17:17	WG1883931
1,2-Dichloroethane	U		0.475	2.50	25	06/23/2022 17:17	WG1883931
cis-1,2-Dichloroethene	270		0.690	2.50	25	06/23/2022 17:17	WG1883931
trans-1,2-Dichloroethene	43.9		1.43	5.00	25	06/23/2022 17:17	WG1883931
Ethylbenzene	9.40		0.530	2.50	25	06/23/2022 17:17	WG1883931
Methyl tert-butyl ether	U		0.295	1.00	25	06/23/2022 17:17	WG1883931
Tetrachloroethene	U		0.700	2.50	25	06/23/2022 17:17	WG1883931
Toluene	1.43	J	1.25	5.00	25	06/23/2022 17:17	WG1883931
Trichloroethene	762		0.400	1.00	25	06/23/2022 17:17	WG1883931
Vinyl chloride	7.57	C3	0.682	2.50	25	06/23/2022 17:17	WG1883931
Xylenes, Total	U		4.78	6.50	25	06/23/2022 17:17	WG1883931
(S) Toluene-d8	*94.4*			*75.0-131*		*06/23/2022 17:17*	WG1883931
(S) 4-Bromofluorobenzene	*95.0*			*67.0-138*		*06/23/2022 17:17*	WG1883931
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*06/23/2022 17:17*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:32	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:13	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2460		31.6	100	1	06/20/2022 19:38	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*78.0-120*		*06/20/2022 19:38*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	4.54		0.320	0.800	20	06/23/2022 17:37	WG1883931
1,2-Dichloroethane	U		0.380	2.00	20	06/23/2022 17:37	WG1883931
cis-1,2-Dichloroethene	67.6		0.552	2.00	20	06/23/2022 17:37	WG1883931
trans-1,2-Dichloroethene	3.52	J	1.14	4.00	20	06/23/2022 17:37	WG1883931
Ethylbenzene	96.5		0.424	2.00	20	06/23/2022 17:37	WG1883931
Methyl tert-butyl ether	U		0.236	0.800	20	06/23/2022 17:37	WG1883931
Tetrachloroethene	97.6		0.560	2.00	20	06/23/2022 17:37	WG1883931
Toluene	1.42	J	1.00	4.00	20	06/23/2022 17:37	WG1883931
Trichloroethene	623		0.320	0.800	20	06/23/2022 17:37	WG1883931
Vinyl chloride	U	C3	0.546	2.00	20	06/23/2022 17:37	WG1883931
Xylenes, Total	13.0		3.82	5.20	20	06/23/2022 17:37	WG1883931
(S) Toluene-d8	*96.8*			*75.0-131*		*06/23/2022 17:37*	WG1883931
(S) 4-Bromofluorobenzene	*96.5*			*67.0-138*		*06/23/2022 17:37*	WG1883931
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 17:37*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	06/21/2022 01:44	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/06/2022 20:42	WG1886036

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	594		31.6	100	1	06/20/2022 19:59	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*78.0-120*		*06/20/2022 19:59*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	37.7		0.0160	0.0400	1	06/23/2022 13:24	WG1883931
1,2-Dichloroethane	U		0.0190	0.100	1	06/23/2022 13:24	WG1883931
cis-1,2-Dichloroethene	462		0.552	2.00	20	06/24/2022 14:53	WG1885163
trans-1,2-Dichloroethene	11.7		0.0572	0.200	1	06/23/2022 13:24	WG1883931
Ethylbenzene	0.0450	J	0.0212	0.100	1	06/23/2022 13:24	WG1883931
Methyl tert-butyl ether	U		0.0118	0.0400	1	06/23/2022 13:24	WG1883931
Tetrachloroethene	0.0760	J	0.0280	0.100	1	06/23/2022 13:24	WG1883931
Toluene	0.300		0.0500	0.200	1	06/23/2022 13:24	WG1883931
Trichloroethene	60.8		0.0160	0.0400	1	06/23/2022 13:24	WG1883931
Vinyl chloride	32.0	C3	0.0273	0.100	1	06/23/2022 13:24	WG1883931
Xylenes, Total	U		0.191	0.260	1	06/23/2022 13:24	WG1883931
(S) Toluene-d8	*97.1*			*75.0-131*		*06/23/2022 13:24*	WG1883931
(S) Toluene-d8	*101*			*75.0-131*		*06/24/2022 14:53*	WG1885163
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*06/23/2022 13:24*	WG1883931
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*06/24/2022 14:53*	WG1885163
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 13:24*	WG1883931
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*06/24/2022 14:53*	WG1885163

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:56	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/06/2022 20:55	WG1886036

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2240		31.6	100	1	06/20/2022 20:21	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*78.0-120*		*06/20/2022 20:21*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	2.02		0.0160	0.0400	1	06/23/2022 18:16	WG1883931
1,2-Dichloroethane	U		0.0190	0.100	1	06/23/2022 18:16	WG1883931
cis-1,2-Dichloroethene	275		2.76	10.0	100	06/24/2022 15:12	WG1885163
trans-1,2-Dichloroethene	46.8		0.0572	0.200	1	06/23/2022 18:16	WG1883931
Ethylbenzene	9.87		0.0212	0.100	1	06/23/2022 18:16	WG1883931
Methyl tert-butyl ether	U		0.0118	0.0400	1	06/23/2022 18:16	WG1883931
Tetrachloroethene	0.166		0.0280	0.100	1	06/23/2022 18:16	WG1883931
Toluene	0.380		0.0500	0.200	1	06/23/2022 18:16	WG1883931
Trichloroethene	842		1.60	4.00	100	06/24/2022 15:12	WG1885163
Vinyl chloride	9.29	C3	0.0273	0.100	1	06/23/2022 18:16	WG1883931
Xylenes, Total	1.08		0.191	0.260	1	06/23/2022 18:16	WG1883931
(S) Toluene-d8	*82.8*			*75.0-131*		*06/23/2022 18:16*	WG1883931
(S) Toluene-d8	*100*			*75.0-131*		*06/24/2022 15:12*	WG1885163
(S) 4-Bromofluorobenzene	*90.7*			*67.0-138*		*06/23/2022 18:16*	WG1883931
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*06/24/2022 15:12*	WG1885163
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*06/23/2022 18:16*	WG1883931
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*06/24/2022 15:12*	WG1885163

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00584	0.0218	1.09	06/21/2022 02:08	WG1882034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	06/22/2022 18:28	WG1883779
Toluene	U		0.278	1.00	1	06/22/2022 18:28	WG1883779
Ethylbenzene	U		0.137	1.00	1	06/22/2022 18:28	WG1883779
Total Xylenes	U		0.174	3.00	1	06/22/2022 18:28	WG1883779
(S) Toluene-d8	*105*			*80.0-120*		*06/22/2022 18:28*	WG1883779
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*06/22/2022 18:28*	WG1883779
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/22/2022 18:28*	WG1883779

Method Blank (MB)

(MB) R3812036-1 07/07/22 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R3812036-2 07/07/22 12:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	46.6	93.1	80.0-120	

L1505495-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505495-02 07/07/22 12:30 • (MS) R3812036-4 07/07/22 12:37 • (MSD) R3812036-5 07/07/22 12:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	50.0	U	47.5	46.4	95.0	92.7	1	75.0-125			2.41	20

Method Blank (MB)

(MB) R3811678-1 07/06/22 20:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R3811678-2 07/06/22 20:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	49.8	99.7	80.0-120	

L1505635-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505635-08 07/06/22 20:42 • (MS) R3811678-4 07/06/22 20:49 • (MSD) R3811678-5 07/06/22 20:52

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	50.0	U	50.8	49.3	102	98.7	1	75.0-125			2.98	20

Method Blank (MB)

(MB) R3806634-2 06/20/22 14:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	58.5	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3806634-1 06/20/22 13:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5390	98.0	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*109*	*78.0-120*	

Method Blank (MB)

(MB) R3806086-2 06/19/22 14:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0160	0.0400
1,2-Dichloroethane	U		0.0190	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
Ethylbenzene	U		0.0212	0.100
Methyl tert-butyl ether	U		0.0118	0.0400
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
Trichloroethene	U		0.0160	0.0400
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*89.7*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3806086-1 06/19/22 13:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	4.29	85.8	70.0-123	
1,2-Dichloroethane	5.00	4.26	85.2	65.0-131	
cis-1,2-Dichloroethene	5.00	4.76	95.2	73.0-125	
trans-1,2-Dichloroethene	5.00	4.00	80.0	71.0-125	
Ethylbenzene	5.00	4.63	92.6	74.0-126	
Methyl tert-butyl ether	5.00	3.94	78.8	66.0-132	
Tetrachloroethene	5.00	4.90	98.0	70.0-136	
Toluene	5.00	4.46	89.2	75.0-121	
Trichloroethene	5.00	4.78	95.6	76.0-126	
Vinyl chloride	5.00	4.18	83.6	63.0-134	
Xylenes, Total	15.0	13.8	92.0	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.1*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*99.3*	*70.0-130*	

Method Blank (MB)

(MB) R3807135-3 06/23/22 09:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.0280	0.100
(S) Toluene-d8	*96.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3807135-1 06/23/22 08:33 • (LCSD) R3807135-2 06/23/22 08:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Tetrachloroethene	5.00	4.46	4.62	89.2	92.4	70.0-136			3.52	20
(S) Toluene-d8				*95.3*	*94.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*99.7*	*97.6*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*114*	*119*	*70.0-130*				

Method Blank (MB)

(MB) R3806470-3 06/22/22 17:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) 4-Bromofluorobenzene	*100*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3806470-1 06/22/22 16:07 • (LCSD) R3806470-2 06/22/22 16:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.18	4.91	104	98.2	70.0-123			5.35	20
Toluene	5.00	5.06	4.71	101	94.2	79.0-120			7.16	20
Ethylbenzene	5.00	4.87	4.64	97.4	92.8	79.0-123			4.84	20
Xylenes, Total	15.0	15.0	14.1	100	94.0	79.0-123			6.19	20
(S) Toluene-d8				*103*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*99.9*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*103*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3807136-3 06/23/22 09:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0160	0.0400
1,2-Dichloroethane	U		0.0190	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
Ethylbenzene	U		0.0212	0.100
Methyl tert-butyl ether	U		0.0118	0.0400
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
Trichloroethene	U		0.0160	0.0400
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*96.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3807136-1 06/23/22 08:33 • (LCSD) R3807136-2 06/23/22 08:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.71	4.99	94.2	99.8	70.0-123			5.77	20
1,2-Dichloroethane	5.00	5.36	5.46	107	109	65.0-131			1.85	20
cis-1,2-Dichloroethene	5.00	5.23	5.36	105	107	73.0-125			2.46	20
trans-1,2-Dichloroethene	5.00	4.80	5.16	96.0	103	71.0-125			7.23	20
Ethylbenzene	5.00	4.37	4.49	87.4	89.8	74.0-126			2.71	20
Methyl tert-butyl ether	5.00	5.60	5.86	112	117	66.0-132			4.54	20
Tetrachloroethene	5.00	4.46	4.62	89.2	92.4	70.0-136			3.52	20
Toluene	5.00	4.25	4.35	85.0	87.0	75.0-121			2.33	20
Trichloroethene	5.00	4.46	4.82	89.2	96.4	76.0-126			7.76	20
Vinyl chloride	5.00	3.84	4.04	76.8	80.8	63.0-134			5.08	20
Xylenes, Total	15.0	13.1	13.6	87.3	90.7	72.0-127			3.75	20
(S) Toluene-d8				*95.3*	*94.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*99.7*	*97.6*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*114*	*119*	*70.0-130*				

Method Blank (MB)

(MB) R3807805-3 06/24/22 13:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
cis-1,2-Dichloroethene	U		0.0276	0.100
Trichloroethene	U		0.0160	0.0400
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*107*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3807805-1 06/24/22 13:01 • (LCSD) R3807805-2 06/24/22 13:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	5.00	4.23	4.39	84.6	87.8	73.0-125			3.71	20
Trichloroethene	5.00	4.83	5.12	96.6	102	76.0-126			5.83	20
(S) Toluene-d8				*101*	*99.3*	*75.0-131*				
(S) 4-Bromofluorobenzene				*109*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*107*	*116*	*70.0-130*				

Method Blank (MB)

(MB) R3806570-1 06/20/22 23:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylene Dibromide	U		0.00536	0.0200

L1505635-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1505635-01 06/21/22 00:32 • (DUP) R3806570-3 06/21/22 00:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Ethylene Dibromide	U	U	1.02	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3806570-4 06/21/22 02:32 • (LCSD) R3806570-5 06/21/22 05:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Ethylene Dibromide	0.250	0.344	0.333	138	133	60.0-140			3.25	20

L1505635-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1505635-02 06/21/22 00:08 • (MS) R3806570-2 06/20/22 23:56

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Ethylene Dibromide	0.101	U	0.106	105	1.01	64.0-159	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected:

Please Circle: PT MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Andrew Huser

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 MTBE/EDC 40mlAmb-HCl	8260 PCE/TCE/VC 40mlAmb-HCl	8260 cis/trans12DCE 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD - Diss Pb 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Pb 6020 250mlHDPE-HNO3			Remarks	Sample # (lab only)
MW-19-W-20220613	Grab	GW	—	6/13/22	1027	11		X	X	X	X	X	X	X				-01
MW-20-W-20220613	Grab	GW	—	6/13/22	1114	11		X	X	X	X	X	X	X				-02
MW-21-W-20220613	Grab	GW	—	6/13/22	1157	11		X	X	X	X	X	X	X				-03
MW-22-W-20220613	Grab	GW	—	6/13/22	1227	11		X	X	X	X	X	X	X				-04
MW-23-W-20220613	Grab	GW	—	6/13/22	1257	11		X	X	X	X	X	X	X				-05
MW-27-W-20220613	Grab	GW	—	6/13/22	1516	11		X	X	X	X	X	X	X				-06
MW-28-W-20220613	Grab	GW	—	6/13/22	1552	11		X	X	X	X	X	X	X				-07
MW-31-W-20220613	Grab	GW	—	6/13/22	~~1445~~ 1445	11		X	X	X	X	X	X	X				-08
DP-W-20220613	Grab	GW	—	6/13/22	1200	11		X	X	X	X	X	X	X				-09
TB-1-20220613	Grab	GW	—	6/13/22	0900	3	X											-10

Chain of Custody Page 1 of 1

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 1505635

J228

Acctnum: **CHEVARCWA**
Template: **T205068**
Prelogin: **P910519**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	6/14/22	1600	SHIPPED VIA FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 3.9+0=3.9 Bottles Received: 99	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) William Stinson	Date: 6-16 Time: 9:00	Hold: Condition: NCF / OK

ANALYTICAL REPORT

September 07, 2022

Arcadis - Chevron - WA

Sample Delivery Group:	L1528316
Samples Received:	08/23/2022
Project Number:	30064302.19.45
Description:	90129
Site:	4700 BROOKLYN AVE NE SEATTLE
Report To:	Ada Hamilton 1100 Olive Way Suite 800 Seattle, WA 98101

Entire Report Reviewed By:

Brian Ford

Project Manager

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-19-W-20220818 L1528316-01 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 13:35 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 16:22	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 15:13	08/28/22 15:13	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	1	08/29/22 17:15	08/29/22 17:15	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.02	08/26/22 14:04	08/26/22 21:04	CCW	Mt. Juliet, TN

MW-20-W-20220818 L1528316-02 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 14:10 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 16:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 15:35	08/28/22 15:35	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	5	08/29/22 18:31	08/29/22 18:31	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.01	08/26/22 14:04	08/26/22 21:16	CCW	Mt. Juliet, TN

MW-21-W-20220818 L1528316-03 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 10:52 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 15:57	08/28/22 15:57	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	1	08/29/22 17:34	08/29/22 17:34	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1	08/26/22 14:04	08/26/22 21:28	CCW	Mt. Juliet, TN

MW-22-W-20220818 L1528316-04 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 10:16 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:09	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 16:19	08/28/22 16:19	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	10	08/29/22 19:38	08/29/22 19:38	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1	08/26/22 14:04	08/26/22 21:40	CCW	Mt. Juliet, TN

MW-23-W-20220818 L1528316-05 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 09:39 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:12	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 16:41	08/28/22 16:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	10	08/29/22 19:57	08/29/22 19:57	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1	08/26/22 14:04	08/26/22 21:52	CCW	Mt. Juliet, TN

MW-25-W-20220818 L1528316-06 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 11:58 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:15	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 17:03	08/28/22 17:03	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	1	08/29/22 17:53	08/29/22 17:53	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918432	20	08/30/22 15:32	08/30/22 15:32	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1	08/26/22 14:04	08/26/22 22:04	CCW	Mt. Juliet, TN

MW-27-W-20220818 L1528316-07 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 12:30 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:19	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 17:25	08/28/22 17:25	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	25	08/29/22 20:16	08/29/22 20:16	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.07	08/26/22 14:04	08/26/22 20:52	CCW	Mt. Juliet, TN

MW-28-W-20220818 L1528316-08 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 13:03 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:22	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 17:48	08/28/22 17:48	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	20	08/29/22 20:35	08/29/22 20:35	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1	08/26/22 14:04	08/26/22 20:28	CCW	Mt. Juliet, TN

MW-30-W-20220818 L1528316-09 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 09:07 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:25	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 18:10	08/28/22 18:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	1	08/29/22 18:12	08/29/22 18:12	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918432	1	08/30/22 15:12	08/30/22 15:12	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.01	08/26/22 14:04	08/26/22 22:16	CCW	Mt. Juliet, TN

MW-31-W-20220818 L1528316-10 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 11:25 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:28	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 18:57	08/28/22 18:57	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918072	20	08/29/22 20:54	08/29/22 20:54	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.01	08/26/22 14:04	08/26/22 22:28	CCW	Mt. Juliet, TN

BD-W-20220818 L1528316-11 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 12:00 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1916170	1	08/26/22 13:33	08/26/22 18:38	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1917549	1	08/28/22 19:19	08/28/22 19:19	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1920159	100	09/01/22 17:42	09/01/22 17:42	GLN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1920930	10	09/02/22 16:49	09/02/22 16:49	JHH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1916899	1.02	08/26/22 14:04	08/26/22 23:16	CCW	Mt. Juliet, TN

TB-1-20220818 L1528316-12 GW

Collected by: Jonah Davis | Collected date/time: 08/18/22 12:00 | Received date/time: 08/23/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1916827	1	08/26/22 03:42	08/26/22 03:42	ACG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	08/26/2022 16:22	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	08/28/2022 15:13	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*108*			*78.0-120*		*08/28/2022 15:13*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.27	C3	0.548	1.00	1	08/29/2022 17:15	WG1918072
Acrylonitrile	U	C3	0.0760	0.500	1	08/29/2022 17:15	WG1918072
Benzene	U		0.0160	0.0400	1	08/29/2022 17:15	WG1918072
Bromobenzene	U		0.0420	0.500	1	08/29/2022 17:15	WG1918072
Bromochloromethane	U		0.0452	0.200	1	08/29/2022 17:15	WG1918072
Bromodichloromethane	0.121		0.0315	0.100	1	08/29/2022 17:15	WG1918072
Bromoform	U		0.239	1.00	1	08/29/2022 17:15	WG1918072
Bromomethane	U		0.148	0.500	1	08/29/2022 17:15	WG1918072
n-Butylbenzene	U		0.153	0.500	1	08/29/2022 17:15	WG1918072
sec-Butylbenzene	U		0.101	0.500	1	08/29/2022 17:15	WG1918072
tert-Butylbenzene	U		0.0620	0.200	1	08/29/2022 17:15	WG1918072
Carbon disulfide	U		0.162	0.500	1	08/29/2022 17:15	WG1918072
Carbon tetrachloride	U		0.0432	0.200	1	08/29/2022 17:15	WG1918072
Chlorobenzene	U		0.0229	0.100	1	08/29/2022 17:15	WG1918072
Chlorodibromomethane	U		0.0180	0.100	1	08/29/2022 17:15	WG1918072
Chloroethane	U		0.0432	0.200	1	08/29/2022 17:15	WG1918072
Chloroform	2.73		0.0166	0.100	1	08/29/2022 17:15	WG1918072
Chloromethane	U		0.0556	0.500	1	08/29/2022 17:15	WG1918072
2-Chlorotoluene	U		0.0368	0.100	1	08/29/2022 17:15	WG1918072
4-Chlorotoluene	U		0.0452	0.200	1	08/29/2022 17:15	WG1918072
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	08/29/2022 17:15	WG1918072
1,2-Dibromoethane	U		0.0210	0.100	1	08/29/2022 17:15	WG1918072
Dibromomethane	U		0.0400	0.200	1	08/29/2022 17:15	WG1918072
1,2-Dichlorobenzene	U		0.0580	0.200	1	08/29/2022 17:15	WG1918072
1,3-Dichlorobenzene	U		0.0680	0.200	1	08/29/2022 17:15	WG1918072
1,4-Dichlorobenzene	U		0.0788	0.200	1	08/29/2022 17:15	WG1918072
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	08/29/2022 17:15	WG1918072
Dichlorodifluoromethane	U		0.0327	0.100	1	08/29/2022 17:15	WG1918072
1,1-Dichloroethane	U		0.0230	0.100	1	08/29/2022 17:15	WG1918072
1,2-Dichloroethane	U		0.0190	0.100	1	08/29/2022 17:15	WG1918072
1,1-Dichloroethene	U		0.0200	0.100	1	08/29/2022 17:15	WG1918072
cis-1,2-Dichloroethene	U		0.0276	0.100	1	08/29/2022 17:15	WG1918072
trans-1,2-Dichloroethene	U		0.0572	0.200	1	08/29/2022 17:15	WG1918072
1,2-Dichloropropane	U		0.0508	0.200	1	08/29/2022 17:15	WG1918072
1,1-Dichloropropene	U		0.0280	0.100	1	08/29/2022 17:15	WG1918072
1,3-Dichloropropane	U		0.0700	0.200	1	08/29/2022 17:15	WG1918072
cis-1,3-Dichloropropene	U		0.0271	0.100	1	08/29/2022 17:15	WG1918072
trans-1,3-Dichloropropene	U		0.0612	0.200	1	08/29/2022 17:15	WG1918072
2,2-Dichloropropane	U		0.0317	0.100	1	08/29/2022 17:15	WG1918072
Di-isopropyl ether	U	C3	0.0140	0.0400	1	08/29/2022 17:15	WG1918072
Ethylbenzene	U		0.0212	0.100	1	08/29/2022 17:15	WG1918072
Hexachloro-1,3-butadiene	U		0.508	1.00	1	08/29/2022 17:15	WG1918072
2-Hexanone	U		0.400	1.00	1	08/29/2022 17:15	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
n-Hexane	U		0.0424	0.200	1	08/29/2022 17:15	WG1918072
Iodomethane	U		0.242	0.500	1	08/29/2022 17:15	WG1918072
Isopropylbenzene	U		0.0345	0.100	1	08/29/2022 17:15	WG1918072
p-Isopropyltoluene	U		0.0932	0.200	1	08/29/2022 17:15	WG1918072
2-Butanone (MEK)	U	C3	0.500	1.00	1	08/29/2022 17:15	WG1918072
Methylene Chloride	U		0.265	1.00	1	08/29/2022 17:15	WG1918072
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	08/29/2022 17:15	WG1918072
Methyl tert-butyl ether	U		0.0118	0.0400	1	08/29/2022 17:15	WG1918072
Naphthalene	0.261	J	0.124	0.500	1	08/29/2022 17:15	WG1918072
n-Propylbenzene	U		0.0472	0.200	1	08/29/2022 17:15	WG1918072
Styrene	U		0.109	0.500	1	08/29/2022 17:15	WG1918072
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	08/29/2022 17:15	WG1918072
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	08/29/2022 17:15	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	08/29/2022 17:15	WG1918072
Tetrachloroethene	0.182		0.0280	0.100	1	08/29/2022 17:15	WG1918072
Toluene	U		0.0500	0.200	1	08/29/2022 17:15	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.0250	0.500	1	08/29/2022 17:15	WG1918072
1,2,4-Trichlorobenzene	U	C4	0.193	0.500	1	08/29/2022 17:15	WG1918072
1,1,1-Trichloroethane	U		0.0110	0.100	1	08/29/2022 17:15	WG1918072
1,1,2-Trichloroethane	U		0.0353	0.100	1	08/29/2022 17:15	WG1918072
Trichloroethene	U		0.0160	0.0400	1	08/29/2022 17:15	WG1918072
Trichlorofluoromethane	U		0.0200	0.100	1	08/29/2022 17:15	WG1918072
1,2,3-Trichloropropane	U		0.204	0.500	1	08/29/2022 17:15	WG1918072
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	08/29/2022 17:15	WG1918072
1,2,3-Trimethylbenzene	0.0740	J	0.0460	0.200	1	08/29/2022 17:15	WG1918072
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	08/29/2022 17:15	WG1918072
Vinyl acetate	U		0.141	0.500	1	08/29/2022 17:15	WG1918072
Vinyl chloride	U		0.0273	0.100	1	08/29/2022 17:15	WG1918072
Xylenes, Total	U		0.191	0.260	1	08/29/2022 17:15	WG1918072
(S) Toluene-d8	*111*			*75.0-131*		*08/29/2022 17:15*	WG1918072
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*08/29/2022 17:15*	WG1918072
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*08/29/2022 17:15*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/26/2022 21:04	WG1916899

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	08/26/2022 16:44	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	08/28/2022 15:35	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*108*			*78.0-120*		*08/28/2022 15:35*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	7.24	C3	2.74	5.00	5	08/29/2022 18:31	WG1918072
Acrylonitrile	U	C3	0.380	2.50	5	08/29/2022 18:31	WG1918072
Benzene	U		0.0800	0.200	5	08/29/2022 18:31	WG1918072
Bromobenzene	U		0.210	2.50	5	08/29/2022 18:31	WG1918072
Bromochloromethane	U		0.226	1.00	5	08/29/2022 18:31	WG1918072
Bromodichloromethane	U		0.158	0.500	5	08/29/2022 18:31	WG1918072
Bromoform	U		1.20	5.00	5	08/29/2022 18:31	WG1918072
Bromomethane	U		0.740	2.50	5	08/29/2022 18:31	WG1918072
n-Butylbenzene	U		0.765	2.50	5	08/29/2022 18:31	WG1918072
sec-Butylbenzene	U		0.505	2.50	5	08/29/2022 18:31	WG1918072
tert-Butylbenzene	U		0.310	1.00	5	08/29/2022 18:31	WG1918072
Carbon disulfide	U		0.810	2.50	5	08/29/2022 18:31	WG1918072
Carbon tetrachloride	U		0.216	1.00	5	08/29/2022 18:31	WG1918072
Chlorobenzene	U		0.115	0.500	5	08/29/2022 18:31	WG1918072
Chlorodibromomethane	U		0.0900	0.500	5	08/29/2022 18:31	WG1918072
Chloroethane	U		0.216	1.00	5	08/29/2022 18:31	WG1918072
Chloroform	2.67		0.0830	0.500	5	08/29/2022 18:31	WG1918072
Chloromethane	U		0.278	2.50	5	08/29/2022 18:31	WG1918072
2-Chlorotoluene	U		0.184	0.500	5	08/29/2022 18:31	WG1918072
4-Chlorotoluene	U		0.226	1.00	5	08/29/2022 18:31	WG1918072
1,2-Dibromo-3-Chloropropane	U		1.02	5.00	5	08/29/2022 18:31	WG1918072
1,2-Dibromoethane	U		0.105	0.500	5	08/29/2022 18:31	WG1918072
Dibromomethane	U		0.200	1.00	5	08/29/2022 18:31	WG1918072
1,2-Dichlorobenzene	U		0.290	1.00	5	08/29/2022 18:31	WG1918072
1,3-Dichlorobenzene	U		0.340	1.00	5	08/29/2022 18:31	WG1918072
1,4-Dichlorobenzene	U		0.394	1.00	5	08/29/2022 18:31	WG1918072
trans-1,4-Dichloro-2-butene	U		0.280	1.00	5	08/29/2022 18:31	WG1918072
Dichlorodifluoromethane	U		0.164	0.500	5	08/29/2022 18:31	WG1918072
1,1-Dichloroethane	U		0.115	0.500	5	08/29/2022 18:31	WG1918072
1,2-Dichloroethane	U		0.0950	0.500	5	08/29/2022 18:31	WG1918072
1,1-Dichloroethene	U		0.100	0.500	5	08/29/2022 18:31	WG1918072
cis-1,2-Dichloroethene	0.185	J	0.138	0.500	5	08/29/2022 18:31	WG1918072
trans-1,2-Dichloroethene	U		0.286	1.00	5	08/29/2022 18:31	WG1918072
1,2-Dichloropropane	U		0.254	1.00	5	08/29/2022 18:31	WG1918072
1,1-Dichloropropene	U		0.140	0.500	5	08/29/2022 18:31	WG1918072
1,3-Dichloropropane	U		0.350	1.00	5	08/29/2022 18:31	WG1918072
cis-1,3-Dichloropropene	U		0.136	0.500	5	08/29/2022 18:31	WG1918072
trans-1,3-Dichloropropene	U		0.306	1.00	5	08/29/2022 18:31	WG1918072
2,2-Dichloropropane	U		0.159	0.500	5	08/29/2022 18:31	WG1918072
Di-isopropyl ether	U	C3	0.0700	0.200	5	08/29/2022 18:31	WG1918072
Ethylbenzene	U		0.106	0.500	5	08/29/2022 18:31	WG1918072
Hexachloro-1,3-butadiene	U		2.54	5.00	5	08/29/2022 18:31	WG1918072
2-Hexanone	U		2.00	5.00	5	08/29/2022 18:31	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.212	1.00	5	08/29/2022 18:31	WG1918072
Iodomethane	U		1.21	2.50	5	08/29/2022 18:31	WG1918072
Isopropylbenzene	U		0.173	0.500	5	08/29/2022 18:31	WG1918072
p-Isopropyltoluene	U		0.466	1.00	5	08/29/2022 18:31	WG1918072
2-Butanone (MEK)	U	C3	2.50	5.00	5	08/29/2022 18:31	WG1918072
Methylene Chloride	U		1.33	5.00	5	08/29/2022 18:31	WG1918072
4-Methyl-2-pentanone (MIBK)	U		2.00	5.00	5	08/29/2022 18:31	WG1918072
Methyl tert-butyl ether	U		0.0590	0.200	5	08/29/2022 18:31	WG1918072
Naphthalene	U		0.620	2.50	5	08/29/2022 18:31	WG1918072
n-Propylbenzene	U		0.236	1.00	5	08/29/2022 18:31	WG1918072
Styrene	U		0.545	2.50	5	08/29/2022 18:31	WG1918072
1,1,1,2-Tetrachloroethane	U		0.100	0.500	5	08/29/2022 18:31	WG1918072
1,1,2,2-Tetrachloroethane	U		0.0780	0.500	5	08/29/2022 18:31	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.135	0.500	5	08/29/2022 18:31	WG1918072
Tetrachloroethene	0.275	J	0.140	0.500	5	08/29/2022 18:31	WG1918072
Toluene	U		0.250	1.00	5	08/29/2022 18:31	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.125	2.50	5	08/29/2022 18:31	WG1918072
1,2,4-Trichlorobenzene	U	C4	0.965	2.50	5	08/29/2022 18:31	WG1918072
1,1,1-Trichloroethane	U		0.0550	0.500	5	08/29/2022 18:31	WG1918072
1,1,2-Trichloroethane	U		0.177	0.500	5	08/29/2022 18:31	WG1918072
Trichloroethene	U		0.0800	0.200	5	08/29/2022 18:31	WG1918072
Trichlorofluoromethane	U		0.100	0.500	5	08/29/2022 18:31	WG1918072
1,2,3-Trichloropropane	U		1.02	2.50	5	08/29/2022 18:31	WG1918072
1,2,4-Trimethylbenzene	U		0.232	1.00	5	08/29/2022 18:31	WG1918072
1,2,3-Trimethylbenzene	U		0.230	1.00	5	08/29/2022 18:31	WG1918072
1,3,5-Trimethylbenzene	U		0.216	1.00	5	08/29/2022 18:31	WG1918072
Vinyl acetate	U		0.705	2.50	5	08/29/2022 18:31	WG1918072
Vinyl chloride	U		0.137	0.500	5	08/29/2022 18:31	WG1918072
Xylenes, Total	U		0.955	1.30	5	08/29/2022 18:31	WG1918072
(S) Toluene-d8	*113*			*75.0-131*		*08/29/2022 18:31*	WG1918072
(S) 4-Bromofluorobenzene	*95.1*			*67.0-138*		*08/29/2022 18:31*	WG1918072
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*08/29/2022 18:31*	WG1918072

Sample Narrative:

L1528316-02 WG1918072: Lowest possible dilution due to sample foaming.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	08/26/2022 21:16	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:06	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	32.9	B J	31.6	100	1	08/28/2022 15:57	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*108*			*78.0-120*		*08/28/2022 15:57*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	0.548	1.00	1	08/29/2022 17:34	WG1918072
Acrylonitrile	U	C3	0.0760	0.500	1	08/29/2022 17:34	WG1918072
Benzene	U		0.0160	0.0400	1	08/29/2022 17:34	WG1918072
Bromobenzene	U		0.0420	0.500	1	08/29/2022 17:34	WG1918072
Bromochloromethane	U		0.0452	0.200	1	08/29/2022 17:34	WG1918072
Bromodichloromethane	U		0.0315	0.100	1	08/29/2022 17:34	WG1918072
Bromoform	U		0.239	1.00	1	08/29/2022 17:34	WG1918072
Bromomethane	U		0.148	0.500	1	08/29/2022 17:34	WG1918072
n-Butylbenzene	U		0.153	0.500	1	08/29/2022 17:34	WG1918072
sec-Butylbenzene	U		0.101	0.500	1	08/29/2022 17:34	WG1918072
tert-Butylbenzene	U		0.0620	0.200	1	08/29/2022 17:34	WG1918072
Carbon disulfide	U		0.162	0.500	1	08/29/2022 17:34	WG1918072
Carbon tetrachloride	U		0.0432	0.200	1	08/29/2022 17:34	WG1918072
Chlorobenzene	U		0.0229	0.100	1	08/29/2022 17:34	WG1918072
Chlorodibromomethane	U		0.0180	0.100	1	08/29/2022 17:34	WG1918072
Chloroethane	U		0.0432	0.200	1	08/29/2022 17:34	WG1918072
Chloroform	U		0.0166	0.100	1	08/29/2022 17:34	WG1918072
Chloromethane	U		0.0556	0.500	1	08/29/2022 17:34	WG1918072
2-Chlorotoluene	U		0.0368	0.100	1	08/29/2022 17:34	WG1918072
4-Chlorotoluene	U		0.0452	0.200	1	08/29/2022 17:34	WG1918072
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	08/29/2022 17:34	WG1918072
1,2-Dibromoethane	U		0.0210	0.100	1	08/29/2022 17:34	WG1918072
Dibromomethane	U		0.0400	0.200	1	08/29/2022 17:34	WG1918072
1,2-Dichlorobenzene	U		0.0580	0.200	1	08/29/2022 17:34	WG1918072
1,3-Dichlorobenzene	U		0.0680	0.200	1	08/29/2022 17:34	WG1918072
1,4-Dichlorobenzene	U		0.0788	0.200	1	08/29/2022 17:34	WG1918072
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	08/29/2022 17:34	WG1918072
Dichlorodifluoromethane	U		0.0327	0.100	1	08/29/2022 17:34	WG1918072
1,1-Dichloroethane	U		0.0230	0.100	1	08/29/2022 17:34	WG1918072
1,2-Dichloroethane	U		0.0190	0.100	1	08/29/2022 17:34	WG1918072
1,1-Dichloroethene	U		0.0200	0.100	1	08/29/2022 17:34	WG1918072
cis-1,2-Dichloroethene	U		0.0276	0.100	1	08/29/2022 17:34	WG1918072
trans-1,2-Dichloroethene	U		0.0572	0.200	1	08/29/2022 17:34	WG1918072
1,2-Dichloropropane	U		0.0508	0.200	1	08/29/2022 17:34	WG1918072
1,1-Dichloropropene	U		0.0280	0.100	1	08/29/2022 17:34	WG1918072
1,3-Dichloropropane	U		0.0700	0.200	1	08/29/2022 17:34	WG1918072
cis-1,3-Dichloropropene	U		0.0271	0.100	1	08/29/2022 17:34	WG1918072
trans-1,3-Dichloropropene	U		0.0612	0.200	1	08/29/2022 17:34	WG1918072
2,2-Dichloropropane	U		0.0317	0.100	1	08/29/2022 17:34	WG1918072
Di-isopropyl ether	U	C3	0.0140	0.0400	1	08/29/2022 17:34	WG1918072
Ethylbenzene	U		0.0212	0.100	1	08/29/2022 17:34	WG1918072
Hexachloro-1,3-butadiene	U		0.508	1.00	1	08/29/2022 17:34	WG1918072
2-Hexanone	U		0.400	1.00	1	08/29/2022 17:34	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
n-Hexane	U		0.0424	0.200	1	08/29/2022 17:34	WG1918072
Iodomethane	U		0.242	0.500	1	08/29/2022 17:34	WG1918072
Isopropylbenzene	U		0.0345	0.100	1	08/29/2022 17:34	WG1918072
p-Isopropyltoluene	U		0.0932	0.200	1	08/29/2022 17:34	WG1918072
2-Butanone (MEK)	U	C3	0.500	1.00	1	08/29/2022 17:34	WG1918072
Methylene Chloride	U		0.265	1.00	1	08/29/2022 17:34	WG1918072
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	08/29/2022 17:34	WG1918072
Methyl tert-butyl ether	U		0.0118	0.0400	1	08/29/2022 17:34	WG1918072
Naphthalene	U		0.124	0.500	1	08/29/2022 17:34	WG1918072
n-Propylbenzene	U		0.0472	0.200	1	08/29/2022 17:34	WG1918072
Styrene	U		0.109	0.500	1	08/29/2022 17:34	WG1918072
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	08/29/2022 17:34	WG1918072
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	08/29/2022 17:34	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	08/29/2022 17:34	WG1918072
Tetrachloroethene	U		0.0280	0.100	1	08/29/2022 17:34	WG1918072
Toluene	U		0.0500	0.200	1	08/29/2022 17:34	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.0250	0.500	1	08/29/2022 17:34	WG1918072
1,2,4-Trichlorobenzene	U	C4	0.193	0.500	1	08/29/2022 17:34	WG1918072
1,1,1-Trichloroethane	U		0.0110	0.100	1	08/29/2022 17:34	WG1918072
1,1,2-Trichloroethane	U		0.0353	0.100	1	08/29/2022 17:34	WG1918072
Trichloroethene	U		0.0160	0.0400	1	08/29/2022 17:34	WG1918072
Trichlorofluoromethane	U		0.0200	0.100	1	08/29/2022 17:34	WG1918072
1,2,3-Trichloropropane	U		0.204	0.500	1	08/29/2022 17:34	WG1918072
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	08/29/2022 17:34	WG1918072
1,2,3-Trimethylbenzene	U		0.0460	0.200	1	08/29/2022 17:34	WG1918072
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	08/29/2022 17:34	WG1918072
Vinyl acetate	U		0.141	0.500	1	08/29/2022 17:34	WG1918072
Vinyl chloride	U		0.0273	0.100	1	08/29/2022 17:34	WG1918072
Xylenes, Total	U		0.191	0.260	1	08/29/2022 17:34	WG1918072
(S) Toluene-d8	*107*			*75.0-131*		*08/29/2022 17:34*	WG1918072
(S) 4-Bromofluorobenzene	*99.4*			*67.0-138*		*08/29/2022 17:34*	WG1918072
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/29/2022 17:34*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	08/26/2022 21:28	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:09	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	555		31.6	100	1	08/28/2022 16:19	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*08/28/2022 16:19*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	5.48	10.0	10	08/29/2022 19:38	WG1918072
Acrylonitrile	U	C3	0.760	5.00	10	08/29/2022 19:38	WG1918072
Benzene	5.92		0.160	0.400	10	08/29/2022 19:38	WG1918072
Bromobenzene	U		0.420	5.00	10	08/29/2022 19:38	WG1918072
Bromochloromethane	U		0.452	2.00	10	08/29/2022 19:38	WG1918072
Bromodichloromethane	U		0.315	1.00	10	08/29/2022 19:38	WG1918072
Bromoform	U		2.39	10.0	10	08/29/2022 19:38	WG1918072
Bromomethane	U		1.48	5.00	10	08/29/2022 19:38	WG1918072
n-Butylbenzene	U		1.53	5.00	10	08/29/2022 19:38	WG1918072
sec-Butylbenzene	U		1.01	5.00	10	08/29/2022 19:38	WG1918072
tert-Butylbenzene	U		0.620	2.00	10	08/29/2022 19:38	WG1918072
Carbon disulfide	U		1.62	5.00	10	08/29/2022 19:38	WG1918072
Carbon tetrachloride	U		0.432	2.00	10	08/29/2022 19:38	WG1918072
Chlorobenzene	U		0.229	1.00	10	08/29/2022 19:38	WG1918072
Chlorodibromomethane	U		0.180	1.00	10	08/29/2022 19:38	WG1918072
Chloroethane	U		0.432	2.00	10	08/29/2022 19:38	WG1918072
Chloroform	U		0.166	1.00	10	08/29/2022 19:38	WG1918072
Chloromethane	U		0.556	5.00	10	08/29/2022 19:38	WG1918072
2-Chlorotoluene	U		0.368	1.00	10	08/29/2022 19:38	WG1918072
4-Chlorotoluene	U		0.452	2.00	10	08/29/2022 19:38	WG1918072
1,2-Dibromo-3-Chloropropane	U		2.04	10.0	10	08/29/2022 19:38	WG1918072
1,2-Dibromoethane	U		0.210	1.00	10	08/29/2022 19:38	WG1918072
Dibromomethane	U		0.400	2.00	10	08/29/2022 19:38	WG1918072
1,2-Dichlorobenzene	U		0.580	2.00	10	08/29/2022 19:38	WG1918072
1,3-Dichlorobenzene	U		0.680	2.00	10	08/29/2022 19:38	WG1918072
1,4-Dichlorobenzene	U		0.788	2.00	10	08/29/2022 19:38	WG1918072
trans-1,4-Dichloro-2-butene	U		0.560	2.00	10	08/29/2022 19:38	WG1918072
Dichlorodifluoromethane	U		0.327	1.00	10	08/29/2022 19:38	WG1918072
1,1-Dichloroethane	U		0.230	1.00	10	08/29/2022 19:38	WG1918072
1,2-Dichloroethane	U		0.190	1.00	10	08/29/2022 19:38	WG1918072
1,1-Dichloroethene	1.00	J	0.200	1.00	10	08/29/2022 19:38	WG1918072
cis-1,2-Dichloroethene	596		0.276	1.00	10	08/29/2022 19:38	WG1918072
trans-1,2-Dichloroethene	10.3		0.572	2.00	10	08/29/2022 19:38	WG1918072
1,2-Dichloropropane	U		0.508	2.00	10	08/29/2022 19:38	WG1918072
1,1-Dichloropropene	U		0.280	1.00	10	08/29/2022 19:38	WG1918072
1,3-Dichloropropane	U		0.700	2.00	10	08/29/2022 19:38	WG1918072
cis-1,3-Dichloropropene	U		0.271	1.00	10	08/29/2022 19:38	WG1918072
trans-1,3-Dichloropropene	U		0.612	2.00	10	08/29/2022 19:38	WG1918072
2,2-Dichloropropane	U		0.317	1.00	10	08/29/2022 19:38	WG1918072
Di-isopropyl ether	U	C3	0.140	0.400	10	08/29/2022 19:38	WG1918072
Ethylbenzene	U		0.212	1.00	10	08/29/2022 19:38	WG1918072
Hexachloro-1,3-butadiene	U		5.08	10.0	10	08/29/2022 19:38	WG1918072
2-Hexanone	U		4.00	10.0	10	08/29/2022 19:38	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.424	2.00	10	08/29/2022 19:38	WG1918072
Iodomethane	U		2.42	5.00	10	08/29/2022 19:38	WG1918072
Isopropylbenzene	U		0.345	1.00	10	08/29/2022 19:38	WG1918072
p-Isopropyltoluene	U		0.932	2.00	10	08/29/2022 19:38	WG1918072
2-Butanone (MEK)	U	C3	5.00	10.0	10	08/29/2022 19:38	WG1918072
Methylene Chloride	U		2.65	10.0	10	08/29/2022 19:38	WG1918072
4-Methyl-2-pentanone (MIBK)	U		4.00	10.0	10	08/29/2022 19:38	WG1918072
Methyl tert-butyl ether	U		0.118	0.400	10	08/29/2022 19:38	WG1918072
Naphthalene	U		1.24	5.00	10	08/29/2022 19:38	WG1918072
n-Propylbenzene	U		0.472	2.00	10	08/29/2022 19:38	WG1918072
Styrene	U		1.09	5.00	10	08/29/2022 19:38	WG1918072
1,1,1,2-Tetrachloroethane	U		0.200	1.00	10	08/29/2022 19:38	WG1918072
1,1,2,2-Tetrachloroethane	U		0.156	1.00	10	08/29/2022 19:38	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.270	1.00	10	08/29/2022 19:38	WG1918072
Tetrachloroethene	0.690	J	0.280	1.00	10	08/29/2022 19:38	WG1918072
Toluene	U		0.500	2.00	10	08/29/2022 19:38	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.250	5.00	10	08/29/2022 19:38	WG1918072
1,2,4-Trichlorobenzene	U	C4	1.93	5.00	10	08/29/2022 19:38	WG1918072
1,1,1-Trichloroethane	U		0.110	1.00	10	08/29/2022 19:38	WG1918072
1,1,2-Trichloroethane	U		0.353	1.00	10	08/29/2022 19:38	WG1918072
Trichloroethene	352		0.160	0.400	10	08/29/2022 19:38	WG1918072
Trichlorofluoromethane	U		0.200	1.00	10	08/29/2022 19:38	WG1918072
1,2,3-Trichloropropane	U		2.04	5.00	10	08/29/2022 19:38	WG1918072
1,2,4-Trimethylbenzene	U		0.464	2.00	10	08/29/2022 19:38	WG1918072
1,2,3-Trimethylbenzene	U		0.460	2.00	10	08/29/2022 19:38	WG1918072
1,3,5-Trimethylbenzene	U		0.432	2.00	10	08/29/2022 19:38	WG1918072
Vinyl acetate	U		1.41	5.00	10	08/29/2022 19:38	WG1918072
Vinyl chloride	4.70		0.273	1.00	10	08/29/2022 19:38	WG1918072
Xylenes, Total	U		1.91	2.60	10	08/29/2022 19:38	WG1918072
(S) Toluene-d8	*103*			*75.0-131*		*08/29/2022 19:38*	WG1918072
(S) 4-Bromofluorobenzene	*85.2*			*67.0-138*		*08/29/2022 19:38*	WG1918072
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*08/29/2022 19:38*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	08/26/2022 21:40	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:12	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	296	B	31.6	100	1	08/28/2022 16:41	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*		*08/28/2022 16:41*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	5.48	10.0	10	08/29/2022 19:57	WG1918072
Acrylonitrile	U	C3	0.760	5.00	10	08/29/2022 19:57	WG1918072
Benzene	5.59		0.160	0.400	10	08/29/2022 19:57	WG1918072
Bromobenzene	U		0.420	5.00	10	08/29/2022 19:57	WG1918072
Bromochloromethane	U		0.452	2.00	10	08/29/2022 19:57	WG1918072
Bromodichloromethane	U		0.315	1.00	10	08/29/2022 19:57	WG1918072
Bromoform	U		2.39	10.0	10	08/29/2022 19:57	WG1918072
Bromomethane	U		1.48	5.00	10	08/29/2022 19:57	WG1918072
n-Butylbenzene	U		1.53	5.00	10	08/29/2022 19:57	WG1918072
sec-Butylbenzene	U		1.01	5.00	10	08/29/2022 19:57	WG1918072
tert-Butylbenzene	U		0.620	2.00	10	08/29/2022 19:57	WG1918072
Carbon disulfide	U		1.62	5.00	10	08/29/2022 19:57	WG1918072
Carbon tetrachloride	U		0.432	2.00	10	08/29/2022 19:57	WG1918072
Chlorobenzene	U		0.229	1.00	10	08/29/2022 19:57	WG1918072
Chlorodibromomethane	U		0.180	1.00	10	08/29/2022 19:57	WG1918072
Chloroethane	U		0.432	2.00	10	08/29/2022 19:57	WG1918072
Chloroform	0.660	J	0.166	1.00	10	08/29/2022 19:57	WG1918072
Chloromethane	U		0.556	5.00	10	08/29/2022 19:57	WG1918072
2-Chlorotoluene	U		0.368	1.00	10	08/29/2022 19:57	WG1918072
4-Chlorotoluene	U		0.452	2.00	10	08/29/2022 19:57	WG1918072
1,2-Dibromo-3-Chloropropane	U		2.04	10.0	10	08/29/2022 19:57	WG1918072
1,2-Dibromoethane	U		0.210	1.00	10	08/29/2022 19:57	WG1918072
Dibromomethane	U		0.400	2.00	10	08/29/2022 19:57	WG1918072
1,2-Dichlorobenzene	U		0.580	2.00	10	08/29/2022 19:57	WG1918072
1,3-Dichlorobenzene	U		0.680	2.00	10	08/29/2022 19:57	WG1918072
1,4-Dichlorobenzene	U		0.788	2.00	10	08/29/2022 19:57	WG1918072
trans-1,4-Dichloro-2-butene	U		0.560	2.00	10	08/29/2022 19:57	WG1918072
Dichlorodifluoromethane	U		0.327	1.00	10	08/29/2022 19:57	WG1918072
1,1-Dichloroethane	U		0.230	1.00	10	08/29/2022 19:57	WG1918072
1,2-Dichloroethane	0.630	J	0.190	1.00	10	08/29/2022 19:57	WG1918072
1,1-Dichloroethene	0.800	J	0.200	1.00	10	08/29/2022 19:57	WG1918072
cis-1,2-Dichloroethene	410		0.276	1.00	10	08/29/2022 19:57	WG1918072
trans-1,2-Dichloroethene	7.83		0.572	2.00	10	08/29/2022 19:57	WG1918072
1,2-Dichloropropane	U		0.508	2.00	10	08/29/2022 19:57	WG1918072
1,1-Dichloropropene	U		0.280	1.00	10	08/29/2022 19:57	WG1918072
1,3-Dichloropropane	U		0.700	2.00	10	08/29/2022 19:57	WG1918072
cis-1,3-Dichloropropene	U		0.271	1.00	10	08/29/2022 19:57	WG1918072
trans-1,3-Dichloropropene	U		0.612	2.00	10	08/29/2022 19:57	WG1918072
2,2-Dichloropropane	U		0.317	1.00	10	08/29/2022 19:57	WG1918072
Di-isopropyl ether	U	C3	0.140	0.400	10	08/29/2022 19:57	WG1918072
Ethylbenzene	U		0.212	1.00	10	08/29/2022 19:57	WG1918072
Hexachloro-1,3-butadiene	U		5.08	10.0	10	08/29/2022 19:57	WG1918072
2-Hexanone	U		4.00	10.0	10	08/29/2022 19:57	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.424	2.00	10	08/29/2022 19:57	WG1918072
Iodomethane	U		2.42	5.00	10	08/29/2022 19:57	WG1918072
Isopropylbenzene	U		0.345	1.00	10	08/29/2022 19:57	WG1918072
p-Isopropyltoluene	U		0.932	2.00	10	08/29/2022 19:57	WG1918072
2-Butanone (MEK)	U	C3	5.00	10.0	10	08/29/2022 19:57	WG1918072
Methylene Chloride	U		2.65	10.0	10	08/29/2022 19:57	WG1918072
4-Methyl-2-pentanone (MIBK)	U		4.00	10.0	10	08/29/2022 19:57	WG1918072
Methyl tert-butyl ether	U		0.118	0.400	10	08/29/2022 19:57	WG1918072
Naphthalene	U		1.24	5.00	10	08/29/2022 19:57	WG1918072
n-Propylbenzene	U		0.472	2.00	10	08/29/2022 19:57	WG1918072
Styrene	U		1.09	5.00	10	08/29/2022 19:57	WG1918072
1,1,1,2-Tetrachloroethane	U		0.200	1.00	10	08/29/2022 19:57	WG1918072
1,1,2,2-Tetrachloroethane	U		0.156	1.00	10	08/29/2022 19:57	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.270	1.00	10	08/29/2022 19:57	WG1918072
Tetrachloroethene	U		0.280	1.00	10	08/29/2022 19:57	WG1918072
Toluene	U		0.500	2.00	10	08/29/2022 19:57	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.250	5.00	10	08/29/2022 19:57	WG1918072
1,2,4-Trichlorobenzene	U	C4	1.93	5.00	10	08/29/2022 19:57	WG1918072
1,1,1-Trichloroethane	U		0.110	1.00	10	08/29/2022 19:57	WG1918072
1,1,2-Trichloroethane	U		0.353	1.00	10	08/29/2022 19:57	WG1918072
Trichloroethene	34.4		0.160	0.400	10	08/29/2022 19:57	WG1918072
Trichlorofluoromethane	U		0.200	1.00	10	08/29/2022 19:57	WG1918072
1,2,3-Trichloropropane	U		2.04	5.00	10	08/29/2022 19:57	WG1918072
1,2,4-Trimethylbenzene	U		0.464	2.00	10	08/29/2022 19:57	WG1918072
1,2,3-Trimethylbenzene	U		0.460	2.00	10	08/29/2022 19:57	WG1918072
1,3,5-Trimethylbenzene	U		0.432	2.00	10	08/29/2022 19:57	WG1918072
Vinyl acetate	U		1.41	5.00	10	08/29/2022 19:57	WG1918072
Vinyl chloride	11.4		0.273	1.00	10	08/29/2022 19:57	WG1918072
Xylenes, Total	U		1.91	2.60	10	08/29/2022 19:57	WG1918072
(S) Toluene-d8	*109*			*75.0-131*		*08/29/2022 19:57*	WG1918072
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*08/29/2022 19:57*	WG1918072
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*08/29/2022 19:57*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	08/26/2022 21:52	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	08/26/2022 18:15	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	638		31.6	100	1	08/28/2022 17:03	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*08/28/2022 17:03*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	C3	0.548	1.00	1	08/29/2022 17:53	WG1918072
Acrylonitrile	U	C3	0.0760	0.500	1	08/29/2022 17:53	WG1918072
Benzene	48.4		0.0160	0.0400	1	08/29/2022 17:53	WG1918072
Bromobenzene	U		0.0420	0.500	1	08/29/2022 17:53	WG1918072
Bromochloromethane	U		0.0452	0.200	1	08/29/2022 17:53	WG1918072
Bromodichloromethane	U		0.0315	0.100	1	08/29/2022 17:53	WG1918072
Bromoform	U		0.239	1.00	1	08/29/2022 17:53	WG1918072
Bromomethane	U		0.148	0.500	1	08/29/2022 17:53	WG1918072
n-Butylbenzene	U		0.153	0.500	1	08/29/2022 17:53	WG1918072
sec-Butylbenzene	U		0.101	0.500	1	08/29/2022 17:53	WG1918072
tert-Butylbenzene	U		0.0620	0.200	1	08/29/2022 17:53	WG1918072
Carbon disulfide	U		0.162	0.500	1	08/29/2022 17:53	WG1918072
Carbon tetrachloride	U		0.0432	0.200	1	08/29/2022 17:53	WG1918072
Chlorobenzene	U		0.0229	0.100	1	08/29/2022 17:53	WG1918072
Chlorodibromomethane	U		0.0180	0.100	1	08/29/2022 17:53	WG1918072
Chloroethane	U		0.0432	0.200	1	08/29/2022 17:53	WG1918072
Chloroform	U		0.0166	0.100	1	08/29/2022 17:53	WG1918072
Chloromethane	U		0.0556	0.500	1	08/29/2022 17:53	WG1918072
2-Chlorotoluene	U		0.0368	0.100	1	08/29/2022 17:53	WG1918072
4-Chlorotoluene	U		0.0452	0.200	1	08/29/2022 17:53	WG1918072
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	08/29/2022 17:53	WG1918072
1,2-Dibromoethane	U		0.0210	0.100	1	08/29/2022 17:53	WG1918072
Dibromomethane	U		0.0400	0.200	1	08/29/2022 17:53	WG1918072
1,2-Dichlorobenzene	U		0.0580	0.200	1	08/29/2022 17:53	WG1918072
1,3-Dichlorobenzene	U		0.0680	0.200	1	08/29/2022 17:53	WG1918072
1,4-Dichlorobenzene	U		0.0788	0.200	1	08/29/2022 17:53	WG1918072
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	08/29/2022 17:53	WG1918072
Dichlorodifluoromethane	U		0.0327	0.100	1	08/29/2022 17:53	WG1918072
1,1-Dichloroethane	U		0.0230	0.100	1	08/29/2022 17:53	WG1918072
1,2-Dichloroethane	U		0.0190	0.100	1	08/29/2022 17:53	WG1918072
1,1-Dichloroethene	2.99		0.0200	0.100	1	08/29/2022 17:53	WG1918072
cis-1,2-Dichloroethene	444		0.552	2.00	20	08/30/2022 15:32	WG1918432
trans-1,2-Dichloroethene	20.2		0.0572	0.200	1	08/29/2022 17:53	WG1918072
1,2-Dichloropropane	U		0.0508	0.200	1	08/29/2022 17:53	WG1918072
1,1-Dichloropropene	U		0.0280	0.100	1	08/29/2022 17:53	WG1918072
1,3-Dichloropropane	U		0.0700	0.200	1	08/29/2022 17:53	WG1918072
cis-1,3-Dichloropropene	U		0.0271	0.100	1	08/29/2022 17:53	WG1918072
trans-1,3-Dichloropropene	U		0.0612	0.200	1	08/29/2022 17:53	WG1918072
2,2-Dichloropropane	U		0.0317	0.100	1	08/29/2022 17:53	WG1918072
Di-isopropyl ether	U	C3	0.0140	0.0400	1	08/29/2022 17:53	WG1918072
Ethylbenzene	0.146		0.0212	0.100	1	08/29/2022 17:53	WG1918072
Hexachloro-1,3-butadiene	U		0.508	1.00	1	08/29/2022 17:53	WG1918072
2-Hexanone	U		0.400	1.00	1	08/29/2022 17:53	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.0424	0.200	1	08/29/2022 17:53	WG1918072
Iodomethane	U		0.242	0.500	1	08/29/2022 17:53	WG1918072
Isopropylbenzene	U		0.0345	0.100	1	08/29/2022 17:53	WG1918072
p-Isopropyltoluene	U		0.0932	0.200	1	08/29/2022 17:53	WG1918072
2-Butanone (MEK)	U	C3	0.500	1.00	1	08/29/2022 17:53	WG1918072
Methylene Chloride	U		0.265	1.00	1	08/29/2022 17:53	WG1918072
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	08/29/2022 17:53	WG1918072
Methyl tert-butyl ether	U		0.0118	0.0400	1	08/29/2022 17:53	WG1918072
Naphthalene	U		0.124	0.500	1	08/29/2022 17:53	WG1918072
n-Propylbenzene	U		0.0472	0.200	1	08/29/2022 17:53	WG1918072
Styrene	U		0.109	0.500	1	08/29/2022 17:53	WG1918072
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	08/29/2022 17:53	WG1918072
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	08/29/2022 17:53	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	08/29/2022 17:53	WG1918072
Tetrachloroethene	6.30		0.0280	0.100	1	08/29/2022 17:53	WG1918072
Toluene	0.633		0.0500	0.200	1	08/29/2022 17:53	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.0250	0.500	1	08/29/2022 17:53	WG1918072
1,2,4-Trichlorobenzene	U	C4	0.193	0.500	1	08/29/2022 17:53	WG1918072
1,1,1-Trichloroethane	U		0.0110	0.100	1	08/29/2022 17:53	WG1918072
1,1,2-Trichloroethane	U		0.0353	0.100	1	08/29/2022 17:53	WG1918072
Trichloroethene	147		0.320	0.800	20	08/30/2022 15:32	WG1918432
Trichlorofluoromethane	U		0.0200	0.100	1	08/29/2022 17:53	WG1918072
1,2,3-Trichloropropane	U		0.204	0.500	1	08/29/2022 17:53	WG1918072
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	08/29/2022 17:53	WG1918072
1,2,3-Trimethylbenzene	U		0.0460	0.200	1	08/29/2022 17:53	WG1918072
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	08/29/2022 17:53	WG1918072
Vinyl acetate	U		0.141	0.500	1	08/29/2022 17:53	WG1918072
Vinyl chloride	55.4		0.0273	0.100	1	08/29/2022 17:53	WG1918072
Xylenes, Total	U		0.191	0.260	1	08/29/2022 17:53	WG1918072
(S) Toluene-d8	*109*			*75.0-131*		*08/29/2022 17:53*	WG1918072
(S) Toluene-d8	*105*			*75.0-131*		*08/30/2022 15:32*	WG1918432
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*08/29/2022 17:53*	WG1918072
(S) 4-Bromofluorobenzene	*97.3*			*67.0-138*		*08/30/2022 15:32*	WG1918432
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/29/2022 17:53*	WG1918072
(S) 1,2-Dichloroethane-d4	*99.2*			*70.0-130*		*08/30/2022 15:32*	WG1918432

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	08/26/2022 22:04	WG1916899

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:19	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	2140		31.6	100	1	08/28/2022 17:25	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*100*			*78.0-120*		*08/28/2022 17:25*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	13.7	25.0	25	08/29/2022 20:16	WG1918072
Acrylonitrile	U	C3	1.90	12.5	25	08/29/2022 20:16	WG1918072
Benzene	7.90		0.400	1.00	25	08/29/2022 20:16	WG1918072
Bromobenzene	U		1.05	12.5	25	08/29/2022 20:16	WG1918072
Bromochloromethane	U		1.13	5.00	25	08/29/2022 20:16	WG1918072
Bromodichloromethane	U		0.788	2.50	25	08/29/2022 20:16	WG1918072
Bromoform	U		5.98	25.0	25	08/29/2022 20:16	WG1918072
Bromomethane	U		3.70	12.5	25	08/29/2022 20:16	WG1918072
n-Butylbenzene	U		3.83	12.5	25	08/29/2022 20:16	WG1918072
sec-Butylbenzene	4.53	J	2.53	12.5	25	08/29/2022 20:16	WG1918072
tert-Butylbenzene	U		1.55	5.00	25	08/29/2022 20:16	WG1918072
Carbon disulfide	U		4.05	12.5	25	08/29/2022 20:16	WG1918072
Carbon tetrachloride	U		1.08	5.00	25	08/29/2022 20:16	WG1918072
Chlorobenzene	U		0.573	2.50	25	08/29/2022 20:16	WG1918072
Chlorodibromomethane	U		0.450	2.50	25	08/29/2022 20:16	WG1918072
Chloroethane	U		1.08	5.00	25	08/29/2022 20:16	WG1918072
Chloroform	U		0.415	2.50	25	08/29/2022 20:16	WG1918072
Chloromethane	U		1.39	12.5	25	08/29/2022 20:16	WG1918072
2-Chlorotoluene	U		0.920	2.50	25	08/29/2022 20:16	WG1918072
4-Chlorotoluene	U		1.13	5.00	25	08/29/2022 20:16	WG1918072
1,2-Dibromo-3-Chloropropane	U		5.10	25.0	25	08/29/2022 20:16	WG1918072
1,2-Dibromoethane	U		0.525	2.50	25	08/29/2022 20:16	WG1918072
Dibromomethane	U		1.00	5.00	25	08/29/2022 20:16	WG1918072
1,2-Dichlorobenzene	U		1.45	5.00	25	08/29/2022 20:16	WG1918072
1,3-Dichlorobenzene	U		1.70	5.00	25	08/29/2022 20:16	WG1918072
1,4-Dichlorobenzene	U		1.97	5.00	25	08/29/2022 20:16	WG1918072
trans-1,4-Dichloro-2-butene	U		1.40	5.00	25	08/29/2022 20:16	WG1918072
Dichlorodifluoromethane	U		0.818	2.50	25	08/29/2022 20:16	WG1918072
1,1-Dichloroethane	U		0.575	2.50	25	08/29/2022 20:16	WG1918072
1,2-Dichloroethane	U		0.475	2.50	25	08/29/2022 20:16	WG1918072
1,1-Dichloroethene	U		0.500	2.50	25	08/29/2022 20:16	WG1918072
cis-1,2-Dichloroethene	108		0.690	2.50	25	08/29/2022 20:16	WG1918072
trans-1,2-Dichloroethene	12.1		1.43	5.00	25	08/29/2022 20:16	WG1918072
1,2-Dichloropropane	U		1.27	5.00	25	08/29/2022 20:16	WG1918072
1,1-Dichloropropene	U		0.700	2.50	25	08/29/2022 20:16	WG1918072
1,3-Dichloropropane	U		1.75	5.00	25	08/29/2022 20:16	WG1918072
cis-1,3-Dichloropropene	U		0.678	2.50	25	08/29/2022 20:16	WG1918072
trans-1,3-Dichloropropene	U		1.53	5.00	25	08/29/2022 20:16	WG1918072
2,2-Dichloropropane	U		0.793	2.50	25	08/29/2022 20:16	WG1918072
Di-isopropyl ether	U	C3	0.350	1.00	25	08/29/2022 20:16	WG1918072
Ethylbenzene	152		0.530	2.50	25	08/29/2022 20:16	WG1918072
Hexachloro-1,3-butadiene	U		12.7	25.0	25	08/29/2022 20:16	WG1918072
2-Hexanone	U		10.0	25.0	25	08/29/2022 20:16	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	19.3		1.06	5.00	25	08/29/2022 20:16	WG1918072
Iodomethane	U		6.05	12.5	25	08/29/2022 20:16	WG1918072
Isopropylbenzene	25.8		0.863	2.50	25	08/29/2022 20:16	WG1918072
p-Isopropyltoluene	U		2.33	5.00	25	08/29/2022 20:16	WG1918072
2-Butanone (MEK)	U	C3	12.5	25.0	25	08/29/2022 20:16	WG1918072
Methylene Chloride	U		6.63	25.0	25	08/29/2022 20:16	WG1918072
4-Methyl-2-pentanone (MIBK)	U		10.0	25.0	25	08/29/2022 20:16	WG1918072
Methyl tert-butyl ether	U		0.295	1.00	25	08/29/2022 20:16	WG1918072
Naphthalene	6.40	J	3.10	12.5	25	08/29/2022 20:16	WG1918072
n-Propylbenzene	23.2		1.18	5.00	25	08/29/2022 20:16	WG1918072
Styrene	U		2.73	12.5	25	08/29/2022 20:16	WG1918072
1,1,1,2-Tetrachloroethane	U		0.500	2.50	25	08/29/2022 20:16	WG1918072
1,1,2,2-Tetrachloroethane	U		0.390	2.50	25	08/29/2022 20:16	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.675	2.50	25	08/29/2022 20:16	WG1918072
Tetrachloroethene	324		0.700	2.50	25	08/29/2022 20:16	WG1918072
Toluene	1.93	J	1.25	5.00	25	08/29/2022 20:16	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.625	12.5	25	08/29/2022 20:16	WG1918072
1,2,4-Trichlorobenzene	U	C4	4.83	12.5	25	08/29/2022 20:16	WG1918072
1,1,1-Trichloroethane	U		0.275	2.50	25	08/29/2022 20:16	WG1918072
1,1,2-Trichloroethane	U		0.883	2.50	25	08/29/2022 20:16	WG1918072
Trichloroethene	1010		0.400	1.00	25	08/29/2022 20:16	WG1918072
Trichlorofluoromethane	U		0.500	2.50	25	08/29/2022 20:16	WG1918072
1,2,3-Trichloropropane	U		5.10	12.5	25	08/29/2022 20:16	WG1918072
1,2,4-Trimethylbenzene	8.28	B	1.16	5.00	25	08/29/2022 20:16	WG1918072
1,2,3-Trimethylbenzene	3.25	J	1.15	5.00	25	08/29/2022 20:16	WG1918072
1,3,5-Trimethylbenzene	3.05	J	1.08	5.00	25	08/29/2022 20:16	WG1918072
Vinyl acetate	U		3.53	12.5	25	08/29/2022 20:16	WG1918072
Vinyl chloride	U		0.682	2.50	25	08/29/2022 20:16	WG1918072
Xylenes, Total	15.9		4.78	6.50	25	08/29/2022 20:16	WG1918072
(S) Toluene-d8	*109*			*75.0-131*		*08/29/2022 20:16*	WG1918072
(S) 4-Bromofluorobenzene	*99.1*			*67.0-138*		*08/29/2022 20:16*	WG1918072
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*08/29/2022 20:16*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00574	0.0214	1.07	08/26/2022 20:52	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:22	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	2100		31.6	100	1	08/28/2022 17:48	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*100*			*78.0-120*		*08/28/2022 17:48*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.0	20.0	20	08/29/2022 20:35	WG1918072
Acrylonitrile	U	C3	1.52	10.0	20	08/29/2022 20:35	WG1918072
Benzene	6.12		0.320	0.800	20	08/29/2022 20:35	WG1918072
Bromobenzene	U		0.840	10.0	20	08/29/2022 20:35	WG1918072
Bromochloromethane	U		0.904	4.00	20	08/29/2022 20:35	WG1918072
Bromodichloromethane	U		0.630	2.00	20	08/29/2022 20:35	WG1918072
Bromoform	U		4.78	20.0	20	08/29/2022 20:35	WG1918072
Bromomethane	U		2.96	10.0	20	08/29/2022 20:35	WG1918072
n-Butylbenzene	U		3.06	10.0	20	08/29/2022 20:35	WG1918072
sec-Butylbenzene	3.46	J	2.02	10.0	20	08/29/2022 20:35	WG1918072
tert-Butylbenzene	U		1.24	4.00	20	08/29/2022 20:35	WG1918072
Carbon disulfide	U		3.24	10.0	20	08/29/2022 20:35	WG1918072
Carbon tetrachloride	U		0.864	4.00	20	08/29/2022 20:35	WG1918072
Chlorobenzene	U		0.458	2.00	20	08/29/2022 20:35	WG1918072
Chlorodibromomethane	U		0.360	2.00	20	08/29/2022 20:35	WG1918072
Chloroethane	U		0.864	4.00	20	08/29/2022 20:35	WG1918072
Chloroform	U		0.332	2.00	20	08/29/2022 20:35	WG1918072
Chloromethane	U		1.11	10.0	20	08/29/2022 20:35	WG1918072
2-Chlorotoluene	U		0.736	2.00	20	08/29/2022 20:35	WG1918072
4-Chlorotoluene	U		0.904	4.00	20	08/29/2022 20:35	WG1918072
1,2-Dibromo-3-Chloropropane	U		4.08	20.0	20	08/29/2022 20:35	WG1918072
1,2-Dibromoethane	U		0.420	2.00	20	08/29/2022 20:35	WG1918072
Dibromomethane	U		0.800	4.00	20	08/29/2022 20:35	WG1918072
1,2-Dichlorobenzene	U		1.16	4.00	20	08/29/2022 20:35	WG1918072
1,3-Dichlorobenzene	U		1.36	4.00	20	08/29/2022 20:35	WG1918072
1,4-Dichlorobenzene	U		1.58	4.00	20	08/29/2022 20:35	WG1918072
trans-1,4-Dichloro-2-butene	U		1.12	4.00	20	08/29/2022 20:35	WG1918072
Dichlorodifluoromethane	U		0.654	2.00	20	08/29/2022 20:35	WG1918072
1,1-Dichloroethane	U		0.460	2.00	20	08/29/2022 20:35	WG1918072
1,2-Dichloroethane	U		0.380	2.00	20	08/29/2022 20:35	WG1918072
1,1-Dichloroethene	U		0.400	2.00	20	08/29/2022 20:35	WG1918072
cis-1,2-Dichloroethene	106		0.552	2.00	20	08/29/2022 20:35	WG1918072
trans-1,2-Dichloroethene	14.0		1.14	4.00	20	08/29/2022 20:35	WG1918072
1,2-Dichloropropane	U		1.02	4.00	20	08/29/2022 20:35	WG1918072
1,1-Dichloropropene	U		0.560	2.00	20	08/29/2022 20:35	WG1918072
1,3-Dichloropropane	U		1.40	4.00	20	08/29/2022 20:35	WG1918072
cis-1,3-Dichloropropene	U		0.542	2.00	20	08/29/2022 20:35	WG1918072
trans-1,3-Dichloropropene	U		1.22	4.00	20	08/29/2022 20:35	WG1918072
2,2-Dichloropropane	U		0.634	2.00	20	08/29/2022 20:35	WG1918072
Di-isopropyl ether	U	C3	0.280	0.800	20	08/29/2022 20:35	WG1918072
Ethylbenzene	129		0.424	2.00	20	08/29/2022 20:35	WG1918072
Hexachloro-1,3-butadiene	U		10.2	20.0	20	08/29/2022 20:35	WG1918072
2-Hexanone	U		8.00	20.0	20	08/29/2022 20:35	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	14.2		0.848	4.00	20	08/29/2022 20:35	WG1918072
Iodomethane	U		4.84	10.0	20	08/29/2022 20:35	WG1918072
Isopropylbenzene	23.3		0.690	2.00	20	08/29/2022 20:35	WG1918072
p-Isopropyltoluene	3.22	J	1.86	4.00	20	08/29/2022 20:35	WG1918072
2-Butanone (MEK)	U	C3	10.0	20.0	20	08/29/2022 20:35	WG1918072
Methylene Chloride	U		5.30	20.0	20	08/29/2022 20:35	WG1918072
4-Methyl-2-pentanone (MIBK)	U		8.00	20.0	20	08/29/2022 20:35	WG1918072
Methyl tert-butyl ether	U		0.236	0.800	20	08/29/2022 20:35	WG1918072
Naphthalene	U		2.48	10.0	20	08/29/2022 20:35	WG1918072
n-Propylbenzene	19.8		0.944	4.00	20	08/29/2022 20:35	WG1918072
Styrene	U		2.18	10.0	20	08/29/2022 20:35	WG1918072
1,1,1,2-Tetrachloroethane	U		0.400	2.00	20	08/29/2022 20:35	WG1918072
1,1,2,2-Tetrachloroethane	U		0.312	2.00	20	08/29/2022 20:35	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.540	2.00	20	08/29/2022 20:35	WG1918072
Tetrachloroethene	309		0.560	2.00	20	08/29/2022 20:35	WG1918072
Toluene	1.64	J	1.00	4.00	20	08/29/2022 20:35	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.500	10.0	20	08/29/2022 20:35	WG1918072
1,2,4-Trichlorobenzene	U	C4	3.86	10.0	20	08/29/2022 20:35	WG1918072
1,1,1-Trichloroethane	U		0.220	2.00	20	08/29/2022 20:35	WG1918072
1,1,2-Trichloroethane	U		0.706	2.00	20	08/29/2022 20:35	WG1918072
Trichloroethene	1030		0.320	0.800	20	08/29/2022 20:35	WG1918072
Trichlorofluoromethane	U		0.400	2.00	20	08/29/2022 20:35	WG1918072
1,2,3-Trichloropropane	U		4.08	10.0	20	08/29/2022 20:35	WG1918072
1,2,4-Trimethylbenzene	5.88	B	0.928	4.00	20	08/29/2022 20:35	WG1918072
1,2,3-Trimethylbenzene	2.48	J	0.920	4.00	20	08/29/2022 20:35	WG1918072
1,3,5-Trimethylbenzene	U		0.864	4.00	20	08/29/2022 20:35	WG1918072
Vinyl acetate	U		2.82	10.0	20	08/29/2022 20:35	WG1918072
Vinyl chloride	2.94		0.546	2.00	20	08/29/2022 20:35	WG1918072
Xylenes, Total	10.4		3.82	5.20	20	08/29/2022 20:35	WG1918072
(S) Toluene-d8	*107*			*75.0-131*		*08/29/2022 20:35*	WG1918072
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*08/29/2022 20:35*	WG1918072
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*		*08/29/2022 20:35*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	08/26/2022 20:28	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:25	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	43.1	B J	31.6	100	1	08/28/2022 18:10	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*		*08/28/2022 18:10*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.33	C3	0.548	1.00	1	08/29/2022 18:12	WG1918072
Acrylonitrile	U	C3	0.0760	0.500	1	08/29/2022 18:12	WG1918072
Benzene	0.0220	J	0.0160	0.0400	1	08/29/2022 18:12	WG1918072
Bromobenzene	U		0.0420	0.500	1	08/29/2022 18:12	WG1918072
Bromochloromethane	U		0.0452	0.200	1	08/29/2022 18:12	WG1918072
Bromodichloromethane	U		0.0315	0.100	1	08/29/2022 18:12	WG1918072
Bromoform	U		0.239	1.00	1	08/29/2022 18:12	WG1918072
Bromomethane	U		0.148	0.500	1	08/29/2022 18:12	WG1918072
n-Butylbenzene	U		0.153	0.500	1	08/29/2022 18:12	WG1918072
sec-Butylbenzene	U		0.101	0.500	1	08/29/2022 18:12	WG1918072
tert-Butylbenzene	U		0.0620	0.200	1	08/29/2022 18:12	WG1918072
Carbon disulfide	U		0.162	0.500	1	08/29/2022 18:12	WG1918072
Carbon tetrachloride	U		0.0432	0.200	1	08/29/2022 18:12	WG1918072
Chlorobenzene	U		0.0229	0.100	1	08/29/2022 18:12	WG1918072
Chlorodibromomethane	U		0.0180	0.100	1	08/29/2022 18:12	WG1918072
Chloroethane	U		0.0432	0.200	1	08/29/2022 18:12	WG1918072
Chloroform	0.260		0.0166	0.100	1	08/29/2022 18:12	WG1918072
Chloromethane	U		0.0556	0.500	1	08/29/2022 18:12	WG1918072
2-Chlorotoluene	U		0.0368	0.100	1	08/29/2022 18:12	WG1918072
4-Chlorotoluene	U		0.0452	0.200	1	08/29/2022 18:12	WG1918072
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	08/29/2022 18:12	WG1918072
1,2-Dibromoethane	U		0.0210	0.100	1	08/29/2022 18:12	WG1918072
Dibromomethane	U		0.0400	0.200	1	08/29/2022 18:12	WG1918072
1,2-Dichlorobenzene	U		0.0580	0.200	1	08/29/2022 18:12	WG1918072
1,3-Dichlorobenzene	U		0.0680	0.200	1	08/29/2022 18:12	WG1918072
1,4-Dichlorobenzene	U		0.0788	0.200	1	08/29/2022 18:12	WG1918072
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	08/29/2022 18:12	WG1918072
Dichlorodifluoromethane	U		0.0327	0.100	1	08/29/2022 18:12	WG1918072
1,1-Dichloroethane	U		0.0230	0.100	1	08/29/2022 18:12	WG1918072
1,2-Dichloroethane	U		0.0190	0.100	1	08/29/2022 18:12	WG1918072
1,1-Dichloroethene	U		0.0200	0.100	1	08/29/2022 18:12	WG1918072
cis-1,2-Dichloroethene	0.260		0.0276	0.100	1	08/30/2022 15:12	WG1918432
trans-1,2-Dichloroethene	U		0.0572	0.200	1	08/29/2022 18:12	WG1918072
1,2-Dichloropropane	U		0.0508	0.200	1	08/29/2022 18:12	WG1918072
1,1-Dichloropropene	U		0.0280	0.100	1	08/29/2022 18:12	WG1918072
1,3-Dichloropropane	U		0.0700	0.200	1	08/29/2022 18:12	WG1918072
cis-1,3-Dichloropropene	U		0.0271	0.100	1	08/29/2022 18:12	WG1918072
trans-1,3-Dichloropropene	U		0.0612	0.200	1	08/29/2022 18:12	WG1918072
2,2-Dichloropropane	U		0.0317	0.100	1	08/29/2022 18:12	WG1918072
Di-isopropyl ether	U	C3	0.0140	0.0400	1	08/29/2022 18:12	WG1918072
Ethylbenzene	U		0.0212	0.100	1	08/29/2022 18:12	WG1918072
Hexachloro-1,3-butadiene	U		0.508	1.00	1	08/29/2022 18:12	WG1918072
2-Hexanone	U		0.400	1.00	1	08/29/2022 18:12	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.0424	0.200	1	08/29/2022 18:12	WG1918072
Iodomethane	U		0.242	0.500	1	08/29/2022 18:12	WG1918072
Isopropylbenzene	U		0.0345	0.100	1	08/29/2022 18:12	WG1918072
p-Isopropyltoluene	U		0.0932	0.200	1	08/29/2022 18:12	WG1918072
2-Butanone (MEK)	U	C3	0.500	1.00	1	08/29/2022 18:12	WG1918072
Methylene Chloride	U		0.265	1.00	1	08/29/2022 18:12	WG1918072
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	08/29/2022 18:12	WG1918072
Methyl tert-butyl ether	U		0.0118	0.0400	1	08/29/2022 18:12	WG1918072
Naphthalene	U		0.124	0.500	1	08/29/2022 18:12	WG1918072
n-Propylbenzene	U		0.0472	0.200	1	08/29/2022 18:12	WG1918072
Styrene	U		0.109	0.500	1	08/29/2022 18:12	WG1918072
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	08/29/2022 18:12	WG1918072
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	08/29/2022 18:12	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	08/29/2022 18:12	WG1918072
Tetrachloroethene	2.24		0.0280	0.100	1	08/29/2022 18:12	WG1918072
Toluene	0.0810	J	0.0500	0.200	1	08/29/2022 18:12	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.0250	0.500	1	08/29/2022 18:12	WG1918072
1,2,4-Trichlorobenzene	U	C4	0.193	0.500	1	08/29/2022 18:12	WG1918072
1,1,1-Trichloroethane	U		0.0110	0.100	1	08/29/2022 18:12	WG1918072
1,1,2-Trichloroethane	U		0.0353	0.100	1	08/29/2022 18:12	WG1918072
Trichloroethene	0.172		0.0160	0.0400	1	08/30/2022 15:12	WG1918432
Trichlorofluoromethane	U		0.0200	0.100	1	08/29/2022 18:12	WG1918072
1,2,3-Trichloropropane	U		0.204	0.500	1	08/29/2022 18:12	WG1918072
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	08/29/2022 18:12	WG1918072
1,2,3-Trimethylbenzene	U		0.0460	0.200	1	08/29/2022 18:12	WG1918072
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	08/29/2022 18:12	WG1918072
Vinyl acetate	U		0.141	0.500	1	08/29/2022 18:12	WG1918072
Vinyl chloride	0.996		0.0273	0.100	1	08/29/2022 18:12	WG1918072
Xylenes, Total	U		0.191	0.260	1	08/29/2022 18:12	WG1918072
(S) Toluene-d8	*111*			*75.0-131*		*08/29/2022 18:12*	WG1918072
(S) Toluene-d8	*104*			*75.0-131*		*08/30/2022 15:12*	WG1918432
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*		*08/29/2022 18:12*	WG1918072
(S) 4-Bromofluorobenzene	*94.5*			*67.0-138*		*08/30/2022 15:12*	WG1918432
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/29/2022 18:12*	WG1918072
(S) 1,2-Dichloroethane-d4	*97.9*			*70.0-130*		*08/30/2022 15:12*	WG1918432

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	08/26/2022 22:16	WG1916899

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	08/26/2022 18:28	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	599		31.6	100	1	08/28/2022 18:57	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*08/28/2022 18:57*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.0	20.0	20	08/29/2022 20:54	WG1918072
Acrylonitrile	U	C3	1.52	10.0	20	08/29/2022 20:54	WG1918072
Benzene	40.3		0.320	0.800	20	08/29/2022 20:54	WG1918072
Bromobenzene	U		0.840	10.0	20	08/29/2022 20:54	WG1918072
Bromochloromethane	U		0.904	4.00	20	08/29/2022 20:54	WG1918072
Bromodichloromethane	U		0.630	2.00	20	08/29/2022 20:54	WG1918072
Bromoform	U		4.78	20.0	20	08/29/2022 20:54	WG1918072
Bromomethane	U		2.96	10.0	20	08/29/2022 20:54	WG1918072
n-Butylbenzene	U		3.06	10.0	20	08/29/2022 20:54	WG1918072
sec-Butylbenzene	U		2.02	10.0	20	08/29/2022 20:54	WG1918072
tert-Butylbenzene	U		1.24	4.00	20	08/29/2022 20:54	WG1918072
Carbon disulfide	U		3.24	10.0	20	08/29/2022 20:54	WG1918072
Carbon tetrachloride	U		0.864	4.00	20	08/29/2022 20:54	WG1918072
Chlorobenzene	U		0.458	2.00	20	08/29/2022 20:54	WG1918072
Chlorodibromomethane	U		0.360	2.00	20	08/29/2022 20:54	WG1918072
Chloroethane	U		0.864	4.00	20	08/29/2022 20:54	WG1918072
Chloroform	U		0.332	2.00	20	08/29/2022 20:54	WG1918072
Chloromethane	U		1.11	10.0	20	08/29/2022 20:54	WG1918072
2-Chlorotoluene	U		0.736	2.00	20	08/29/2022 20:54	WG1918072
4-Chlorotoluene	U		0.904	4.00	20	08/29/2022 20:54	WG1918072
1,2-Dibromo-3-Chloropropane	U		4.08	20.0	20	08/29/2022 20:54	WG1918072
1,2-Dibromoethane	U		0.420	2.00	20	08/29/2022 20:54	WG1918072
Dibromomethane	U		0.800	4.00	20	08/29/2022 20:54	WG1918072
1,2-Dichlorobenzene	U		1.16	4.00	20	08/29/2022 20:54	WG1918072
1,3-Dichlorobenzene	U		1.36	4.00	20	08/29/2022 20:54	WG1918072
1,4-Dichlorobenzene	U		1.58	4.00	20	08/29/2022 20:54	WG1918072
trans-1,4-Dichloro-2-butene	U		1.12	4.00	20	08/29/2022 20:54	WG1918072
Dichlorodifluoromethane	U		0.654	2.00	20	08/29/2022 20:54	WG1918072
1,1-Dichloroethane	U		0.460	2.00	20	08/29/2022 20:54	WG1918072
1,2-Dichloroethane	U		0.380	2.00	20	08/29/2022 20:54	WG1918072
1,1-Dichloroethene	2.36		0.400	2.00	20	08/29/2022 20:54	WG1918072
cis-1,2-Dichloroethene	592		0.552	2.00	20	08/29/2022 20:54	WG1918072
trans-1,2-Dichloroethene	18.2		1.14	4.00	20	08/29/2022 20:54	WG1918072
1,2-Dichloropropane	U		1.02	4.00	20	08/29/2022 20:54	WG1918072
1,1-Dichloropropene	U		0.560	2.00	20	08/29/2022 20:54	WG1918072
1,3-Dichloropropane	U		1.40	4.00	20	08/29/2022 20:54	WG1918072
cis-1,3-Dichloropropene	U		0.542	2.00	20	08/29/2022 20:54	WG1918072
trans-1,3-Dichloropropene	U		1.22	4.00	20	08/29/2022 20:54	WG1918072
2,2-Dichloropropane	U		0.634	2.00	20	08/29/2022 20:54	WG1918072
Di-isopropyl ether	U	C3	0.280	0.800	20	08/29/2022 20:54	WG1918072
Ethylbenzene	0.700	J	0.424	2.00	20	08/29/2022 20:54	WG1918072
Hexachloro-1,3-butadiene	U		10.2	20.0	20	08/29/2022 20:54	WG1918072
2-Hexanone	U		8.00	20.0	20	08/29/2022 20:54	WG1918072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.848	4.00	20	08/29/2022 20:54	WG1918072
Iodomethane	U		4.84	10.0	20	08/29/2022 20:54	WG1918072
Isopropylbenzene	U		0.690	2.00	20	08/29/2022 20:54	WG1918072
p-Isopropyltoluene	U		1.86	4.00	20	08/29/2022 20:54	WG1918072
2-Butanone (MEK)	U	C3	10.0	20.0	20	08/29/2022 20:54	WG1918072
Methylene Chloride	U		5.30	20.0	20	08/29/2022 20:54	WG1918072
4-Methyl-2-pentanone (MIBK)	U		8.00	20.0	20	08/29/2022 20:54	WG1918072
Methyl tert-butyl ether	U		0.236	0.800	20	08/29/2022 20:54	WG1918072
Naphthalene	U		2.48	10.0	20	08/29/2022 20:54	WG1918072
n-Propylbenzene	U		0.944	4.00	20	08/29/2022 20:54	WG1918072
Styrene	U		2.18	10.0	20	08/29/2022 20:54	WG1918072
1,1,1,2-Tetrachloroethane	U		0.400	2.00	20	08/29/2022 20:54	WG1918072
1,1,2,2-Tetrachloroethane	U		0.312	2.00	20	08/29/2022 20:54	WG1918072
1,1,2-Trichlorotrifluoroethane	U		0.540	2.00	20	08/29/2022 20:54	WG1918072
Tetrachloroethene	9.28		0.560	2.00	20	08/29/2022 20:54	WG1918072
Toluene	U		1.00	4.00	20	08/29/2022 20:54	WG1918072
1,2,3-Trichlorobenzene	U	C4	0.500	10.0	20	08/29/2022 20:54	WG1918072
1,2,4-Trichlorobenzene	U	C4	3.86	10.0	20	08/29/2022 20:54	WG1918072
1,1,1-Trichloroethane	U		0.220	2.00	20	08/29/2022 20:54	WG1918072
1,1,2-Trichloroethane	U		0.706	2.00	20	08/29/2022 20:54	WG1918072
Trichloroethene	213		0.320	0.800	20	08/29/2022 20:54	WG1918072
Trichlorofluoromethane	U		0.400	2.00	20	08/29/2022 20:54	WG1918072
1,2,3-Trichloropropane	U		4.08	10.0	20	08/29/2022 20:54	WG1918072
1,2,4-Trimethylbenzene	U		0.928	4.00	20	08/29/2022 20:54	WG1918072
1,2,3-Trimethylbenzene	U		0.920	4.00	20	08/29/2022 20:54	WG1918072
1,3,5-Trimethylbenzene	U		0.864	4.00	20	08/29/2022 20:54	WG1918072
Vinyl acetate	U		2.82	10.0	20	08/29/2022 20:54	WG1918072
Vinyl chloride	41.0		0.546	2.00	20	08/29/2022 20:54	WG1918072
Xylenes, Total	U		3.82	5.20	20	08/29/2022 20:54	WG1918072
(S) Toluene-d8	*108*			*75.0-131*		*08/29/2022 20:54*	WG1918072
(S) 4-Bromofluorobenzene	*95.4*			*67.0-138*		*08/29/2022 20:54*	WG1918072
(S) 1,2-Dichloroethane-d4	*97.8*			*70.0-130*		*08/29/2022 20:54*	WG1918072

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	08/26/2022 22:28	WG1916899

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	08/26/2022 18:38	WG1916170

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	409		31.6	100	1	08/28/2022 19:19	WG1917549
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*08/28/2022 19:19*	WG1917549

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		54.8	100	100	09/01/2022 17:42	WG1920159
Acetone	8.41	J Q	5.48	10.0	10	09/02/2022 16:49	WG1920930
Acrylonitrile	U		7.60	50.0	100	09/01/2022 17:42	WG1920159
Acrylonitrile	U	Q	0.760	5.00	10	09/02/2022 16:49	WG1920930
Benzene	U		1.60	4.00	100	09/01/2022 17:42	WG1920159
Benzene	4.54	Q	0.160	0.400	10	09/02/2022 16:49	WG1920930
Bromobenzene	U		4.20	50.0	100	09/01/2022 17:42	WG1920159
Bromobenzene	U	Q	0.420	5.00	10	09/02/2022 16:49	WG1920930
Bromochloromethane	U		4.52	20.0	100	09/01/2022 17:42	WG1920159
Bromochloromethane	U	Q	0.452	2.00	10	09/02/2022 16:49	WG1920930
Bromodichloromethane	U		3.15	10.0	100	09/01/2022 17:42	WG1920159
Bromodichloromethane	U	Q	0.315	1.00	10	09/02/2022 16:49	WG1920930
Bromoform	U		23.9	100	100	09/01/2022 17:42	WG1920159
Bromoform	U	Q	2.39	10.0	10	09/02/2022 16:49	WG1920930
Bromomethane	U		14.8	50.0	100	09/01/2022 17:42	WG1920159
Bromomethane	U	Q	1.48	5.00	10	09/02/2022 16:49	WG1920930
n-Butylbenzene	U		15.3	50.0	100	09/01/2022 17:42	WG1920159
n-Butylbenzene	U	Q	1.53	5.00	10	09/02/2022 16:49	WG1920930
sec-Butylbenzene	U		10.1	50.0	100	09/01/2022 17:42	WG1920159
sec-Butylbenzene	U	Q	1.01	5.00	10	09/02/2022 16:49	WG1920930
tert-Butylbenzene	U		6.20	20.0	100	09/01/2022 17:42	WG1920159
tert-Butylbenzene	U	Q	0.620	2.00	10	09/02/2022 16:49	WG1920930
Carbon disulfide	U		16.2	50.0	100	09/01/2022 17:42	WG1920159
Carbon disulfide	U	Q	1.62	5.00	10	09/02/2022 16:49	WG1920930
Carbon tetrachloride	U		4.32	20.0	100	09/01/2022 17:42	WG1920159
Carbon tetrachloride	U	Q	0.432	2.00	10	09/02/2022 16:49	WG1920930
Chlorobenzene	U		2.29	10.0	100	09/01/2022 17:42	WG1920159
Chlorobenzene	U	Q	0.229	1.00	10	09/02/2022 16:49	WG1920930
Chlorodibromomethane	U		1.80	10.0	100	09/01/2022 17:42	WG1920159
Chlorodibromomethane	U	Q	0.180	1.00	10	09/02/2022 16:49	WG1920930
Chloroethane	U		4.32	20.0	100	09/01/2022 17:42	WG1920159
Chloroethane	U	Q	0.432	2.00	10	09/02/2022 16:49	WG1920930
Chloroform	U		1.66	10.0	100	09/01/2022 17:42	WG1920159
Chloroform	U	Q	0.166	1.00	10	09/02/2022 16:49	WG1920930
Chloromethane	U		5.56	50.0	100	09/01/2022 17:42	WG1920159
Chloromethane	U	Q	0.556	5.00	10	09/02/2022 16:49	WG1920930
2-Chlorotoluene	U		3.68	10.0	100	09/01/2022 17:42	WG1920159
2-Chlorotoluene	U	Q	0.368	1.00	10	09/02/2022 16:49	WG1920930
4-Chlorotoluene	U		4.52	20.0	100	09/01/2022 17:42	WG1920159
4-Chlorotoluene	U	Q	0.452	2.00	10	09/02/2022 16:49	WG1920930
1,2-Dibromo-3-Chloropropane	U		20.4	100	100	09/01/2022 17:42	WG1920159
1,2-Dibromo-3-Chloropropane	U	Q	2.04	10.0	10	09/02/2022 16:49	WG1920930
1,2-Dibromoethane	U		2.10	10.0	100	09/01/2022 17:42	WG1920159

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dibromoethane	U	Q	0.210	1.00	10	09/02/2022 16:49	WG1920930
Dibromomethane	U		4.00	20.0	100	09/01/2022 17:42	WG1920159
Dibromomethane	U	Q	0.400	2.00	10	09/02/2022 16:49	WG1920930
1,2-Dichlorobenzene	U		5.80	20.0	100	09/01/2022 17:42	WG1920159
1,2-Dichlorobenzene	U	Q	0.580	2.00	10	09/02/2022 16:49	WG1920930
1,3-Dichlorobenzene	U		6.80	20.0	100	09/01/2022 17:42	WG1920159
1,3-Dichlorobenzene	U	Q	0.680	2.00	10	09/02/2022 16:49	WG1920930
1,4-Dichlorobenzene	U		7.88	20.0	100	09/01/2022 17:42	WG1920159
1,4-Dichlorobenzene	U	Q	0.788	2.00	10	09/02/2022 16:49	WG1920930
trans-1,4-Dichloro-2-butene	U	J3	5.60	20.0	100	09/01/2022 17:42	WG1920159
trans-1,4-Dichloro-2-butene	U	C4 J4 Q	0.560	2.00	10	09/02/2022 16:49	WG1920930
Dichlorodifluoromethane	U		3.27	10.0	100	09/01/2022 17:42	WG1920159
Dichlorodifluoromethane	U	Q	0.327	1.00	10	09/02/2022 16:49	WG1920930
1,1-Dichloroethane	U		2.30	10.0	100	09/01/2022 17:42	WG1920159
1,1-Dichloroethane	U	Q	0.230	1.00	10	09/02/2022 16:49	WG1920930
1,2-Dichloroethane	U		1.90	10.0	100	09/01/2022 17:42	WG1920159
1,2-Dichloroethane	U	Q	0.190	1.00	10	09/02/2022 16:49	WG1920930
1,1-Dichloroethene	U		2.00	10.0	100	09/01/2022 17:42	WG1920159
1,1-Dichloroethene	0.691	J Q	0.200	1.00	10	09/02/2022 16:49	WG1920930
cis-1,2-Dichloroethene	474		2.76	10.0	100	09/01/2022 17:42	WG1920159
cis-1,2-Dichloroethene	459	Q	0.276	1.00	10	09/02/2022 16:49	WG1920930
trans-1,2-Dichloroethene	U		5.72	20.0	100	09/01/2022 17:42	WG1920159
trans-1,2-Dichloroethene	7.89	Q	0.572	2.00	10	09/02/2022 16:49	WG1920930
1,2-Dichloropropane	U		5.08	20.0	100	09/01/2022 17:42	WG1920159
1,2-Dichloropropane	U	Q	0.508	2.00	10	09/02/2022 16:49	WG1920930
1,1-Dichloropropene	U		2.80	10.0	100	09/01/2022 17:42	WG1920159
1,1-Dichloropropene	U	Q	0.280	1.00	10	09/02/2022 16:49	WG1920930
1,3-Dichloropropane	U		7.00	20.0	100	09/01/2022 17:42	WG1920159
1,3-Dichloropropane	U	Q	0.700	2.00	10	09/02/2022 16:49	WG1920930
cis-1,3-Dichloropropene	U		2.71	10.0	100	09/01/2022 17:42	WG1920159
cis-1,3-Dichloropropene	U	Q	0.271	1.00	10	09/02/2022 16:49	WG1920930
trans-1,3-Dichloropropene	U		6.12	20.0	100	09/01/2022 17:42	WG1920159
trans-1,3-Dichloropropene	U	Q	0.612	2.00	10	09/02/2022 16:49	WG1920930
2,2-Dichloropropane	U		3.17	10.0	100	09/01/2022 17:42	WG1920159
2,2-Dichloropropane	U	Q	0.317	1.00	10	09/02/2022 16:49	WG1920930
Di-isopropyl ether	U		1.40	4.00	100	09/01/2022 17:42	WG1920159
Di-isopropyl ether	U	Q	0.140	0.400	10	09/02/2022 16:49	WG1920930
Ethylbenzene	U		2.12	10.0	100	09/01/2022 17:42	WG1920159
Ethylbenzene	U	Q	0.212	1.00	10	09/02/2022 16:49	WG1920930
Hexachloro-1,3-butadiene	U		50.8	100	100	09/01/2022 17:42	WG1920159
Hexachloro-1,3-butadiene	U	Q	5.08	10.0	10	09/02/2022 16:49	WG1920930
2-Hexanone	U		40.0	100	100	09/01/2022 17:42	WG1920159
2-Hexanone	U	Q	4.00	10.0	10	09/02/2022 16:49	WG1920930
n-Hexane	U	C3	4.24	20.0	100	09/01/2022 17:42	WG1920159
n-Hexane	U	Q	0.424	2.00	10	09/02/2022 16:49	WG1920930
Iodomethane	U		24.2	50.0	100	09/01/2022 17:42	WG1920159
Iodomethane	U	Q	2.42	5.00	10	09/02/2022 16:49	WG1920930
Isopropylbenzene	U		3.45	10.0	100	09/01/2022 17:42	WG1920159
Isopropylbenzene	U	Q	0.345	1.00	10	09/02/2022 16:49	WG1920930
p-Isopropyltoluene	U		9.32	20.0	100	09/01/2022 17:42	WG1920159
p-Isopropyltoluene	U	Q	0.932	2.00	10	09/02/2022 16:49	WG1920930
2-Butanone (MEK)	U	J3	50.0	100	100	09/01/2022 17:42	WG1920159
2-Butanone (MEK)	U	Q	5.00	10.0	10	09/02/2022 16:49	WG1920930
Methylene Chloride	U		26.5	100	100	09/01/2022 17:42	WG1920159
Methylene Chloride	U	Q	2.65	10.0	10	09/02/2022 16:49	WG1920930
4-Methyl-2-pentanone (MIBK)	U		40.0	100	100	09/01/2022 17:42	WG1920159

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
4-Methyl-2-pentanone (MIBK)	U	Q	4.00	10.0	10	09/02/2022 16:49	WG1920930
Methyl tert-butyl ether	U		1.18	4.00	100	09/01/2022 17:42	WG1920159
Methyl tert-butyl ether	U	Q	0.118	0.400	10	09/02/2022 16:49	WG1920930
Naphthalene	U	J4	12.4	50.0	100	09/01/2022 17:42	WG1920159
Naphthalene	U	Q	1.24	5.00	10	09/02/2022 16:49	WG1920930
n-Propylbenzene	U		4.72	20.0	100	09/01/2022 17:42	WG1920159
n-Propylbenzene	U	Q	0.472	2.00	10	09/02/2022 16:49	WG1920930
Styrene	U		10.9	50.0	100	09/01/2022 17:42	WG1920159
Styrene	U	Q	1.09	5.00	10	09/02/2022 16:49	WG1920930
1,1,1,2-Tetrachloroethane	U		2.00	10.0	100	09/01/2022 17:42	WG1920159
1,1,1,2-Tetrachloroethane	U	Q	0.200	1.00	10	09/02/2022 16:49	WG1920930
1,1,2,2-Tetrachloroethane	U		1.56	10.0	100	09/01/2022 17:42	WG1920159
1,1,2,2-Tetrachloroethane	U	Q	0.156	1.00	10	09/02/2022 16:49	WG1920930
1,1,2-Trichlorotrifluoroethane	U		2.70	10.0	100	09/01/2022 17:42	WG1920159
1,1,2-Trichlorotrifluoroethane	U	Q	0.270	1.00	10	09/02/2022 16:49	WG1920930
Tetrachloroethene	U		2.80	10.0	100	09/01/2022 17:42	WG1920159
Tetrachloroethene	1.05	Q	0.280	1.00	10	09/02/2022 16:49	WG1920930
Toluene	U		5.00	20.0	100	09/01/2022 17:42	WG1920159
Toluene	U	Q	0.500	2.00	10	09/02/2022 16:49	WG1920930
1,2,3-Trichlorobenzene	U		2.50	50.0	100	09/01/2022 17:42	WG1920159
1,2,3-Trichlorobenzene	U	Q	0.250	5.00	10	09/02/2022 16:49	WG1920930
1,2,4-Trichlorobenzene	U		19.3	50.0	100	09/01/2022 17:42	WG1920159
1,2,4-Trichlorobenzene	U	Q	1.93	5.00	10	09/02/2022 16:49	WG1920930
1,1,1-Trichloroethane	U		1.10	10.0	100	09/01/2022 17:42	WG1920159
1,1,1-Trichloroethane	U	Q	0.110	1.00	10	09/02/2022 16:49	WG1920930
1,1,2-Trichloroethane	U		3.53	10.0	100	09/01/2022 17:42	WG1920159
1,1,2-Trichloroethane	U	Q	0.353	1.00	10	09/02/2022 16:49	WG1920930
Trichloroethene	304		1.60	4.00	100	09/01/2022 17:42	WG1920159
Trichloroethene	263	Q	0.160	0.400	10	09/02/2022 16:49	WG1920930
Trichlorofluoromethane	U		2.00	10.0	100	09/01/2022 17:42	WG1920159
Trichlorofluoromethane	U	Q	0.200	1.00	10	09/02/2022 16:49	WG1920930
1,2,3-Trichloropropane	U		20.4	50.0	100	09/01/2022 17:42	WG1920159
1,2,3-Trichloropropane	U	Q	2.04	5.00	10	09/02/2022 16:49	WG1920930
1,2,4-Trimethylbenzene	U		4.64	20.0	100	09/01/2022 17:42	WG1920159
1,2,4-Trimethylbenzene	U	Q	0.464	2.00	10	09/02/2022 16:49	WG1920930
1,2,3-Trimethylbenzene	U		4.60	20.0	100	09/01/2022 17:42	WG1920159
1,2,3-Trimethylbenzene	U	Q	0.460	2.00	10	09/02/2022 16:49	WG1920930
1,3,5-Trimethylbenzene	U		4.32	20.0	100	09/01/2022 17:42	WG1920159
1,3,5-Trimethylbenzene	U	Q	0.432	2.00	10	09/02/2022 16:49	WG1920930
Vinyl acetate	U		14.1	50.0	100	09/01/2022 17:42	WG1920159
Vinyl acetate	U	Q	1.41	5.00	10	09/02/2022 16:49	WG1920930
Vinyl chloride	U		2.73	10.0	100	09/01/2022 17:42	WG1920159
Vinyl chloride	2.13	Q	0.273	1.00	10	09/02/2022 16:49	WG1920930
Xylenes, Total	U		19.1	26.0	100	09/01/2022 17:42	WG1920159
Xylenes, Total	U	Q	1.91	2.60	10	09/02/2022 16:49	WG1920930
(S) Toluene-d8	*114*			*75.0-131*		*09/01/2022 17:42*	WG1920159
(S) Toluene-d8	*108*			*75.0-131*		*09/02/2022 16:49*	WG1920930
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*09/01/2022 17:42*	WG1920159
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*09/02/2022 16:49*	WG1920930
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*		*09/01/2022 17:42*	WG1920159
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*		*09/02/2022 16:49*	WG1920930

Sample Narrative:

L1528316-11 WG1920159, WG1920930: Initial analysis over diluted based on historical data.

L1528316-11 WG1920159, WG1920930: Reanalyzed out of hold at lower dilution. Reporting both data runs.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/26/2022 23:16	WG1916899

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	08/26/2022 03:42	WG1916827
Toluene	U		0.278	1.00	1	08/26/2022 03:42	WG1916827
Ethylbenzene	U		0.137	1.00	1	08/26/2022 03:42	WG1916827
Total Xylenes	U		0.174	3.00	1	08/26/2022 03:42	WG1916827
(S) Toluene-d8	*106*			*80.0-120*		*08/26/2022 03:42*	WG1916827
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/26/2022 03:42*	WG1916827
(S) 1,2-Dichloroethane-d4	*125*			*70.0-130*		*08/26/2022 03:42*	WG1916827

Method Blank (MB)

(MB) R3830998-1 08/26/22 16:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R3830998-2 08/26/22 16:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	49.2	98.5	80.0-120	

L1528316-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528316-01 08/26/22 16:22 • (MS) R3830998-4 08/26/22 16:28 • (MSD) R3830998-5 08/26/22 16:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	50.0	U	50.9	48.2	102	96.4	1	75.0-125			5.46	20

Method Blank (MB)

(MB) R3832306-2 08/28/22 11:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	38.4	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3832306-1 08/28/22 10:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	4910	89.3	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*114*	*78.0-120*	

Method Blank (MB)

(MB) R3831004-3 08/25/22 21:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3831004-1 08/25/22 20:13 • (LCSD) R3831004-2 08/25/22 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.37	5.49	107	110	70.0-123			2.21	20
Toluene	5.00	4.97	5.11	99.4	102	79.0-120			2.78	20
Ethylbenzene	5.00	4.65	4.77	93.0	95.4	79.0-123			2.55	20
Xylenes, Total	15.0	14.2	14.7	94.7	98.0	79.0-123			3.46	20
(S) Toluene-d8				*106*	*106*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*102*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*127*	*122*	*70.0-130*				

Method Blank (MB)

(MB) R3831724-3 08/29/22 11:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		0.548	1.00
Acrylonitrile	U		0.0760	0.500
Benzene	U		0.0160	0.0400
Bromobenzene	U		0.0420	0.500
Bromochloromethane	U		0.0452	0.200
Bromodichloromethane	U		0.0315	0.100
Bromoform	U		0.239	1.00
Bromomethane	U		0.148	0.500
n-Butylbenzene	U		0.153	0.500
sec-Butylbenzene	U		0.101	0.500
tert-Butylbenzene	U		0.0620	0.200
Carbon disulfide	U		0.162	0.500
Carbon tetrachloride	U		0.0432	0.200
Chlorobenzene	U		0.0229	0.100
Chlorodibromomethane	U		0.0180	0.100
Chloroethane	U		0.0432	0.200
Chloroform	U		0.0166	0.100
Chloromethane	U		0.0556	0.500
2-Chlorotoluene	U		0.0368	0.100
4-Chlorotoluene	U		0.0452	0.200
1,2-Dibromo-3-Chloropropane	U		0.204	1.00
1,2-Dibromoethane	U		0.0210	0.100
Dibromomethane	U		0.0400	0.200
1,2-Dichlorobenzene	U		0.0580	0.200
1,3-Dichlorobenzene	U		0.0680	0.200
1,4-Dichlorobenzene	U		0.0788	0.200
trans-1,4-Dichloro-2-butene	U		0.0560	0.200
Dichlorodifluoromethane	U		0.0327	0.100
1,1-Dichloroethane	U		0.0230	0.100
1,2-Dichloroethane	U		0.0190	0.100
1,1-Dichloroethene	U		0.0200	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
1,2-Dichloropropane	U		0.0508	0.200
1,1-Dichloropropene	U		0.0280	0.100
1,3-Dichloropropane	U		0.0700	0.200
cis-1,3-Dichloropropene	U		0.0271	0.100
trans-1,3-Dichloropropene	U		0.0612	0.200
2,2-Dichloropropane	U		0.0317	0.100
Di-isopropyl ether	U		0.0140	0.0400

Method Blank (MB)

(MB) R3831724-3 08/29/22 11:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.0212	0.100
Hexachloro-1,3-butadiene	U		0.508	1.00
2-Hexanone	U		0.400	1.00
n-Hexane	U		0.0424	0.200
Iodomethane	U		0.242	0.500
Isopropylbenzene	U		0.0345	0.100
p-Isopropyltoluene	U		0.0932	0.200
2-Butanone (MEK)	U		0.500	1.00
Methylene Chloride	U		0.265	1.00
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00
Methyl tert-butyl ether	U		0.0118	0.0400
Naphthalene	U		0.124	0.500
n-Propylbenzene	U		0.0472	0.200
Styrene	U		0.109	0.500
1,1,1,2-Tetrachloroethane	U		0.0200	0.100
1,1,2,2-Tetrachloroethane	U		0.0156	0.100
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
1,2,3-Trichlorobenzene	U		0.0250	0.500
1,2,4-Trichlorobenzene	U		0.193	0.500
1,1,1-Trichloroethane	U		0.0110	0.100
1,1,2-Trichloroethane	U		0.0353	0.100
Trichloroethene	U		0.0160	0.0400
Trichlorofluoromethane	U		0.0200	0.100
1,2,3-Trichloropropane	U		0.204	0.500
1,2,4-Trimethylbenzene	0.0770	J	0.0464	0.200
1,2,3-Trimethylbenzene	U		0.0460	0.200
1,3,5-Trimethylbenzene	U		0.0432	0.200
Vinyl acetate	U		0.141	0.500
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*105*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3831724-1 08/29/22 10:01 • (LCSD) R3831724-2 08/29/22 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	12.8	12.5	51.2	50.0	10.0-160			2.37	31
Acrylonitrile	25.0	16.3	17.0	65.2	68.0	45.0-153			4.20	22
Benzene	5.00	4.23	4.47	84.6	89.4	70.0-123			5.52	20
Bromobenzene	5.00	5.21	5.46	104	109	73.0-121			4.69	20
Bromochloromethane	5.00	4.40	4.55	88.0	91.0	77.0-128			3.35	20
Bromodichloromethane	5.00	4.79	5.15	95.8	103	73.0-121			7.24	20
Bromoform	5.00	4.87	4.89	97.4	97.8	64.0-132			0.410	20
Bromomethane	5.00	5.48	5.89	110	118	56.0-147			7.21	20
n-Butylbenzene	5.00	4.55	4.92	91.0	98.4	68.0-135			7.81	20
sec-Butylbenzene	5.00	5.22	5.46	104	109	74.0-130			4.49	20
tert-Butylbenzene	5.00	5.28	5.56	106	111	75.0-127			5.17	20
Carbon disulfide	5.00	4.11	4.25	82.2	85.0	56.0-133			3.35	20
Carbon tetrachloride	5.00	5.04	5.38	101	108	66.0-128			6.53	20
Chlorobenzene	5.00	4.57	4.73	91.4	94.6	76.0-128			3.44	20
Chlorodibromomethane	5.00	5.32	5.22	106	104	74.0-127			1.90	20
Chloroethane	5.00	5.36	5.84	107	117	61.0-134			8.57	20
Chloroform	5.00	4.21	4.40	84.2	88.0	72.0-123			4.41	20
Chloromethane	5.00	4.14	4.60	82.8	92.0	51.0-138			10.5	20
2-Chlorotoluene	5.00	5.16	4.99	103	99.8	75.0-124			3.35	20
4-Chlorotoluene	5.00	4.66	5.02	93.2	100	75.0-124			7.44	20
1,2-Dibromo-3-Chloropropane	5.00	5.26	5.46	105	109	59.0-130			3.73	20
1,2-Dibromoethane	5.00	5.09	5.18	102	104	74.0-128			1.75	20
Dibromomethane	5.00	4.58	4.78	91.6	95.6	75.0-122			4.27	20
1,2-Dichlorobenzene	5.00	4.48	4.69	89.6	93.8	76.0-124			4.58	20
1,3-Dichlorobenzene	5.00	4.64	4.81	92.8	96.2	76.0-125			3.60	20
1,4-Dichlorobenzene	5.00	4.57	4.81	91.4	96.2	77.0-121			5.12	20
trans-1,4-Dichloro-2-butene	5.00	5.05	5.19	101	104	45.0-143			2.73	20
Dichlorodifluoromethane	5.00	4.59	4.84	91.8	96.8	43.0-156			5.30	20
1,1-Dichloroethane	5.00	4.01	4.30	80.2	86.0	70.0-127			6.98	20
1,2-Dichloroethane	5.00	4.12	4.20	82.4	84.0	65.0-131			1.92	20
1,1-Dichloroethene	5.00	4.38	4.62	87.6	92.4	65.0-131			5.33	20
cis-1,2-Dichloroethene	5.00	4.40	4.59	88.0	91.8	73.0-125			4.23	20
trans-1,2-Dichloroethene	5.00	4.23	4.45	84.6	89.0	71.0-125			5.07	20
1,2-Dichloropropane	5.00	4.25	4.59	85.0	91.8	74.0-125			7.69	20
1,1-Dichloropropene	5.00	4.77	5.12	95.4	102	73.0-125			7.08	20
1,3-Dichloropropane	5.00	4.82	5.00	96.4	100	80.0-125			3.67	20
cis-1,3-Dichloropropene	5.00	4.85	5.14	97.0	103	76.0-127			5.81	20
trans-1,3-Dichloropropene	5.00	5.31	5.22	106	104	73.0-127			1.71	20
2,2-Dichloropropane	5.00	5.16	5.46	103	109	59.0-135			5.65	20
Di-isopropyl ether	5.00	3.76	4.19	75.2	83.8	60.0-136			10.8	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3831724-1 08/29/22 10:01 • (LCSD) R3831724-2 08/29/22 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	4.69	4.74	93.8	94.8	74.0-126			1.06	20
Hexachloro-1,3-butadiene	5.00	5.39	5.73	108	115	57.0-150			6.12	20
2-Hexanone	25.0	23.9	24.3	95.6	97.2	54.0-147			1.66	20
n-Hexane	5.00	4.31	4.51	86.2	90.2	55.0-137			4.54	20
Iodomethane	25.0	21.8	22.8	87.2	91.2	74.0-134			4.48	20
Isopropylbenzene	5.00	4.67	4.79	93.4	95.8	72.0-127			2.54	20
p-Isopropyltoluene	5.00	4.51	4.90	90.2	98.0	72.0-133			8.29	20
2-Butanone (MEK)	25.0	18.3	20.1	73.2	80.4	30.0-160			9.37	24
Methylene Chloride	5.00	4.27	4.20	85.4	84.0	68.0-123			1.65	20
4-Methyl-2-pentanone (MIBK)	25.0	23.2	23.2	92.8	92.8	56.0-143			0.000	20
Methyl tert-butyl ether	5.00	4.26	4.36	85.2	87.2	66.0-132			2.32	20
Naphthalene	5.00	5.81	6.32	116	126	59.0-130			8.41	20
n-Propylbenzene	5.00	4.80	5.02	96.0	100	74.0-126			4.48	20
Styrene	5.00	4.49	4.56	89.8	91.2	72.0-127			1.55	20
1,1,1,2-Tetrachloroethane	5.00	4.88	5.10	97.6	102	74.0-129			4.41	20
1,1,2,2-Tetrachloroethane	5.00	5.13	5.17	103	103	68.0-128			0.777	20
1,1,2-Trichlorotrifluoroethane	5.00	4.71	4.75	94.2	95.0	61.0-139			0.846	20
Tetrachloroethene	5.00	5.33	5.25	107	105	70.0-136			1.51	20
Toluene	5.00	4.65	4.68	93.0	93.6	75.0-121			0.643	20
1,2,3-Trichlorobenzene	5.00	5.18	5.71	104	114	59.0-139			9.73	20
1,2,4-Trichlorobenzene	5.00	4.56	5.03	91.2	101	62.0-137			9.80	20
1,1,1-Trichloroethane	5.00	4.96	5.18	99.2	104	69.0-126			4.34	20
1,1,2-Trichloroethane	5.00	5.11	5.15	102	103	78.0-123			0.780	20
Trichloroethene	5.00	4.74	5.06	94.8	101	76.0-126			6.53	20
Trichlorofluoromethane	5.00	4.76	5.50	95.2	110	61.0-142			14.4	20
1,2,3-Trichloropropane	5.00	5.40	5.39	108	108	67.0-129			0.185	20
1,2,4-Trimethylbenzene	5.00	4.97	5.21	99.4	104	70.0-126			4.72	20
1,2,3-Trimethylbenzene	5.00	4.69	4.98	93.8	99.6	74.0-124			6.00	20
1,3,5-Trimethylbenzene	5.00	4.91	5.18	98.2	104	73.0-127			5.35	20
Vinyl acetate	25.0	24.9	26.6	99.6	106	43.0-159			6.60	20
Vinyl chloride	5.00	5.73	6.16	115	123	63.0-134			7.23	20
Xylenes, Total	15.0	13.9	14.1	92.7	94.0	72.0-127			1.43	20
(S) Toluene-d8				*106*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.3*	*94.1*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*92.3*	*96.1*	*70.0-130*				

Method Blank (MB)

(MB) R3832201-3 08/30/22 12:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
cis-1,2-Dichloroethene	U		0.0276	0.100
Trichloroethene	U		0.0160	0.0400
(S) Toluene-d8	*104*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*99.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3832201-1 08/30/22 11:46 • (LCSD) R3832201-2 08/30/22 12:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
cis-1,2-Dichloroethene	5.00	4.79	5.51	95.8	110	73.0-125			14.0	20
Trichloroethene	5.00	4.89	5.54	97.8	111	76.0-126			12.5	20
(S) Toluene-d8				*102*	*100*	*75.0-131*				
(S) 4-Bromofluorobenzene				*95.1*	*92.9*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*102*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3833199-3 09/01/22 13:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		0.548	1.00
Acrylonitrile	U		0.0760	0.500
Benzene	U		0.0160	0.0400
Bromobenzene	U		0.0420	0.500
Bromochloromethane	U		0.0452	0.200
Bromodichloromethane	U		0.0315	0.100
Bromoform	U		0.239	1.00
Bromomethane	U		0.148	0.500
n-Butylbenzene	U		0.153	0.500
sec-Butylbenzene	U		0.101	0.500
tert-Butylbenzene	U		0.0620	0.200
Carbon disulfide	U		0.162	0.500
Carbon tetrachloride	U		0.0432	0.200
Chlorobenzene	U		0.0229	0.100
Chlorodibromomethane	U		0.0180	0.100
Chloroethane	U		0.0432	0.200
Chloroform	U		0.0166	0.100
Chloromethane	U		0.0556	0.500
2-Chlorotoluene	U		0.0368	0.100
4-Chlorotoluene	U		0.0452	0.200
1,2-Dibromo-3-Chloropropane	U		0.204	1.00
1,2-Dibromoethane	U		0.0210	0.100
Dibromomethane	U		0.0400	0.200
1,2-Dichlorobenzene	U		0.0580	0.200
1,3-Dichlorobenzene	U		0.0680	0.200
1,4-Dichlorobenzene	U		0.0788	0.200
trans-1,4-Dichloro-2-butene	U		0.0560	0.200
Dichlorodifluoromethane	U		0.0327	0.100
1,1-Dichloroethane	U		0.0230	0.100
1,2-Dichloroethane	U		0.0190	0.100
1,1-Dichloroethene	U		0.0200	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
1,2-Dichloropropane	U		0.0508	0.200
1,1-Dichloropropene	U		0.0280	0.100
1,3-Dichloropropane	U		0.0700	0.200
cis-1,3-Dichloropropene	U		0.0271	0.100
trans-1,3-Dichloropropene	U		0.0612	0.200
2,2-Dichloropropane	U		0.0317	0.100
Di-isopropyl ether	U		0.0140	0.0400

Method Blank (MB)

(MB) R3833199-3 09/01/22 13:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.0212	0.100
Hexachloro-1,3-butadiene	U		0.508	1.00
2-Hexanone	U		0.400	1.00
n-Hexane	U		0.0424	0.200
Iodomethane	U		0.242	0.500
Isopropylbenzene	U		0.0345	0.100
p-Isopropyltoluene	U		0.0932	0.200
2-Butanone (MEK)	U		0.500	1.00
Methylene Chloride	U		0.265	1.00
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00
Methyl tert-butyl ether	U		0.0118	0.0400
Naphthalene	U		0.124	0.500
n-Propylbenzene	U		0.0472	0.200
Styrene	U		0.109	0.500
1,1,1,2-Tetrachloroethane	U		0.0200	0.100
1,1,2,2-Tetrachloroethane	U		0.0156	0.100
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
1,2,3-Trichlorobenzene	U		0.0250	0.500
1,2,4-Trichlorobenzene	U		0.193	0.500
1,1,1-Trichloroethane	U		0.0110	0.100
1,1,2-Trichloroethane	U		0.0353	0.100
Trichloroethene	U		0.0160	0.0400
Trichlorofluoromethane	U		0.0200	0.100
1,2,3-Trichloropropane	U		0.204	0.500
1,2,4-Trimethylbenzene	U		0.0464	0.200
1,2,3-Trimethylbenzene	U		0.0460	0.200
1,3,5-Trimethylbenzene	U		0.0432	0.200
Vinyl acetate	U		0.141	0.500
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*113*			*75.0-131*
(S) 4-Bromofluorobenzene	*108*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3833199-1 09/01/22 11:59 • (LCSD) R3833199-2 09/01/22 12:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	25.8	24.6	103	98.4	10.0-160			4.76	31
Acrylonitrile	25.0	26.0	26.2	104	105	45.0-153			0.766	22
Benzene	5.00	5.29	5.35	106	107	70.0-123			1.13	20
Bromobenzene	5.00	5.13	4.93	103	98.6	73.0-121			3.98	20
Bromochloromethane	5.00	5.45	5.36	109	107	77.0-128			1.67	20
Bromodichloromethane	5.00	4.71	4.84	94.2	96.8	73.0-121			2.72	20
Bromoform	5.00	5.22	5.27	104	105	64.0-132			0.953	20
Bromomethane	5.00	4.41	4.72	88.2	94.4	56.0-147			6.79	20
n-Butylbenzene	5.00	5.27	5.51	105	110	68.0-135			4.45	20
sec-Butylbenzene	5.00	5.25	5.15	105	103	74.0-130			1.92	20
tert-Butylbenzene	5.00	4.29	3.88	85.8	77.6	75.0-127			10.0	20
Carbon disulfide	5.00	4.19	4.20	83.8	84.0	56.0-133			0.238	20
Carbon tetrachloride	5.00	4.78	4.88	95.6	97.6	66.0-128			2.07	20
Chlorobenzene	5.00	4.87	5.03	97.4	101	76.0-128			3.23	20
Chlorodibromomethane	5.00	5.05	5.12	101	102	74.0-127			1.38	20
Chloroethane	5.00	5.43	5.88	109	118	61.0-134			7.96	20
Chloroform	5.00	4.75	4.89	95.0	97.8	72.0-123			2.90	20
Chloromethane	5.00	5.60	5.32	112	106	51.0-138			5.13	20
2-Chlorotoluene	5.00	4.90	4.97	98.0	99.4	75.0-124			1.42	20
4-Chlorotoluene	5.00	5.15	4.91	103	98.2	75.0-124			4.77	20
1,2-Dibromo-3-Chloropropane	5.00	5.59	5.35	112	107	59.0-130			4.39	20
1,2-Dibromoethane	5.00	4.73	4.63	94.6	92.6	74.0-128			2.14	20
Dibromomethane	5.00	4.80	4.64	96.0	92.8	75.0-122			3.39	20
1,2-Dichlorobenzene	5.00	5.46	5.35	109	107	76.0-124			2.04	20
1,3-Dichlorobenzene	5.00	5.11	4.76	102	95.2	76.0-125			7.09	20
1,4-Dichlorobenzene	5.00	5.21	5.08	104	102	77.0-121			2.53	20
trans-1,4-Dichloro-2-butene	5.00	4.59	6.90	91.8	138	45.0-143		J3	40.2	20
Dichlorodifluoromethane	5.00	4.28	4.36	85.6	87.2	43.0-156			1.85	20
1,1-Dichloroethane	5.00	4.56	4.59	91.2	91.8	70.0-127			0.656	20
1,2-Dichloroethane	5.00	5.21	5.29	104	106	65.0-131			1.52	20
1,1-Dichloroethene	5.00	5.02	4.97	100	99.4	65.0-131			1.00	20
cis-1,2-Dichloroethene	5.00	4.69	4.94	93.8	98.8	73.0-125			5.19	20
trans-1,2-Dichloroethene	5.00	4.49	4.47	89.8	89.4	71.0-125			0.446	20
1,2-Dichloropropane	5.00	4.51	4.46	90.2	89.2	74.0-125			1.11	20
1,1-Dichloropropene	5.00	4.87	4.70	97.4	94.0	73.0-125			3.55	20
1,3-Dichloropropane	5.00	5.03	5.03	101	101	80.0-125			0.000	20
cis-1,3-Dichloropropene	5.00	4.75	4.34	95.0	86.8	76.0-127			9.02	20
trans-1,3-Dichloropropene	5.00	4.72	4.56	94.4	91.2	73.0-127			3.45	20
2,2-Dichloropropane	5.00	4.60	5.07	92.0	101	59.0-135			9.72	20
Di-isopropyl ether	5.00	5.45	5.42	109	108	60.0-136			0.552	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3833199-1 09/01/22 11:59 • (LCSD) R3833199-2 09/01/22 12:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	4.77	5.13	95.4	103	74.0-126			7.27	20
Hexachloro-1,3-butadiene	5.00	5.41	6.18	108	124	57.0-150			13.3	20
2-Hexanone	25.0	25.9	27.4	104	110	54.0-147			5.63	20
n-Hexane	5.00	3.72	3.99	74.4	79.8	55.0-137			7.00	20
Iodomethane	25.0	21.6	22.3	86.4	89.2	74.0-134			3.19	20
Isopropylbenzene	5.00	5.48	5.57	110	111	72.0-127			1.63	20
p-Isopropyltoluene	5.00	5.03	5.10	101	102	72.0-133			1.38	20
2-Butanone (MEK)	25.0	24.6	31.7	98.4	127	30.0-160		J3	25.2	24
Methylene Chloride	5.00	4.72	4.48	94.4	89.6	68.0-123			5.22	20
4-Methyl-2-pentanone (MIBK)	25.0	29.9	30.6	120	122	56.0-143			2.31	20
Methyl tert-butyl ether	5.00	5.20	5.31	104	106	66.0-132			2.09	20
Naphthalene	5.00	6.65	6.60	133	132	59.0-130	J4	J4	0.755	20
n-Propylbenzene	5.00	5.11	5.00	102	100	74.0-126			2.18	20
Styrene	5.00	5.37	5.39	107	108	72.0-127			0.372	20
1,1,1,2-Tetrachloroethane	5.00	5.23	5.03	105	101	74.0-129			3.90	20
1,1,2,2-Tetrachloroethane	5.00	5.12	5.04	102	101	68.0-128			1.57	20
1,1,2-Trichlorotrifluoroethane	5.00	4.90	5.45	98.0	109	61.0-139			10.6	20
Tetrachloroethene	5.00	5.10	5.04	102	101	70.0-136			1.18	20
Toluene	5.00	5.43	5.49	109	110	75.0-121			1.10	20
1,2,3-Trichlorobenzene	5.00	5.66	6.22	113	124	59.0-139			9.43	20
1,2,4-Trichlorobenzene	5.00	5.68	5.94	114	119	62.0-137			4.48	20
1,1,1-Trichloroethane	5.00	4.93	4.90	98.6	98.0	69.0-126			0.610	20
1,1,2-Trichloroethane	5.00	4.84	5.11	96.8	102	78.0-123			5.43	20
Trichloroethene	5.00	5.04	5.12	101	102	76.0-126			1.57	20
Trichlorofluoromethane	5.00	5.23	4.69	105	93.8	61.0-142			10.9	20
1,2,3-Trichloropropane	5.00	5.24	5.22	105	104	67.0-129			0.382	20
1,2,4-Trimethylbenzene	5.00	5.30	5.24	106	105	70.0-126			1.14	20
1,2,3-Trimethylbenzene	5.00	5.52	5.47	110	109	74.0-124			0.910	20
1,3,5-Trimethylbenzene	5.00	5.18	4.94	104	98.8	73.0-127			4.74	20
Vinyl acetate	25.0	22.4	23.2	89.6	92.8	43.0-159			3.51	20
Vinyl chloride	5.00	4.99	4.79	99.8	95.8	63.0-134			4.09	20
Xylenes, Total	15.0	15.7	16.1	105	107	72.0-127			2.52	20
(S) Toluene-d8				*107*	*107*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*103*	*104*	*70.0-130*				

L1529943-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529943-05 09/01/22 16:39 • (MS) R3833199-4 09/01/22 18:25 • (MSD) R3833199-5 09/01/22 18:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	26.3	28.4	105	114	1	10.0-160			7.68	40
Acrylonitrile	25.0	U	25.4	25.9	102	104	1	10.0-160			1.95	40
Benzene	5.00	U	5.69	5.13	114	103	1	10.0-149			10.4	37
Bromobenzene	5.00	U	5.44	5.35	109	107	1	10.0-156			1.67	38
Bromochloromethane	5.00	U	5.60	5.43	112	109	1	10.0-155			3.08	33
Bromodichloromethane	5.00	U	5.18	4.80	104	96.0	1	10.0-143			7.62	37
Bromoform	5.00	U	5.81	5.81	116	116	1	10.0-146			0.000	36
Bromomethane	5.00	U	4.89	4.87	97.8	97.4	1	10.0-149			0.410	38
n-Butylbenzene	5.00	U	5.54	5.19	111	104	1	10.0-160			6.52	40
sec-Butylbenzene	5.00	U	5.49	5.23	110	105	1	10.0-159			4.85	39
tert-Butylbenzene	5.00	U	4.61	4.05	92.2	81.0	1	10.0-156			12.9	39
Carbon disulfide	5.00	U	4.19	3.88	83.8	77.6	1	10.0-145			7.68	39
Carbon tetrachloride	5.00	U	5.80	5.09	116	102	1	10.0-145			13.0	37
Chlorobenzene	5.00	U	5.24	4.90	105	98.0	1	10.0-152			6.71	39
Chlorodibromomethane	5.00	U	5.68	5.33	114	107	1	10.0-146			6.36	37
Chloroethane	5.00	U	6.85	6.44	137	129	1	10.0-146			6.17	40
Chloroform	5.00	1.71	6.86	6.51	103	96.0	1	10.0-146			5.24	37
Chloromethane	5.00	U	6.00	5.65	120	113	1	10.0-159			6.01	37
2-Chlorotoluene	5.00	U	5.36	4.80	107	96.0	1	10.0-159			11.0	38
4-Chlorotoluene	5.00	U	5.35	4.54	107	90.8	1	10.0-155			16.4	39
1,2-Dibromo-3-Chloropropane	5.00	U	5.29	5.15	106	103	1	10.0-151			2.68	39
1,2-Dibromoethane	5.00	U	4.73	5.23	94.6	105	1	10.0-148			10.0	34
Dibromomethane	5.00	U	5.05	4.88	101	97.6	1	10.0-147			3.42	35
1,2-Dichlorobenzene	5.00	U	5.37	5.55	107	111	1	10.0-155			3.30	37
1,3-Dichlorobenzene	5.00	U	5.57	5.09	111	102	1	10.0-153			9.01	38
1,4-Dichlorobenzene	5.00	U	5.28	5.32	106	106	1	10.0-151			0.755	38
trans-1,4-Dichloro-2-butene	5.00	U	7.36	6.13	147	123	1	10.0-152			18.2	36
Dichlorodifluoromethane	5.00	U	4.97	4.90	99.4	98.0	1	10.0-160			1.42	35
1,1-Dichloroethane	5.00	U	4.99	4.49	99.8	89.8	1	10.0-147			10.5	37
1,2-Dichloroethane	5.00	U	5.27	5.34	105	107	1	10.0-148			1.32	35
1,1-Dichloroethene	5.00	U	5.49	5.03	110	101	1	10.0-155			8.75	37
cis-1,2-Dichloroethene	5.00	U	4.90	4.70	98.0	94.0	1	10.0-149			4.17	37
trans-1,2-Dichloroethene	5.00	U	4.60	4.26	92.0	85.2	1	10.0-150			7.67	37
1,2-Dichloropropane	5.00	U	5.00	4.61	100	92.2	1	10.0-148			8.12	37
1,1-Dichloropropene	5.00	U	5.35	4.68	107	93.6	1	10.0-153			13.4	35
1,3-Dichloropropane	5.00	U	5.35	5.51	107	110	1	10.0-154			2.95	35
cis-1,3-Dichloropropene	5.00	U	4.66	4.48	93.2	89.6	1	10.0-151			3.94	37
trans-1,3-Dichloropropene	5.00	U	5.00	5.02	100	100	1	10.0-148			0.399	37
2,2-Dichloropropane	5.00	U	5.64	5.37	113	107	1	10.0-138			4.90	36
Di-isopropyl ether	5.00	U	5.68	5.57	114	111	1	10.0-147			1.96	36

L1529943-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529943-05 09/01/22 16:39 • (MS) R3833199-4 09/01/22 18:25 • (MSD) R3833199-5 09/01/22 18:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	U	5.63	5.02	113	100	1	10.0-160			11.5	38
Hexachloro-1,3-butadiene	5.00	U	4.97	4.97	99.4	99.4	1	10.0-160			0.000	40
2-Hexanone	25.0	U	27.6	29.1	110	116	1	10.0-160			5.29	36
n-Hexane	5.00	U	4.87	4.05	97.4	81.0	1	10.0-157			18.4	37
Iodomethane	25.0	U	22.8	21.4	91.2	85.6	1	10.0-160			6.33	38
Isopropylbenzene	5.00	U	6.09	5.38	122	108	1	10.0-155			12.4	38
p-Isopropyltoluene	5.00	U	5.45	5.11	109	102	1	10.0-160			6.44	40
2-Butanone (MEK)	25.0	U	26.2	29.7	105	119	1	10.0-160			12.5	40
Methylene Chloride	5.00	U	4.47	4.47	89.4	89.4	1	10.0-141			0.000	37
4-Methyl-2-pentanone (MIBK)	25.0	U	31.7	31.5	127	126	1	10.0-160			0.633	35
Methyl tert-butyl ether	5.00	U	5.28	5.39	106	108	1	11.0-147			2.06	35
Naphthalene	5.00	U	5.28	5.37	106	107	1	10.0-160			1.69	36
n-Propylbenzene	5.00	U	5.54	4.96	111	99.2	1	10.0-158			11.0	38
Styrene	5.00	U	5.47	5.28	109	106	1	10.0-160			3.53	40
1,1,1,2-Tetrachloroethane	5.00	U	5.79	5.32	116	106	1	10.0-149			8.46	39
1,1,2,2-Tetrachloroethane	5.00	U	5.62	5.90	112	118	1	10.0-160			4.86	35
1,1,2-Trichlorotrifluoroethane	5.00	U	6.22	5.68	124	114	1	10.0-160			9.08	36
Tetrachloroethene	5.00	U	5.99	5.38	120	108	1	10.0-156			10.7	39
Toluene	5.00	U	6.01	5.47	120	109	1	10.0-156			9.41	38
1,2,3-Trichlorobenzene	5.00	U	5.25	4.96	105	99.2	1	10.0-160			5.68	40
1,2,4-Trichlorobenzene	5.00	U	4.94	5.40	98.8	108	1	10.0-160			8.90	40
1,1,1-Trichloroethane	5.00	U	5.54	4.90	111	98.0	1	10.0-144			12.3	35
1,1,2-Trichloroethane	5.00	U	5.61	5.43	112	109	1	10.0-160			3.26	35
Trichloroethene	5.00	1.26	6.27	6.18	100	98.4	1	10.0-156			1.45	38
Trichlorofluoromethane	5.00	U	5.84	5.63	117	113	1	10.0-160			3.66	40
1,2,3-Trichloropropane	5.00	U	5.56	5.41	111	108	1	10.0-156			2.73	35
1,2,4-Trimethylbenzene	5.00	U	5.53	5.16	111	103	1	10.0-160			6.92	36
1,2,3-Trimethylbenzene	5.00	U	5.47	5.47	109	109	1	10.0-160			0.000	36
1,3,5-Trimethylbenzene	5.00	U	5.38	4.90	108	98.0	1	10.0-160			9.34	38
Vinyl acetate	25.0	U	32.1	32.1	128	128	1	10.0-128			0.000	40
Vinyl chloride	5.00	U	5.92	5.33	118	107	1	10.0-160			10.5	37
Xylenes, Total	15.0	U	17.4	15.7	116	105	1	10.0-160			10.3	38
(S) Toluene-d8					*109*	*107*		*75.0-131*				
(S) 4-Bromofluorobenzene					*102*	*103*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*99.9*	*102*		*70.0-130*				

L1529943-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529943-07 09/01/22 17:00 • (MS) R3833199-6 09/01/22 19:08 • (MSD) R3833199-7 09/01/22 19:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	60.2	106	241	424	1	10.0-160	J5	J3 J5	55.1	40
Acrylonitrile	25.0	U	29.0	47.0	116	188	1	10.0-160		J3 J5	47.4	40
Benzene	5.00	2.24	5.86	6.05	72.4	76.2	1	10.0-149			3.19	37
Bromobenzene	5.00	U	4.36	4.52	87.2	90.4	1	10.0-156			3.60	38
Bromochloromethane	5.00	U	4.22	4.67	84.4	93.4	1	10.0-155			10.1	33
Bromodichloromethane	5.00	U	3.95	4.19	79.0	83.8	1	10.0-143			5.90	37
Bromoform	5.00	U	4.12	4.45	82.4	89.0	1	10.0-146			7.70	36
Bromomethane	5.00	U	3.49	2.81	69.8	56.2	1	10.0-149			21.6	38
n-Butylbenzene	5.00	3.01	10.1	15.4	142	248	1	10.0-160		J3 J5	41.6	40
sec-Butylbenzene	5.00	6.15	8.57	11.7	48.4	111	1	10.0-159			30.9	39
tert-Butylbenzene	5.00	0.561	4.88	4.78	86.4	84.4	1	10.0-156			2.07	39
Carbon disulfide	5.00	U	3.11	2.57	62.2	51.4	1	10.0-145			19.0	39
Carbon tetrachloride	5.00	U	4.39	3.38	87.8	67.6	1	10.0-145			26.0	37
Chlorobenzene	5.00	U	3.92	3.30	78.4	66.0	1	10.0-152			17.2	39
Chlorodibromomethane	5.00	U	3.90	3.93	78.0	78.6	1	10.0-146			0.766	37
Chloroethane	5.00	U	5.07	4.03	101	80.6	1	10.0-146			22.9	40
Chloroform	5.00	U	5.17	6.00	103	120	1	10.0-146			14.9	37
Chloromethane	5.00	U	4.22	3.28	84.4	65.6	1	10.0-159			25.1	37
2-Chlorotoluene	5.00	U	4.73	4.47	94.6	89.4	1	10.0-159			5.65	38
4-Chlorotoluene	5.00	U	4.56	3.61	91.2	72.2	1	10.0-155			23.3	39
1,2-Dibromo-3-Chloropropane	5.00	U	4.43	6.32	88.6	126	1	10.0-151			35.2	39
1,2-Dibromoethane	5.00	U	3.71	3.76	74.2	75.2	1	10.0-148			1.34	34
Dibromomethane	5.00	U	4.07	4.51	81.4	90.2	1	10.0-147			10.3	35
1,2-Dichlorobenzene	5.00	U	4.65	5.11	93.0	102	1	10.0-155			9.43	37
1,3-Dichlorobenzene	5.00	U	4.37	4.55	87.4	91.0	1	10.0-153			4.04	38
1,4-Dichlorobenzene	5.00	U	4.50	4.38	90.0	87.6	1	10.0-151			2.70	38
trans-1,4-Dichloro-2-butene	5.00	U	4.14	6.33	82.8	127	1	10.0-152		J3	41.8	36
Dichlorodifluoromethane	5.00	U	3.53	2.72	70.6	54.4	1	10.0-160			25.9	35
1,1-Dichloroethane	5.00	U	4.28	3.16	85.6	63.2	1	10.0-147			30.1	37
1,2-Dichloroethane	5.00	U	4.24	4.54	84.8	90.8	1	10.0-148			6.83	35
1,1-Dichloroethene	5.00	U	4.02	3.27	80.4	65.4	1	10.0-155			20.6	37
cis-1,2-Dichloroethene	5.00	U	3.92	3.63	78.4	72.6	1	10.0-149			7.68	37
trans-1,2-Dichloroethene	5.00	U	3.64	3.01	72.8	60.2	1	10.0-150			18.9	37
1,2-Dichloropropane	5.00	U	3.68	3.72	73.6	74.4	1	10.0-148			1.08	37
1,1-Dichloropropene	5.00	U	4.28	3.26	85.6	65.2	1	10.0-153			27.1	35
1,3-Dichloropropane	5.00	U	3.79	3.95	75.8	79.0	1	10.0-154			4.13	35
cis-1,3-Dichloropropene	5.00	U	3.82	3.88	76.4	77.6	1	10.0-151			1.56	37
trans-1,3-Dichloropropene	5.00	U	3.77	3.55	75.4	71.0	1	10.0-148			6.01	37
2,2-Dichloropropane	5.00	U	3.98	3.09	79.6	61.8	1	10.0-138			25.2	36
Di-isopropyl ether	5.00	U	4.45	4.84	89.0	96.8	1	10.0-147			8.40	36

L1529943-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529943-07 09/01/22 17:00 • (MS) R3833199-6 09/01/22 19:08 • (MSD) R3833199-7 09/01/22 19:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	0.430	4.43	3.41	80.0	59.6	1	10.0-160			26.0	38
Hexachloro-1,3-butadiene	5.00	U	5.22	6.29	104	126	1	10.0-160			18.6	40
2-Hexanone	25.0	U	21.2	25.4	84.8	102	1	10.0-160			18.0	36
n-Hexane	5.00	47.2	26.7	47.2	0.000	0.000	1	10.0-157	V	J3 V	55.5	37
Iodomethane	25.0	U	16.9	15.0	67.6	60.0	1	10.0-160			11.9	38
Isopropylbenzene	5.00	3.20	6.74	6.73	70.8	70.6	1	10.0-155			0.148	38
p-Isopropyltoluene	5.00	10.8	16.1	24.8	106	280	1	10.0-160		J3 J5	42.5	40
2-Butanone (MEK)	25.0	U	28.6	38.7	114	155	1	10.0-160			30.0	40
Methylene Chloride	5.00	U	3.70	3.53	74.0	70.6	1	10.0-141			4.70	37
4-Methyl-2-pentanone (MIBK)	25.0	U	24.7	29.0	98.8	116	1	10.0-160			16.0	35
Methyl tert-butyl ether	5.00	U	4.14	5.25	82.8	105	1	11.0-147			23.6	35
Naphthalene	5.00	24.9	20.8	33.8	0.000	178	1	10.0-160	V	J3 V	47.6	36
n-Propylbenzene	5.00	1.99	5.80	6.13	76.2	82.8	1	10.0-158			5.53	38
Styrene	5.00	U	4.44	3.78	88.8	75.6	1	10.0-160			16.1	40
1,1,1,2-Tetrachloroethane	5.00	U	4.29	3.69	85.8	73.8	1	10.0-149			15.0	39
1,1,2,2-Tetrachloroethane	5.00	U	4.69	6.07	93.8	121	1	10.0-160			25.7	35
1,1,2-Trichlorotrifluoroethane	5.00	U	4.23	3.39	84.6	67.8	1	10.0-160			22.0	36
Tetrachloroethene	5.00	U	4.34	2.83	86.8	56.6	1	10.0-156		J3	42.1	39
Toluene	5.00	0.265	4.63	3.66	87.3	67.9	1	10.0-156			23.4	38
1,2,3-Trichlorobenzene	5.00	U	4.90	6.09	98.0	122	1	10.0-160			21.7	40
1,2,4-Trichlorobenzene	5.00	U	4.84	5.86	96.8	117	1	10.0-160			19.1	40
1,1,1-Trichloroethane	5.00	U	4.11	3.47	82.2	69.4	1	10.0-144			16.9	35
1,1,2-Trichloroethane	5.00	U	6.64	9.17	133	183	1	10.0-160		J5	32.0	35
Trichloroethene	5.00	U	4.37	3.73	87.4	74.6	1	10.0-156			15.8	38
Trichlorofluoromethane	5.00	U	4.41	3.63	88.2	72.6	1	10.0-160			19.4	40
1,2,3-Trichloropropane	5.00	U	4.99	6.01	99.8	120	1	10.0-156			18.5	35
1,2,4-Trimethylbenzene	5.00	1.86	5.97	6.84	82.2	99.6	1	10.0-160			13.6	36
1,2,3-Trimethylbenzene	5.00	U	4.76	5.06	95.2	101	1	10.0-160			6.11	36
1,3,5-Trimethylbenzene	5.00	24.8	20.1	31.2	0.000	128	1	10.0-160	V	J3	43.3	38
Vinyl acetate	25.0	U	23.2	27.5	92.8	110	1	10.0-128			17.0	40
Vinyl chloride	5.00	U	4.18	3.27	83.6	65.4	1	10.0-160			24.4	37
Xylenes, Total	15.0	10.6	20.9	21.1	68.7	70.0	1	10.0-160			0.952	38
(S) Toluene-d8					*105*	*96.6*		*75.0-131*				
(S) 4-Bromofluorobenzene					*96.9*	*84.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*102*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R3833497-2 09/02/22 06:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		0.548	1.00
Acrylonitrile	U		0.0760	0.500
Benzene	U		0.0160	0.0400
Bromobenzene	U		0.0420	0.500
Bromochloromethane	U		0.0452	0.200
Bromodichloromethane	U		0.0315	0.100
Bromoform	U		0.239	1.00
Bromomethane	U		0.148	0.500
n-Butylbenzene	U		0.153	0.500
sec-Butylbenzene	U		0.101	0.500
tert-Butylbenzene	U		0.0620	0.200
Carbon disulfide	U		0.162	0.500
Carbon tetrachloride	U		0.0432	0.200
Chlorobenzene	U		0.0229	0.100
Chlorodibromomethane	U		0.0180	0.100
Chloroethane	U		0.0432	0.200
Chloroform	U		0.0166	0.100
Chloromethane	U		0.0556	0.500
2-Chlorotoluene	U		0.0368	0.100
4-Chlorotoluene	U		0.0452	0.200
1,2-Dibromo-3-Chloropropane	U		0.204	1.00
1,2-Dibromoethane	U		0.0210	0.100
Dibromomethane	U		0.0400	0.200
1,2-Dichlorobenzene	U		0.0580	0.200
1,3-Dichlorobenzene	U		0.0680	0.200
1,4-Dichlorobenzene	U		0.0788	0.200
trans-1,4-Dichloro-2-butene	U		0.0560	0.200
Dichlorodifluoromethane	U		0.0327	0.100
1,1-Dichloroethane	U		0.0230	0.100
1,2-Dichloroethane	U		0.0190	0.100
1,1-Dichloroethene	U		0.0200	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
1,2-Dichloropropane	U		0.0508	0.200
1,1-Dichloropropene	U		0.0280	0.100
1,3-Dichloropropane	U		0.0700	0.200
cis-1,3-Dichloropropene	U		0.0271	0.100
trans-1,3-Dichloropropene	U		0.0612	0.200
2,2-Dichloropropane	U		0.0317	0.100
Di-isopropyl ether	U		0.0140	0.0400

Method Blank (MB)

(MB) R3833497-2 09/02/22 06:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.0212	0.100
Hexachloro-1,3-butadiene	U		0.508	1.00
2-Hexanone	U		0.400	1.00
n-Hexane	U		0.0424	0.200
Iodomethane	U		0.242	0.500
Isopropylbenzene	U		0.0345	0.100
p-Isopropyltoluene	U		0.0932	0.200
2-Butanone (MEK)	U		0.500	1.00
Methylene Chloride	U		0.265	1.00
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00
Methyl tert-butyl ether	U		0.0118	0.0400
Naphthalene	U		0.124	0.500
n-Propylbenzene	U		0.0472	0.200
Styrene	U		0.109	0.500
1,1,1,2-Tetrachloroethane	U		0.0200	0.100
1,1,2,2-Tetrachloroethane	U		0.0156	0.100
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
1,2,3-Trichlorobenzene	U		0.0250	0.500
1,2,4-Trichlorobenzene	U		0.193	0.500
1,1,1-Trichloroethane	U		0.0110	0.100
1,1,2-Trichloroethane	U		0.0353	0.100
Trichloroethene	U		0.0160	0.0400
Trichlorofluoromethane	U		0.0200	0.100
1,2,3-Trichloropropane	U		0.204	0.500
1,2,4-Trimethylbenzene	U		0.0464	0.200
1,2,3-Trimethylbenzene	U		0.0460	0.200
1,3,5-Trimethylbenzene	U		0.0432	0.200
Vinyl acetate	U		0.141	0.500
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3833497-1 09/02/22 05:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	24.6	98.4	10.0-160	
Acrylonitrile	25.0	21.7	86.8	45.0-153	
Benzene	5.00	3.96	79.2	70.0-123	
Bromobenzene	5.00	4.38	87.6	73.0-121	
Bromochloromethane	5.00	4.80	96.0	77.0-128	
Bromodichloromethane	5.00	4.36	87.2	73.0-121	
Bromoform	5.00	4.23	84.6	64.0-132	
Bromomethane	5.00	3.79	75.8	56.0-147	
n-Butylbenzene	5.00	4.16	83.2	68.0-135	
sec-Butylbenzene	5.00	3.76	75.2	74.0-130	
tert-Butylbenzene	5.00	4.12	82.4	75.0-127	
Carbon disulfide	5.00	3.30	66.0	56.0-133	
Carbon tetrachloride	5.00	3.98	79.6	66.0-128	
Chlorobenzene	5.00	4.47	89.4	76.0-128	
Chlorodibromomethane	5.00	4.45	89.0	74.0-127	
Chloroethane	5.00	3.22	64.4	61.0-134	
Chloroform	5.00	4.34	86.8	72.0-123	
Chloromethane	5.00	4.09	81.8	51.0-138	
2-Chlorotoluene	5.00	4.20	84.0	75.0-124	
4-Chlorotoluene	5.00	4.22	84.4	75.0-124	
1,2-Dibromo-3-Chloropropane	5.00	3.99	79.8	59.0-130	
1,2-Dibromoethane	5.00	4.04	80.8	74.0-128	
Dibromomethane	5.00	4.85	97.0	75.0-122	
1,2-Dichlorobenzene	5.00	4.41	88.2	76.0-124	
1,3-Dichlorobenzene	5.00	4.43	88.6	76.0-125	
1,4-Dichlorobenzene	5.00	4.33	86.6	77.0-121	
trans-1,4-Dichloro-2-butene	5.00	1.59	31.8	45.0-143	J4
Dichlorodifluoromethane	5.00	3.33	66.6	43.0-156	
1,1-Dichloroethane	5.00	4.19	83.8	70.0-127	
1,2-Dichloroethane	5.00	4.17	83.4	65.0-131	
1,1-Dichloroethene	5.00	3.80	76.0	65.0-131	
cis-1,2-Dichloroethene	5.00	4.51	90.2	73.0-125	
trans-1,2-Dichloroethene	5.00	4.06	81.2	71.0-125	
1,2-Dichloropropane	5.00	4.04	80.8	74.0-125	
1,1-Dichloropropene	5.00	4.02	80.4	73.0-125	
1,3-Dichloropropane	5.00	4.36	87.2	80.0-125	
cis-1,3-Dichloropropene	5.00	4.31	86.2	76.0-127	
trans-1,3-Dichloropropene	5.00	4.42	88.4	73.0-127	
2,2-Dichloropropane	5.00	4.09	81.8	59.0-135	
Di-isopropyl ether	5.00	4.68	93.6	60.0-136	

Laboratory Control Sample (LCS)

(LCS) R3833497-1 09/02/22 05:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	5.00	4.01	80.2	74.0-126	
Hexachloro-1,3-butadiene	5.00	3.96	79.2	57.0-150	
2-Hexanone	25.0	22.1	88.4	54.0-147	
n-Hexane	5.00	3.05	61.0	55.0-137	
Iodomethane	25.0	20.9	83.6	74.0-134	
Isopropylbenzene	5.00	4.07	81.4	72.0-127	
p-Isopropyltoluene	5.00	4.18	83.6	72.0-133	
2-Butanone (MEK)	25.0	23.5	94.0	30.0-160	
Methylene Chloride	5.00	4.64	92.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	25.0	25.0	100	56.0-143	
Methyl tert-butyl ether	5.00	4.58	91.6	66.0-132	
Naphthalene	5.00	3.90	78.0	59.0-130	
n-Propylbenzene	5.00	4.15	83.0	74.0-126	
Styrene	5.00	3.97	79.4	72.0-127	
1,1,1,2-Tetrachloroethane	5.00	4.69	93.8	74.0-129	
1,1,2,2-Tetrachloroethane	5.00	4.35	87.0	68.0-128	
1,1,2-Trichlorotrifluoroethane	5.00	3.49	69.8	61.0-139	
Tetrachloroethene	5.00	4.45	89.0	70.0-136	
Toluene	5.00	4.20	84.0	75.0-121	
1,2,3-Trichlorobenzene	5.00	4.18	83.6	59.0-139	
1,2,4-Trichlorobenzene	5.00	4.49	89.8	62.0-137	
1,1,1-Trichloroethane	5.00	4.45	89.0	69.0-126	
1,1,2-Trichloroethane	5.00	4.34	86.8	78.0-123	
Trichloroethene	5.00	4.36	87.2	76.0-126	
Trichlorofluoromethane	5.00	3.84	76.8	61.0-142	
1,2,3-Trichloropropane	5.00	4.28	85.6	67.0-129	
1,2,4-Trimethylbenzene	5.00	4.44	88.8	70.0-126	
1,2,3-Trimethylbenzene	5.00	4.13	82.6	74.0-124	
1,3,5-Trimethylbenzene	5.00	4.30	86.0	73.0-127	
Vinyl acetate	25.0	22.3	89.2	43.0-159	
Vinyl chloride	5.00	3.49	69.8	63.0-134	
Xylenes, Total	15.0	12.8	85.3	72.0-127	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*94.9*	*70.0-130*	

Method Blank (MB)

(MB) R3831176-1 08/26/22 20:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylene Dibromide	U		0.00536	0.0200

L1528316-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1528316-07 08/26/22 20:52 • (DUP) R3831176-3 08/26/22 20:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Ethylene Dibromide	U	U	1.05	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3831176-4 08/26/22 22:52 • (LCSD) R3831176-5 08/27/22 01:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Ethylene Dibromide	0.250	0.292	0.293	117	117	60.0-140			0.342	20

L1528316-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1528316-08 08/26/22 20:28 • (MS) R3831176-2 08/26/22 20:16

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Ethylene Dibromide	0.104	U	0.152	146	1.04	64.0-159	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle, WA

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Jonah Davis

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 Full List VOCs 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD-Diss Lead 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Lead 6020 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW-19-W-20220818	G	GW	—	8/18/22	1335	11	X	X	X	X	X	X		-01
MW-20-W-20220818		GW	—		1410	11	X	X	X	X	X	X		-02
MW-21-W-20220818		GW	—		1052	11	X	X	X	X	X	X		-03
MW-22-W-20220818		GW	—		1016	11	X	X	X	X	X	X		-04
MW-23-W-20220818		GW	—		0939	11	X	X	X	X	X	X		-05
MW-25-W-20220818		GW	—		1158	11	X	X	X	X	X	X		-06
MW-27-W-20220818		GW	—		1230	11	X	X	X	X	X	X		-07
MW-28-W-20220818		GW	—		1303	11	X	X	X	X	X	X		-08
MW-30-W-20220818		GW	—		0907	11	X	X	X	X	X	X		-09
MW-31-W-20220818		GW	—		1125	11	X	X	X	X	X	X		-10

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5485 4001 4550

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1528316

Table #

Acctnum: **CHEVARCWA**
Template:**T213574**
Prelogin: **P940854**
PM: **110 - Brian Ford**
PB:

Shipped Via:

G074

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	8/18/22	1700	SHIPPED VIA FEDEX	2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 0.1 +0.1 1	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/23/22 Time: 8:30	Hold: Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle, WA

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Jonah Davis

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
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Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

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BD-W-20220818	G	GW	—	8/18/22	1200	11	X	X	X	X	X	X					-11
TB-1-20220818	G	GW	—	8/18/22	0900	2	X										-12

Chain of Custody Page 2 of 2

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MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # L1528316

Table #

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Template: **T213574**
Prelogin: **P940854**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5489 4001 4950

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	8/18/22	1700	SHIPPED VIA FEDEX	2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 0.1+0=0.1 Bottles Received: 12	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/23/22 Time: 0830	Hold: Condition: NCF / OK

Appendix H

Vapor Lab Data

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 16, 2022

Ada Hamilton, Project Manager
Arcadis
1100 Olive Way, Suite 800
Seattle, WA 98101

Dear Ms Hamilton:

Included are the results from the testing of material submitted on June 3, 2022 from the 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083 project. There are 16 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ACD0616R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 3, 2022 by Friedman & Bruya, Inc. from the Arcadis 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Arcadis
206083 -01	SVP-1
206083 -02	SVP-3
206083 -03	DUP-1
206083 -04	EB-1

The samples were sent to Fremont Analytical for major gasses analysis. The report is enclosed.

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SVP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-01 1/4.3
Date Analyzed:	06/07/22	Data File:	060220.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	78	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	410
APH EC9-12 aliphatics	380
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SVP-3	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-02 1/4.5
Date Analyzed:	06/07/22	Data File:	060222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	100	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	730
APH EC9-12 aliphatics	1,100
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	DUP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-03 1/4.6
Date Analyzed:	06/07/22	Data File:	060223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<340
APH EC9-12 aliphatics	300
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	EB-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-04 1/4.5
Date Analyzed:	06/07/22	Data File:	060224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<340
APH EC9-12 aliphatics	380
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Arcadis
Date Received:	Not Applicable	Project:	30064302, F&BI 206083
Date Collected:	Not Applicable	Lab ID:	02-1348 MB
Date Analyzed:	06/06/22	Data File:	060212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-01 1/4.3
Date Analyzed:	06/07/22	Data File:	060220.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	79	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.43
Toluene	<81	<21
Ethylbenzene	<1.9	<0.43
m,p-Xylene	<3.7	<0.86
o-Xylene	<1.9	<0.43
Naphthalene	<1.1	<0.21

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVP-3	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-02 1/4.5
Date Analyzed:	06/07/22	Data File:	060222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.45
Toluene	<85	<22
Ethylbenzene	<2	<0.45
m,p-Xylene	<3.9	<0.9
o-Xylene	<2	<0.45
Naphthalene	<1.2	<0.22

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	DUP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-03 1/4.6
Date Analyzed:	06/07/22	Data File:	060223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.5	<0.46
Toluene	<87	<23
Ethylbenzene	<2	<0.46
m,p-Xylene	<4	<0.92
o-Xylene	<2	<0.46
Naphthalene	<1.2	<0.23

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	EB-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-04 1/4.5
Date Analyzed:	06/07/22	Data File:	060224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.45
Toluene	<85	<22
Ethylbenzene	<2	<0.45
m,p-Xylene	<3.9	<0.9
o-Xylene	<2	<0.45
Naphthalene	<1.2	<0.22

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Arcadis
Date Received:	Not Applicable	Project:	30064302, F&BI 206083
Date Collected:	Not Applicable	Lab ID:	02-1348 MB
Date Analyzed:	06/06/22	Data File:	060212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

Date of Report: 06/16/22
Date Received: 06/03/22
Project: 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083
Date Extracted: 06/07/22
Date Analyzed: 06/07/22

RESULTS FROM THE ANALYSIS OF AIR SAMPLES FOR HELIUM USING METHOD ASTM D1946

Results Reported as % Helium

Sample ID Laboratory ID	Helium
SVP-1 206083-01	<0.6
SVP-3 206083-02	<0.6
DUP-1 206083-03	<0.6
EB-1 206083-04	<0.6
Method Blank	<0.6

Date of Report: 06/16/22
Date Received: 06/03/22
Project: 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 206083-01 1/4.3 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	410	340	19
APH EC9-12 aliphatics	ug/m3	380	370	3
APH EC9-10 aromatics	ug/m3	<110	<110	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	84	70-130
APH EC9-12 aliphatics	ug/m3	67	113	70-130
APH EC9-10 aromatics	ug/m3	67	99	70-130

Date of Report: 06/16/22
Date Received: 06/03/22
Project: 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 206083-01 1/4.3 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	<1.4	<1.4	nm
Toluene	ug/m3	<81	<81	nm
Ethylbenzene	ug/m3	<1.9	<1.9	nm
m,p-Xylene	ug/m3	<3.7	<3.7	nm
o-Xylene	ug/m3	<1.9	<1.9	nm
Naphthalene	ug/m3	<1.1	<1.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	93	70-130
Toluene	ug/m3	51	100	70-130
Ethylbenzene	ug/m3	59	95	70-130
m,p-Xylene	ug/m3	120	104	70-130
o-Xylene	ug/m3	59	105	70-130
Naphthalene	ug/m3	71	119	70-130

Date of Report: 06/16/22
Date Received: 06/03/22
Project: 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR HELIUM USING METHOD ASTM D1946

Laboratory Code: 205434-01 (Duplicate)

Analyte	Sample Result (%)	Duplicate Result (%)	Relative Percent Difference	Acceptance Criteria
Helium	<0.6	<0.6	nm	0-20

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

206083

SAMPLE CHAIN OF CUSTODY 6/3/22

Page # 1 of 1

Report To: Ada Hamilton
Company: Arcadis
Address: 1100 Olive Way Suite 800
City, State, ZIP: Seattle, WA 98101
Phone: — Email: Ada.Hamilton@arcadis.com

SAMPLERS (signature): [signature]

PROJECT NAME & ADDRESS: 90129 4700 Brooklyn Ave NE, Seattle, WA

PO #: 30064302

NOTES:

INVOICE TO:

TURNAROUND TIME
☒ Standard
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION / ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	~~TO15 VOCs~~	APH	CH_4, O_2, CO_2 Helium		Notes
SVP-1	01	8346	55	IA / (SG)	6/3/22	-30	1056	-4	1101		X	~~X~~	X	X		*Fixed gases
SVP-3	02	4178	301	IA / (SG)	↓	-29.5	0942	-5	0946		↓		↓	↓		by ASTM-1946
Dup-1	03	4185	61	IA / (SG)	↓	-29	—	-5	—		↓		↓	↓		
EB-1	04	8531	241	IA / SG	↓	-29.5	0900	-5	0904		↓		↓	↓		
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Trevor Bryant	Arcadis	6/3/22	1503
Received by: W. Madden	Windy Madden	F+BI	6/3/22	1504
Relinquished by:				
Received by:		Samples received at 19 °C		

FORMS\COC\COCTO-15.DOC

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 206083
Work Order Number: 2206128

June 14, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 4 sample(s) on 6/7/2022 for the analyses presented in the following report.

Major Gases by EPA Method 3C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *06/14/2022*

CLIENT: Friedman & Bruya
Project: 206083
Work Order: 2206128

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2206128-001	SVP-1	06/07/2022 12:40 PM	06/07/2022 2:13 PM
2206128-002	SVP-3	06/07/2022 12:40 PM	06/07/2022 2:13 PM
2206128-003	DUP-1	06/07/2022 12:40 PM	06/07/2022 2:13 PM
2206128-004	EB-1	06/07/2022 12:40 PM	06/07/2022 2:13 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2206128**
Date: **6/14/2022**

CLIENT: Friedman & Bruya
Project: 206083

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Major gases are reported as % ratio of the Major Gases analyzed (Carbon dioxide, Carbon Monoxide, Methane, Nitrogen, Oxygen and Hydrogen).

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS). The LCS is processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2206128**
Date Reported: **6/14/2022**

CLIENT: Friedman & Bruya
Project: 206083

Lab ID: 2206128-001 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **SVP-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	2.97	0.114	D	%	2.28	6/9/2022 12:41:00 PM
Methane	ND	0.114	D	%	2.28	6/9/2022 12:41:00 PM
Oxygen	26.7	0.114	D	%	2.28	6/9/2022 12:41:00 PM

Lab ID: 2206128-002 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **SVP-3** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	3.39	0.114	D	%	2.29	6/9/2022 1:57:00 PM
Methane	ND	0.114	D	%	2.29	6/9/2022 1:57:00 PM
Oxygen	30.7	0.114	D	%	2.29	6/9/2022 1:57:00 PM

Lab ID: 2206128-003 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **DUP-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	2.72	0.114	D	%	2.28	6/9/2022 2:10:00 PM
Methane	ND	0.114	D	%	2.28	6/9/2022 2:10:00 PM
Oxygen	28.1	0.114	D	%	2.28	6/9/2022 2:10:00 PM

Analytical Report

Work Order: **2206128**
Date Reported: **6/14/2022**

CLIENT: Friedman & Bruya
Project: 206083

Lab ID: 2206128-004 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **EB-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	ND	0.107	D	%	2.14	6/9/2022 3:02:00 PM
Methane	ND	0.107	D	%	2.14	6/9/2022 3:02:00 PM
Oxygen	4.86	0.107	D	%	2.14	6/9/2022 3:02:00 PM

Work Order: 2206128
CLIENT: Friedman & Bruya
Project: 206083

QC SUMMARY REPORT

Major Gases by EPA Method 3C

Sample ID: **LCS-R76141** SampType: **LCS** Units: **%** Prep Date: **6/9/2022** RunNo: **76141**
Client ID: **LCSW** Batch ID: **R76141** Analysis Date: **6/9/2022** SeqNo: **1561714**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	102	0.0500	100.0	0	102	70	130				
Methane	101	0.0500	100.0	0	101	70	130				
Oxygen	98.8	0.0500	100.0	0	98.8	70	130				

Sample ID: **2206128-001AREP** SampType: **REP** Units: **%** Prep Date: **6/9/2022** RunNo: **76141**
Client ID: **SVP-1** Batch ID: **R76141** Analysis Date: **6/9/2022** SeqNo: **1561710**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	2.79	0.114						2.972	6.14	30	D
Methane	ND	0.114						0		30	D
Oxygen	26.2	0.114						26.67	1.64	30	D

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2206128
Logged by:	Clare Griggs	Date Received:	6/7/2022 2:13:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Air Samples		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY 2206128

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
206083	C-210

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard TAT

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	CH_4, O_2, CO_2						Notes
SVP-1		6/7/22	1240	vapor					X						Dilution Factor 2.28
SVP-3		↓	↓	↓					X						2.29
DUP-1									X						2.28
EB-1				✓					X						2.14

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	6/7/22	1241
Received by:	Justine Pogue	FAI	↔ Justine Pogue	6/7/22	14:13
Relinquished by:					
Received by:					

Appendix I

Data Validation Reports

CHEVRON- 90129

DATA REVIEW

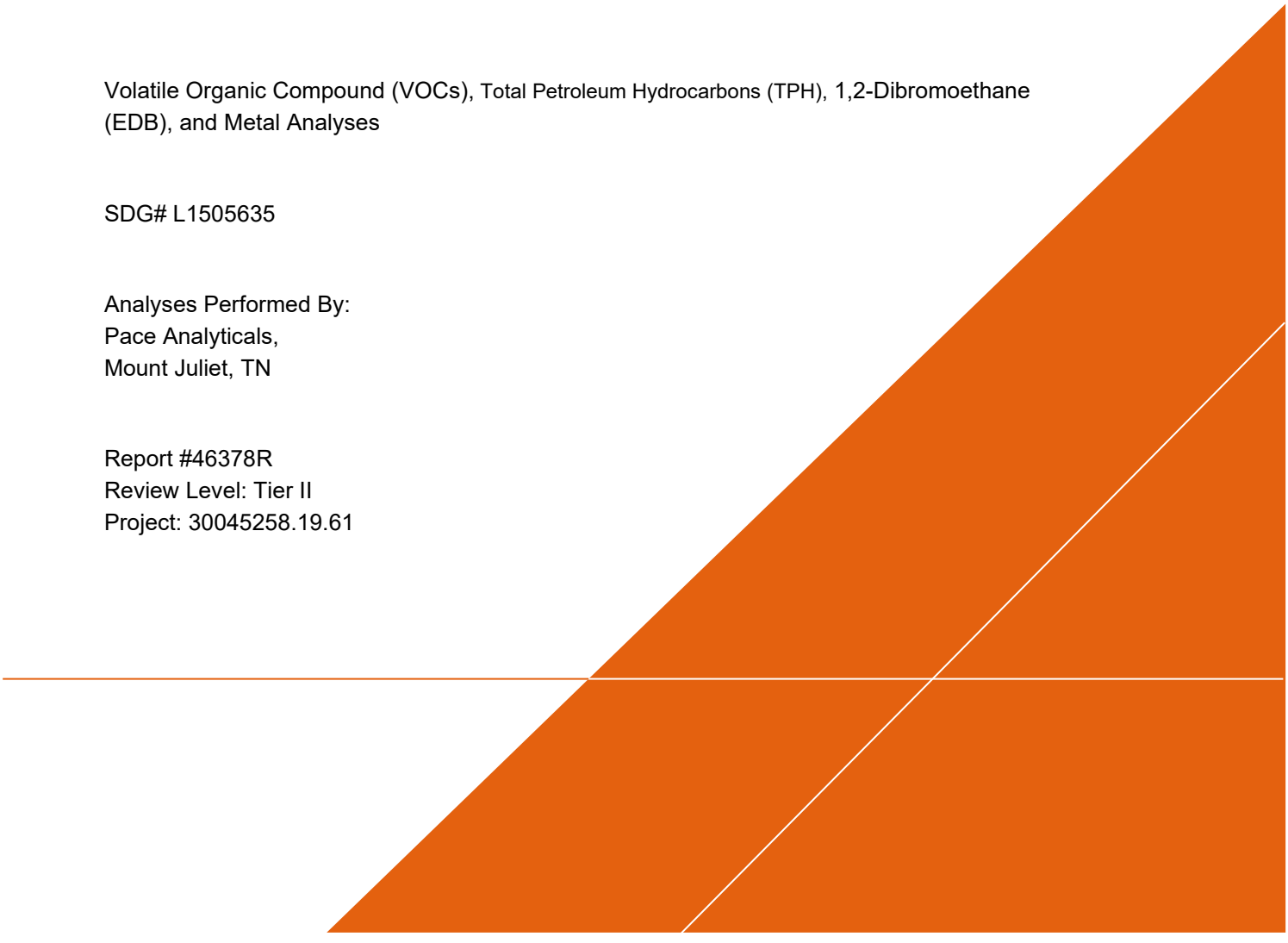
4700 BROOKLYN AVE NE SEATTLE, WA

Volatile Organic Compound (VOCs), Total Petroleum Hydrocarbons (TPH), 1,2-Dibromoethane (EDB), and Metal Analyses

SDG# L1505635

Analyses Performed By:
Pace Analyticals,
Mount Juliet, TN

Report #46378R
Review Level: Tier II
Project: 30045258.19.61



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group SDG# L1505635 for samples collected in association with the Chevron –90129. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis			
					VOC	EDB	TPH	MET
MW-19-W-20220613	L1505635-01	Water	06/13/2022		X	X	X	X
MW-20-W-20220613	L1505635-02	Water	06/13/2022		X	X	X	X
MW-21-W-20220613	L1505635-03	Water	06/13/2022		X	X	X	X
MW-22-W-20220613	L1505635-04	Water	06/13/2022		X	X	X	X
MW-23-W-20220613	L1505635-05	Water	06/13/2022		X	X	X	X
MW-27-W-20220613	L1505635-06	Water	06/13/2022		X	X	X	X
MW-28-W-20220613	L1505635-07	Water	06/13/2022		X	X	X	X
MW-31-W-20220613	L1505635-08	Water	06/13/2022		X	X	X	X
BD-W-20220613	L1505635-09	Water	06/13/2022	MW-27-W-20220613	X	X	X	X
TB-1-20220613	L1505635-10	Water	06/13/2022		X			

Notes:
VOC – Volatile Organic Compound
EDB – 1,2-Dibromoethane
TPH – Total Petroleum Hydrocarbons
MET– Metals

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260D, NWTPHGX and 8011. Data were reviewed in accordance with the method specified criteria, USEPA National Functional Guidelines NFG for Organic Superfund Methods Data Review, EPA-540-R-20-005 (November 2020), with reference to the historical (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the “R” flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. “R” values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW846 8260D	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Notes:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis was not performed on sample associated with this SDG.

5. Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery and RPD within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPDs within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-27-W-20220613 / BD-W-20220613	Benzene	2.05	2.02	AC
	cis-1,2-Dichloroethene	270	275	2 %
	trans-1,2-Dichloroethene	43.9	46.8	6 %
	Ethylbenzene	9.4	9.87	AC
	Tetrachloroethene	2.5 U	0.166	AC
	Toluene	1.43 J	0.38	AC
	Trichloroethene	762	842	10 %
	Vinyl chloride	7.57	9.29	AC
	Xylenes, Total	6.5 U	1.08	AC

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

The laboratory qualified as ‘C3’ for few of the samples stating that the continuing calibration standard associated with this data responded low. The lab qualifier ‘C3’ is eliminated and qualified as estimated (UJ/J).

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compounds	Original Analysis	Diluted Analysis	Reported Analysis
MW-20-W-20220613	Tetrachloroethene	--	125	125 D
MW-31-W-20220613	cis-1,2-Dichloroethene	--	462	462 D

Sample ID	Compounds	Original Analysis	Diluted Analysis	Reported Analysis
BD-W-20220613	cis-1,2-Dichloroethene	--	275	275 D
	Trichloroethene	--	842	842 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW846 8260B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks	X				X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Lab Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

TOTAL PETROLEUM HYDROCARBONS- GASOLINE RANGE ORGANICS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
NWTPHGX	Water	14 days from collection to analysis	Cool to <6 °C; preserved to a pH less than 2 with hydrochloric acid

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following samples were qualified as listed in the following table.

Sample ID	Compounds	Sample Results	Qualification
MW-19-W-20220613 MW-21-W-20220613	Gasoline Range Organics-NWTPH (MB)	Detected sample results <RL and <BAL	"UB" at the RL
MW-20-W-20220613	Gasoline Range Organics-NWTPH (MB)	Detected sample results >RL and <BAL	"UB" at detected sample concentration

Notes:
MB = Method blank
RL = Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established

acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis was not performed on sample associated with this SDG.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-27-W-20220613 / BD-W-20220613	Gasoline Range Organics-NWTPH	2160	2240	3.6

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GASOLINE RANGE PETROLEUM HYDROCARBONS

NWTPHGX	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

%D Percent difference

Ethylene Dibromide (EDB) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8011	Water	14 days from collection to analysis	Cool to <6°C; preserved to a pH of less than 2 s.u with hydrochloric acid

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS analysis performed on sample ID MW-20-W-20220613 exhibited recoveries within the control limit.

5. Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery and RPD within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPDs within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-27-W-20220613 / BD-W-20220613	Ethylene Dibromide	U	U	AC

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR EDB

EDB: SW-846 8011	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks/Field blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Laboratory Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 6020B. Data were reviewed in accordance with the USEPA National Functional Guidelines NFG for Inorganic Superfund Methods Data Review, EPA-540-R-20-006 (November 2020), with reference to the historical (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, OSWER 9240.1-05A-P, October 2004, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
  - J The reported value was obtained from a reading less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL).
- Quantitation (Q) Qualifiers
  - E The reported value is estimated due to the presence of interference.
  - N Spiked sample recovery is not within control limits.
  - * Duplicate analysis is not within control limits.
- Validation Qualifiers
  - J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The analyte was not detected above the reporting limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
  - UB Analyte considered non-detect at the listed value due to associated blank contamination.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

METALS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6020B	Water	180 days from collection to analysis	Cool to <6 °C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

MS/MSD analysis was performed on sample ID MW-31-W-20220613, exhibited acceptable recoveries and RPDs.

3.2 Laboratory Duplicate Analysis

The laboratory duplicates relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one times the RL is applied for water matrices and two times the RL for soil matrices.

Laboratory duplicate analysis was not performed on any of the samples from these SDGs.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent

sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-27-W-20220613 / BD-W-20220613	Lead	U	U	AC

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

6. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METAL

METALS; SW-846 6020B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks	X				X
B. Method Blanks		X		X	
C. Equipment/Field Blanks	X				X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Lab Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
ICP Serial Dilution %D	X				X
Reporting Limit Verification		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Bhagyashree Fulzele

SIGNATURE: 

DATE: August 11, 2022

PEER REVIEW: Dennis Capria

DATE: August 18, 2022

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected:

Please Circle: PT MT CT ET

Phone: **206-325-5254**

Client Project #
30064302.19.45

Lab Project #
CHEVARCWA-90129

Collected by (print):
Andrew Huser

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 BTEX 40mlAmb-HCl	8260 MTBE/EDC 40mlAmb-HCl	8260 PCE/TCE/VC 40mlAmb-HCl	8260 cis/trans12DCE 40mlAmb-HCl	EDB 8011 40mlClr-NaThio	HOLD - Diss Pb 6020 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	Total Pb 6020 250mlHDPE-HNO3			Remarks	Sample # (lab only)
MW-19-W-20220613	Grab	GW	—	6/13/22	1027	11		X	X	X	X	X	X	X				-01
MW-20-W-20220613	Grab	GW	—	6/13/22	1114	11		X	X	X	X	X	X	X				-02
MW-21-W-20220613	Grab	GW	—	6/13/22	1157	11		X	X	X	X	X	X	X				-03
MW-22-W-20220613	Grab	GW	—	6/13/22	1227	11		X	X	X	X	X	X	X				-04
MW-23-W-20220613	Grab	GW	—	6/13/22	1257	11		X	X	X	X	X	X	X				-05
MW-27-W-20220613	Grab	GW	—	6/13/22	1516	11		X	X	X	X	X	X	X				-06
MW-28-W-20220613	Grab	GW	—	6/13/22	1552	11		X	X	X	X	X	X	X				-07
MW-31-W-20220613	Grab	GW	—	6/13/22	~~1445~~ 1445	11		X	X	X	X	X	X	X				-08
DP-W-20220613	Grab	GW	—	6/13/22	1200	11		X	X	X	X	X	X	X				-09
TB-1-20220613	Grab	GW	—	6/13/22	0900	3	X											-10

Chain of Custody Page 1 of 1

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 1505635

J228

Acctnum: **CHEVARCWA**
Template: **T205068**
Prelogin: **P910519**
PM: **110 - Brian Ford**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	6/14/22	1600	SHIPPED VIA FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 3.9+0=3.9 Bottles Received: 99	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) William Stinson	Date: 6-16 Time: 9:00	Hold: Condition: NCF / OK

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/07/2022 13:53	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	~~51.6~~	~~B~~ J	31.6	100 UB	1	06/20/2022 17:29	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.9*			*78.0-120*		*06/20/2022 17:29*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0160	0.0400	1	06/19/2022 17:28	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 17:28	WG1881638
cis-1,2-Dichloroethene	U		0.0276	0.100	1	06/19/2022 17:28	WG1881638
trans-1,2-Dichloroethene	U		0.0572	0.200	1	06/19/2022 17:28	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 17:28	WG1881638
Methyl tert-butyl ether	U	~~C3~~ UJ	0.0118	0.0400	1	06/19/2022 17:28	WG1881638
Tetrachloroethene	0.172		0.0280	0.100	1	06/19/2022 17:28	WG1881638
Toluene	U		0.0500	0.200	1	06/19/2022 17:28	WG1881638
Trichloroethene	U		0.0160	0.0400	1	06/19/2022 17:28	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 17:28	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 17:28	WG1881638
(S) Toluene-d8	*110*			*75.0-131*		*06/19/2022 17:28*	WG1881638
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/19/2022 17:28*	WG1881638
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*		*06/19/2022 17:28*	WG1881638

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00574	0.0214	1.07	06/21/2022 00:32	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/07/2022 13:57	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	111 UB	~~B~~	31.6	100	1	06/20/2022 17:51	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*78.0-120*		*06/20/2022 17:51*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0160	0.0400	1	06/19/2022 20:25	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 20:25	WG1881638
cis-1,2-Dichloroethene	5.04		0.0276	0.100	1	06/19/2022 20:25	WG1881638
trans-1,2-Dichloroethene	0.253		0.0572	0.200	1	06/19/2022 20:25	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 20:25	WG1881638
Methyl tert-butyl ether	U	~~C3~~ UJ	0.0118	0.0400	1	06/19/2022 20:25	WG1881638
Tetrachloroethene	125 D		0.140	0.500	5	06/23/2022 11:08	WG1883676
Toluene	U		0.0500	0.200	1	06/19/2022 20:25	WG1881638
Trichloroethene	13.3		0.0160	0.0400	1	06/19/2022 20:25	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 20:25	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 20:25	WG1881638
(S) Toluene-d8	*114*			*75.0-131*		*06/19/2022 20:25*	WG1881638
(S) Toluene-d8	*96.1*			*75.0-131*		*06/23/2022 11:08*	WG1883676
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/19/2022 20:25*	WG1881638
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*		*06/23/2022 11:08*	WG1883676
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*06/19/2022 20:25*	WG1881638
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 11:08*	WG1883676

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 00:08	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:00	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	~~51.5~~	~~B~~ J	31.6	100 UB	1	06/20/2022 18:12	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*100*			*78.0-120*		*06/20/2022 18:12*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0160	0.0400	1	06/19/2022 17:48	WG1881638
1,2-Dichloroethane	U		0.0190	0.100	1	06/19/2022 17:48	WG1881638
cis-1,2-Dichloroethene	U		0.0276	0.100	1	06/19/2022 17:48	WG1881638
trans-1,2-Dichloroethene	U		0.0572	0.200	1	06/19/2022 17:48	WG1881638
Ethylbenzene	U		0.0212	0.100	1	06/19/2022 17:48	WG1881638
Methyl tert-butyl ether	U	~~C3~~ UJ	0.0118	0.0400	1	06/19/2022 17:48	WG1881638
Tetrachloroethene	U		0.0280	0.100	1	06/19/2022 17:48	WG1881638
Toluene	U		0.0500	0.200	1	06/19/2022 17:48	WG1881638
Trichloroethene	U		0.0160	0.0400	1	06/19/2022 17:48	WG1881638
Vinyl chloride	U		0.0273	0.100	1	06/19/2022 17:48	WG1881638
Xylenes, Total	U		0.191	0.260	1	06/19/2022 17:48	WG1881638
(S) Toluene-d8	*110*			*75.0-131*		*06/19/2022 17:48*	WG1881638
(S) 4-Bromofluorobenzene	*95.0*			*67.0-138*		*06/19/2022 17:48*	WG1881638
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*06/19/2022 17:48*	WG1881638

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00563	0.0210	1.05	06/21/2022 00:56	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:03	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	555	~~B~~	31.6	100	1	06/20/2022 18:34	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*78.0-120*		*06/20/2022 18:34*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	5.37		0.160	0.400	10	06/19/2022 20:45	WG1881638
1,2-Dichloroethane	U		0.190	1.00	10	06/19/2022 20:45	WG1881638
cis-1,2-Dichloroethene	504		0.276	1.00	10	06/19/2022 20:45	WG1881638
trans-1,2-Dichloroethene	7.28		0.572	2.00	10	06/19/2022 20:45	WG1881638
Ethylbenzene	U		0.212	1.00	10	06/19/2022 20:45	WG1881638
Methyl tert-butyl ether	U	~~C3~~ UJ	0.118	0.400	10	06/19/2022 20:45	WG1881638
Tetrachloroethene	0.510	J	0.280	1.00	10	06/23/2022 11:27	WG1883676
Toluene	U		0.500	2.00	10	06/19/2022 20:45	WG1881638
Trichloroethene	296		0.160	0.400	10	06/19/2022 20:45	WG1881638
Vinyl chloride	2.99		0.273	1.00	10	06/19/2022 20:45	WG1881638
Xylenes, Total	U		1.91	2.60	10	06/19/2022 20:45	WG1881638
(S) Toluene-d8	*109*			*75.0-131*		*06/19/2022 20:45*	WG1881638
(S) Toluene-d8	*96.5*			*75.0-131*		*06/23/2022 11:27*	WG1883676
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*06/19/2022 20:45*	WG1881638
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*06/23/2022 11:27*	WG1883676
(S) 1,2-Dichloroethane-d4	*88.5*			*70.0-130*		*06/19/2022 20:45*	WG1881638
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*06/23/2022 11:27*	WG1883676

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	06/21/2022 01:08	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/07/2022 14:06	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	382	~~B~~	31.6	100	1	06/20/2022 18:55	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*78.0-120*		*06/20/2022 18:55*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	4.05		0.160	0.400	10	06/23/2022 16:58	WG1883931
1,2-Dichloroethane	U		0.190	1.00	10	06/23/2022 16:58	WG1883931
cis-1,2-Dichloroethene	436		0.276	1.00	10	06/23/2022 16:58	WG1883931
trans-1,2-Dichloroethene	16.3		0.572	2.00	10	06/23/2022 16:58	WG1883931
Ethylbenzene	U		0.212	1.00	10	06/23/2022 16:58	WG1883931
Methyl tert-butyl ether	U		0.118	0.400	10	06/23/2022 16:58	WG1883931
Tetrachloroethene	U		0.280	1.00	10	06/23/2022 16:58	WG1883931
Toluene	U		0.500	2.00	10	06/23/2022 16:58	WG1883931
Trichloroethene	43.2		0.160	0.400	10	06/23/2022 16:58	WG1883931
Vinyl chloride	3.75	~~C3~~ J	0.273	1.00	10	06/23/2022 16:58	WG1883931
Xylenes, Total	U		1.91	2.60	10	06/23/2022 16:58	WG1883931
(S) Toluene-d8	*96.6*			*75.0-131*		*06/23/2022 16:58*	WG1883931
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*06/23/2022 16:58*	WG1883931
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*06/23/2022 16:58*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:20	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:10	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2160		31.6	100	1	06/20/2022 19:16	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*06/20/2022 19:16*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	2.05		0.400	1.00	25	06/23/2022 17:17	WG1883931
1,2-Dichloroethane	U		0.475	2.50	25	06/23/2022 17:17	WG1883931
cis-1,2-Dichloroethene	270		0.690	2.50	25	06/23/2022 17:17	WG1883931
trans-1,2-Dichloroethene	43.9		1.43	5.00	25	06/23/2022 17:17	WG1883931
Ethylbenzene	9.40		0.530	2.50	25	06/23/2022 17:17	WG1883931
Methyl tert-butyl ether	U		0.295	1.00	25	06/23/2022 17:17	WG1883931
Tetrachloroethene	U		0.700	2.50	25	06/23/2022 17:17	WG1883931
Toluene	1.43	J	1.25	5.00	25	06/23/2022 17:17	WG1883931
Trichloroethene	762		0.400	1.00	25	06/23/2022 17:17	WG1883931
Vinyl chloride	7.57	~~C3~~ J	0.682	2.50	25	06/23/2022 17:17	WG1883931
Xylenes, Total	U		4.78	6.50	25	06/23/2022 17:17	WG1883931
(S) Toluene-d8	*94.4*			*75.0-131*		*06/23/2022 17:17*	WG1883931
(S) 4-Bromofluorobenzene	*95.0*			*67.0-138*		*06/23/2022 17:17*	WG1883931
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*06/23/2022 17:17*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:32	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/07/2022 14:13	WG1886033

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2460		31.6	100	1	06/20/2022 19:38	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*78.0-120*		*06/20/2022 19:38*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	4.54		0.320	0.800	20	06/23/2022 17:37	WG1883931
1,2-Dichloroethane	U		0.380	2.00	20	06/23/2022 17:37	WG1883931
cis-1,2-Dichloroethene	67.6		0.552	2.00	20	06/23/2022 17:37	WG1883931
trans-1,2-Dichloroethene	3.52	J	1.14	4.00	20	06/23/2022 17:37	WG1883931
Ethylbenzene	96.5		0.424	2.00	20	06/23/2022 17:37	WG1883931
Methyl tert-butyl ether	U		0.236	0.800	20	06/23/2022 17:37	WG1883931
Tetrachloroethene	97.6		0.560	2.00	20	06/23/2022 17:37	WG1883931
Toluene	1.42	J	1.00	4.00	20	06/23/2022 17:37	WG1883931
Trichloroethene	623		0.320	0.800	20	06/23/2022 17:37	WG1883931
Vinyl chloride	U	~~C3~~ UJ	0.546	2.00	20	06/23/2022 17:37	WG1883931
Xylenes, Total	13.0		3.82	5.20	20	06/23/2022 17:37	WG1883931
(S) Toluene-d8	*96.8*			*75.0-131*		*06/23/2022 17:37*	WG1883931
(S) 4-Bromofluorobenzene	*96.5*			*67.0-138*		*06/23/2022 17:37*	WG1883931
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 17:37*	WG1883931

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	06/21/2022 01:44	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/06/2022 20:42	WG1886036

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	594		31.6	100	1	06/20/2022 19:59	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*78.0-120*		*06/20/2022 19:59*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	37.7		0.0160	0.0400	1	06/23/2022 13:24	WG1883931
1,2-Dichloroethane	U		0.0190	0.100	1	06/23/2022 13:24	WG1883931
cis-1,2-Dichloroethene	462 D		0.552	2.00	20	06/24/2022 14:53	WG1885163
trans-1,2-Dichloroethene	11.7		0.0572	0.200	1	06/23/2022 13:24	WG1883931
Ethylbenzene	0.0450	J	0.0212	0.100	1	06/23/2022 13:24	WG1883931
Methyl tert-butyl ether	U		0.0118	0.0400	1	06/23/2022 13:24	WG1883931
Tetrachloroethene	0.0760	J	0.0280	0.100	1	06/23/2022 13:24	WG1883931
Toluene	0.300		0.0500	0.200	1	06/23/2022 13:24	WG1883931
Trichloroethene	60.8		0.0160	0.0400	1	06/23/2022 13:24	WG1883931
Vinyl chloride	32.0	~~C3~~ J	0.0273	0.100	1	06/23/2022 13:24	WG1883931
Xylenes, Total	U		0.191	0.260	1	06/23/2022 13:24	WG1883931
(S) Toluene-d8	*97.1*			*75.0-131*		*06/23/2022 13:24*	WG1883931
(S) Toluene-d8	*101*			*75.0-131*		*06/24/2022 14:53*	WG1885163
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*06/23/2022 13:24*	WG1883931
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*06/24/2022 14:53*	WG1885163
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*06/23/2022 13:24*	WG1883931
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*06/24/2022 14:53*	WG1885163

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	06/21/2022 01:56	WG1882034

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		0.849	2.00	1	07/06/2022 20:55	WG1886036

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	2240		31.6	100	1	06/20/2022 20:21	WG1882381
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*78.0-120*		*06/20/2022 20:21*	WG1882381

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	2.02		0.0160	0.0400	1	06/23/2022 18:16	WG1883931
1,2-Dichloroethane	U		0.0190	0.100	1	06/23/2022 18:16	WG1883931
cis-1,2-Dichloroethene	275	D	2.76	10.0	100	06/24/2022 15:12	WG1885163
trans-1,2-Dichloroethene	46.8		0.0572	0.200	1	06/23/2022 18:16	WG1883931
Ethylbenzene	9.87		0.0212	0.100	1	06/23/2022 18:16	WG1883931
Methyl tert-butyl ether	U		0.0118	0.0400	1	06/23/2022 18:16	WG1883931
Tetrachloroethene	0.166		0.0280	0.100	1	06/23/2022 18:16	WG1883931
Toluene	0.380		0.0500	0.200	1	06/23/2022 18:16	WG1883931
Trichloroethene	842	D	1.60	4.00	100	06/24/2022 15:12	WG1885163
Vinyl chloride	9.29	~~C3~~ J	0.0273	0.100	1	06/23/2022 18:16	WG1883931
Xylenes, Total	1.08		0.191	0.260	1	06/23/2022 18:16	WG1883931
(S) Toluene-d8	*82.8*			*75.0-131*		*06/23/2022 18:16*	WG1883931
(S) Toluene-d8	*100*			*75.0-131*		*06/24/2022 15:12*	WG1885163
(S) 4-Bromofluorobenzene	*90.7*			*67.0-138*		*06/23/2022 18:16*	WG1883931
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*06/24/2022 15:12*	WG1885163
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*06/23/2022 18:16*	WG1883931
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*06/24/2022 15:12*	WG1885163

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00584	0.0218	1.09	06/21/2022 02:08	WG1882034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	06/22/2022 18:28	WG1883779
Toluene	U		0.278	1.00	1	06/22/2022 18:28	WG1883779
Ethylbenzene	U		0.137	1.00	1	06/22/2022 18:28	WG1883779
Total Xylenes	U		0.174	3.00	1	06/22/2022 18:28	WG1883779
(S) Toluene-d8	*105*			*80.0-120*		*06/22/2022 18:28*	WG1883779
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*06/22/2022 18:28*	WG1883779
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/22/2022 18:28*	WG1883779

CHEVRON- 90129

DATA REVIEW

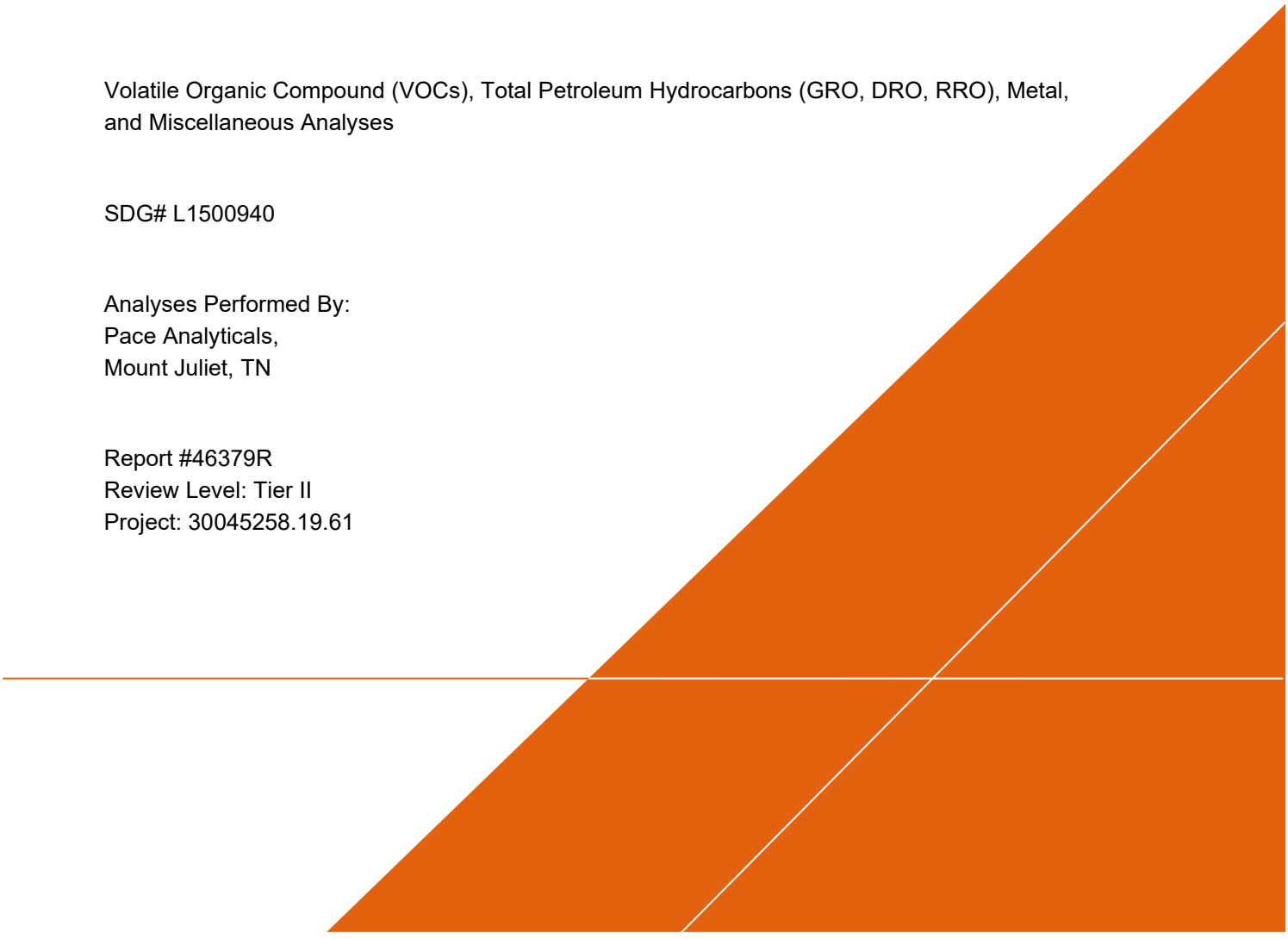
4700 BROOKLYN AVE NE SEATTLE, WA

Volatile Organic Compound (VOCs), Total Petroleum Hydrocarbons (GRO, DRO, RRO), Metal, and Miscellaneous Analyses

SDG# L1500940

Analyses Performed By:
Pace Analyticals,
Mount Juliet, TN

Report #46379R
Review Level: Tier II
Project: 30045258.19.61



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group SDG# L1500940 for samples collected in association with the Chevron –90129. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis		
					VOC	TPH	MET
MW-31-10_220601	L1500940-01	Soil	06/01/2022		X	X	X
MW-31-5_220601	L1500940-02	Soil	06/01/2022		X	X	X
MW-31-15_220601	L1500940-03	Soil	06/01/2022		X	X	X
MW-31-20_220601	L1500940-04	Soil	06/01/2022		X	X	X
MW-31-25_220601	L1500940-05	Soil	06/01/2022		X	X	X
SVP-3-2.5_220601	L1500940-06	Soil	06/01/2022		X	X	X
SVP-3-5_220601	L1500940-07	Soil	06/01/2022		X	X	X
MW-30-5_220602	L1500940-08	Soil	06/02/2022		X	X	X
MW-30-10_220602	L1500940-09	Soil	06/02/2022		X	X	X
MW-30-15_220602	L1500940-10	Soil	06/02/2022		X	X	X
MW-30-20_220602	L1500940-11	Soil	06/02/2022		X	X	X
MW-30-25_220602	L1500940-12	Soil	06/02/2022		X	X	X
FD-1_220601	L1500940-13	Soil	06/01/2022	MW-31-20_220601	X	X	X

Notes:
VOC – Volatile Organic Compound
TPH (GRO, DRO, RRO) – Total Petroleum Hydrocarbons (Gasoline Range Organics, Diesel Range Organics, Residual Range Organics)
MET– Metals

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260D, NWTPHGX, NWTPHDX-NO SGT. Data were reviewed in accordance with the method specified criteria, USEPA National Functional Guidelines NFG for Organic Superfund Methods Data Review, EPA-540-R-20-005 (November 2020), with reference to the historical (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the “R” flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. “R” values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW846 8260D	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C

Notes:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis was not performed on sample associated with this SDG.

5. Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery and RPD within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPDs within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-31-20_220601 / FD-1_220601	Benzene	0.0404	0.0442	8.9
	Toluene	0.00587 J	0.00607 J	AC
	Total Xylenes	0.00147 J	0.0096 U	AC

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW846 8260D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks	X				X
C. Trip blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Lab Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

TOTAL PETROLEUM HYDROCARBONS- GASOLINE RANGE ORGANICS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
NWTPHGX	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following samples were qualified as listed in the following table.

Sample ID	Compounds	Sample Results	Qualification
MW-31-10_220601 MW-31-20_220601 MW-31-25_220601 MW-30-10_220602 MW-30-15_220602 FD-1_220601	TPHG C6 - C12 (MB)	Detected sample results <RL and <BAL	“UB” at the RL

Notes:
MB = Method blank
RL = Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established

acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis performed on sample ID MW-31-10_220601 exhibited recoveries and RPDs within the control limit.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-31-20_220601 / FD-1_220601	Gasoline Range Organics-NWTPH	1.93 J	1.77 J	AC

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GASOLINE RANGE PETROLEUM HYDROCARBONS

NWTPHGX	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X	X		
B. Equipment blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

%D Percent difference

DIESEL RANGE ORGANICS (DRO) – RESIDUAL RANGE ORGANICS (RRO) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
NWTPHDX - No SGT	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis performed on sample ID MW-31-20_220601 exhibited recoveries and RPDs within the control limit.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compounds	Sample Result	Duplicate Result	RPD
MW-31-20_220601 / FD-1_220601	Diesel Range Organics (DRO)	U	U	AC
	Residual Range Organics (RRO)			

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR DRO – RRO

NWTPHDX - NO SGT	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks/Field blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Laboratory Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 6010D. Data were reviewed in accordance with the USEPA National Functional Guidelines NFG for Inorganic Superfund Methods Data Review, EPA-540-R-20-006 (November 2020), with reference to the historical (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, OSWER 9240.1-05A-P, October 2004, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
  - J The reported value was obtained from a reading less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL).
- Quantitation (Q) Qualifiers
  - E The reported value is estimated due to the presence of interference.
  - N Spiked sample recovery is not within control limits.
  - * Duplicate analysis is not within control limits.
- Validation Qualifiers
  - J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The analyte was not detected above the reporting limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
  - UB Analyte considered non-detect at the listed value due to associated blank contamination.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

METALS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6010D	Soil	180 days from collection to analysis	Cool to <6 °C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

MS/MSD analysis was performed on sample ID SVP-3-2.5_220601, exhibited acceptable recoveries and RPDs.

3.2 Laboratory Duplicate Analysis

The laboratory duplicates relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one times the RL is applied for water matrices and two times the RL for soil matrices.

Laboratory duplicate analysis was not performed on any of the samples from these SDGs.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent

sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-31-20_220601 / FD-1_220601	Lead	1.76	2.06	AC

Notes:

U = non-detect
AC = Acceptable

The result between the parent sample and associated field duplicate were acceptable.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

6. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METAL

METALS; SW-846 6010D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
INDUCTIVELY COUPLED PLASMA-OPTICAL EMISSION SPECTROMETRY(ICP-OES)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks	X				X
B. Method Blanks		X		X	
C. Equipment/Field Blanks	X				X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Lab Duplicate (RPD)	X				X
Field Duplicate (RPD)		X		X	
ICP Serial Dilution %D	X				X
Reporting Limit Verification		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Bhagyashree Fulzele

SIGNATURE: 

DATE: August 11, 2022

PEER REVIEW: Dennis Capria

DATE: August 18, 2022

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle. WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark/Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: Seattle WA

Please Circle: (PT) MT CT ET

Phone: 206-325-5254

Client Project #
30064302 07.41

Lab Project #
CHEVARCWA-90129

Collected by (print):
Brian Parby

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):
BP

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
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MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # B119
L1500940

Acctnum: CHEVARCWA
Template: T210050
Prelogin: P926560
PM: 110 - Brian Ford
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	BTEXMN/EDC 8260D 40mlAmb/MeOH10ml/Syr	NWTPHDX no silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	Total Lead 6010 8ozClr-NoPres	MTBE	Naphthalene				Remarks	Sample # (lab only)
MW-31-10	G	SS	10	6/1/22	1200	2	X	X	X	X	X	X					-01
MW-31-5	G	SS	5	6/1/22	1100	2	X	X	X	X	X	X					-02
MW-31-15	G	SS	15	6/1/22	1210	2	X	X	X	X	X	X					-03
MW-31-20	G	SS	20	6/1/22	1240	2	X	X	X	X	X	X					-04
MW-31-25	G	SS	25	6/1/22	1250	2	X	X	X	X	X	X					-05
SVP-3-2.5	G	SS	2.5	6/1/22	1255	2	X	X	X	X	X	X					-06
SVP-3-5	G	SS	5	6/1/22	1300	2	X	X	X	X	X	X					-07
MW-30-5	G	SS	5	6/2/22	0935	2	X	X	X	X	X	X					-08
MW-30-10	G	SS	10	6/2/22	1030	2	X	X	X	X	X	X					-09
MW-30-15	G	SS	15	6/2/22	1045	2	X	X	X	X	X	X					-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5433 8382 2832

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: ✓ Y __N
Bottles arrive intact: ✓ Y __N
Correct bottles used: ✓ Y __N
Sufficient volume sent: ✓ Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓ Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
L PA	6/2/22	1530	FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: JAA6 3.5+0=3.5 2p	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Weronika Sistek	Date: 6/3/22 Time: 0845	Hold: Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - WA

1100 Olive Way
Suite 800
Seattle, WA 98101

Billing Information:
Attn: Accounts Payable
630 Plaza Dr., Ste. 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Sydney Clark/Ada Hamilton

Email To:
Ryan.Brauchla@arcadis.com;Ada.Hamilton@arc

Project Description:
90129

City/State Collected: **Seattle WA**

Please Circle: (PT) MT CT ET

Phone: **206-325-5254**

Client Project #
30064302 07.41

Lab Project #
CHEVARCWA-90129

Collected by (print):
Brian Parley

Site/Facility ID #
4700 BROOKLYN AVE NE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEXMN/EDC 8260D 40mlAmb/MeOH10ml/Syr	NWTPHDX no silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	Total Lead 6010 8ozClr-NoPres	MTBE	Naphthalene						
MW-30-20	G	SS	20	6/2/22	1050	2	X	X	X	X	X	X						-11
MW-30-25	G	SS	25	6/2/22	1100	2	X	X	X	X	X	X						-12
FD-1	G	SS	—	6/1/22	—	2	X	X	X	X	X	X						-13
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1500940

Table #

Acctnum: **CHEVARCWA**

Template: **T210050**

Prelogin: **P926560**

PM: **110 - Brian Ford**

PB:

Shipped Via:

Remarks | Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5433 8382 2832

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
1 DA	6/2/22	1330	FEDEX	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: JAA 6.3 5 to 35 26	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/3/22 Time: 0845	Hold: Condition: NCF / OK

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.78		0.231	0.556	1	06/17/2022 16:19	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~1.31~~	~~B J~~	1.05	3.09 UB	25	06/08/2022 11:32	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 11:32*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000578	0.00124	1	06/10/2022 00:50	WG1877111
Toluene	0.00587	J	0.00161	0.00619	1	06/10/2022 00:50	WG1877111
Ethylbenzene	U		0.000912	0.00309	1	06/10/2022 00:50	WG1877111
Total Xylenes	0.00524	J	0.00109	0.00805	1	06/10/2022 00:50	WG1877111
Methyl tert-butyl ether	U		0.000433	0.00124	1	06/10/2022 00:50	WG1877111
1,2-Dichloroethane	U		0.000803	0.00309	1	06/10/2022 00:50	WG1877111
Naphthalene	U		0.00604	0.0155	1	06/10/2022 00:50	WG1877111
(S) Toluene-d8	*96.6*			*75.0-131*		*06/10/2022 00:50*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 00:50*	WG1877111
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/10/2022 00:50*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.48	4.45	1	06/15/2022 07:06	WG1879138
Residual Range Organics (RRO)	6.23	J	3.70	11.1	1	06/15/2022 07:06	WG1879138
(S) o-Terphenyl	*67.6*			*18.0-148*		*06/15/2022 07:06*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.3		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.53		0.244	0.586	1	06/17/2022 16:22	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.24	3.66	25	06/08/2022 11:55	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 11:55*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000683	0.00146	1	06/10/2022 01:09	WG1877111
Toluene	U		0.00190	0.00731	1	06/10/2022 01:09	WG1877111
Ethylbenzene	U		0.00108	0.00366	1	06/10/2022 01:09	WG1877111
Total Xylenes	U		0.00129	0.00951	1	06/10/2022 01:09	WG1877111
Methyl tert-butyl ether	U		0.000512	0.00146	1	06/10/2022 01:09	WG1877111
1,2-Dichloroethane	U		0.000949	0.00366	1	06/10/2022 01:09	WG1877111
Naphthalene	U		0.00714	0.0183	1	06/10/2022 01:09	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 01:09*	WG1877111
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/10/2022 01:09*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*06/10/2022 01:09*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.56	4.69	1	06/15/2022 02:30	WG1879138
Residual Range Organics (RRO)	U		3.90	11.7	1	06/15/2022 02:30	WG1879138
(S) o-Terphenyl	*53.3*			*18.0-148*		*06/15/2022 02:30*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.33		0.254	0.611	1	06/17/2022 16:25	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.26	3.71	25	06/08/2022 12:18	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 12:18*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000693	0.00148	1	06/10/2022 01:29	WG1877111
Toluene	U		0.00193	0.00742	1	06/10/2022 01:29	WG1877111
Ethylbenzene	U		0.00109	0.00371	1	06/10/2022 01:29	WG1877111
Total Xylenes	0.00224	J	0.00131	0.00965	1	06/10/2022 01:29	WG1877111
Methyl tert-butyl ether	U		0.000520	0.00148	1	06/10/2022 01:29	WG1877111
1,2-Dichloroethane	U		0.000964	0.00371	1	06/10/2022 01:29	WG1877111
Naphthalene	U		0.00725	0.0186	1	06/10/2022 01:29	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 01:29*	WG1877111
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*06/10/2022 01:29*	WG1877111
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*06/10/2022 01:29*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.62	4.89	1	06/15/2022 02:43	WG1879138
Residual Range Organics (RRO)	U		4.07	12.2	1	06/15/2022 02:43	WG1879138
(S) o-Terphenyl	*59.0*			*18.0-148*		*06/15/2022 02:43*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.4		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.76		0.256	0.614	1	06/17/2022 16:33	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~1.93~~	~~B J~~	1.26	3.71 UB	25	06/08/2022 12:41	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 12:41*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0404		0.000693	0.00148	1	06/10/2022 01:48	WG1877111
Toluene	0.00587	J	0.00193	0.00742	1	06/10/2022 01:48	WG1877111
Ethylbenzene	U		0.00109	0.00371	1	06/10/2022 01:48	WG1877111
Total Xylenes	0.00147	J	0.00131	0.00964	1	06/10/2022 01:48	WG1877111
Methyl tert-butyl ether	U		0.000519	0.00148	1	06/10/2022 01:48	WG1877111
1,2-Dichloroethane	U		0.000963	0.00371	1	06/10/2022 01:48	WG1877111
Naphthalene	U		0.00724	0.0185	1	06/10/2022 01:48	WG1877111
(S) Toluene-d8	*98.2*			*75.0-131*		*06/10/2022 01:48*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 01:48*	WG1877111
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*		*06/10/2022 01:48*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.63	4.91	1	06/15/2022 02:56	WG1879138
Residual Range Organics (RRO)	U		4.09	12.3	1	06/15/2022 02:56	WG1879138
(S) o-Terphenyl	*66.3*			*18.0-148*		*06/15/2022 02:56*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.82		0.256	0.616	1	06/17/2022 16:35	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~2.47~~	~~B J~~	1.29	3.82 UB	25	06/08/2022 13:04	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:04*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0858		0.000713	0.00153	1	06/10/2022 02:07	WG1877111
Toluene	0.0146		0.00198	0.00763	1	06/10/2022 02:07	WG1877111
Ethylbenzene	U		0.00112	0.00382	1	06/10/2022 02:07	WG1877111
Total Xylenes	U		0.00134	0.00992	1	06/10/2022 02:07	WG1877111
Methyl tert-butyl ether	U		0.000534	0.00153	1	06/10/2022 02:07	WG1877111
1,2-Dichloroethane	U		0.000991	0.00382	1	06/10/2022 02:07	WG1877111
Naphthalene	U		0.00745	0.0191	1	06/10/2022 02:07	WG1877111
(S) Toluene-d8	*97.2*			*75.0-131*		*06/10/2022 02:07*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 02:07*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 02:07*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.64	4.93	1	06/15/2022 04:16	WG1879138
Residual Range Organics (RRO)	U		4.10	12.3	1	06/15/2022 04:16	WG1879138
(S) o-Terphenyl	*51.1*			*18.0-148*		*06/15/2022 04:16*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.65		0.225	0.542	1	06/17/2022 16:07	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		0.999	2.94	25	06/08/2022 13:27	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:27*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000550	0.00118	1	06/10/2022 02:25	WG1877111
Toluene	U		0.00153	0.00589	1	06/10/2022 02:25	WG1877111
Ethylbenzene	U		0.000868	0.00294	1	06/10/2022 02:25	WG1877111
Total Xylenes	U		0.00104	0.00765	1	06/10/2022 02:25	WG1877111
Methyl tert-butyl ether	U		0.000412	0.00118	1	06/10/2022 02:25	WG1877111
1,2-Dichloroethane	U		0.000764	0.00294	1	06/10/2022 02:25	WG1877111
Naphthalene	U		0.00575	0.0147	1	06/10/2022 02:25	WG1877111
(S) Toluene-d8	*97.2*			*75.0-131*		*06/10/2022 02:25*	WG1877111
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*06/10/2022 02:25*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 02:25*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.44	4.33	1	06/15/2022 04:29	WG1879138
Residual Range Organics (RRO)	U		3.61	10.8	1	06/15/2022 04:29	WG1879138
(S) o-Terphenyl	*60.3*			*18.0-148*		*06/15/2022 04:29*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.2		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.17		0.231	0.554	1	06/17/2022 16:38	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.04	3.08	25	06/08/2022 13:50	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 13:50*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000575	0.00123	1	06/10/2022 02:45	WG1877111
Toluene	U		0.00160	0.00616	1	06/10/2022 02:45	WG1877111
Ethylbenzene	U		0.000908	0.00308	1	06/10/2022 02:45	WG1877111
Total Xylenes	U		0.00108	0.00801	1	06/10/2022 02:45	WG1877111
Methyl tert-butyl ether	U		0.000431	0.00123	1	06/10/2022 02:45	WG1877111
1,2-Dichloroethane	U		0.000800	0.00308	1	06/10/2022 02:45	WG1877111
Naphthalene	U		0.00601	0.0154	1	06/10/2022 02:45	WG1877111
(S) Toluene-d8	*98.8*			*75.0-131*		*06/10/2022 02:45*	WG1877111
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*06/10/2022 02:45*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*06/10/2022 02:45*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.47	4.43	1	06/15/2022 04:42	WG1879138
Residual Range Organics (RRO)	U		3.69	11.1	1	06/15/2022 04:42	WG1879138
(S) o-Terphenyl	*63.6*			*18.0-148*		*06/15/2022 04:42*	WG1879138

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.6		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.95		0.249	0.598	1	06/17/2022 16:40	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.21	3.56	25	06/08/2022 14:13	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:13*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000666	0.00143	1	06/10/2022 03:03	WG1877111
Toluene	U		0.00185	0.00713	1	06/10/2022 03:03	WG1877111
Ethylbenzene	U		0.00105	0.00356	1	06/10/2022 03:03	WG1877111
Total Xylenes	0.00153	J	0.00125	0.00927	1	06/10/2022 03:03	WG1877111
Methyl tert-butyl ether	U		0.000499	0.00143	1	06/10/2022 03:03	WG1877111
1,2-Dichloroethane	U		0.000925	0.00356	1	06/10/2022 03:03	WG1877111
Naphthalene	U		0.00696	0.0178	1	06/10/2022 03:03	WG1877111
(S) Toluene-d8	*96.1*			*75.0-131*		*06/10/2022 03:03*	WG1877111
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*06/10/2022 03:03*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*06/10/2022 03:03*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.59	4.79	1	06/16/2022 11:28	WG1879850
Residual Range Organics (RRO)	U		3.98	12.0	1	06/16/2022 11:28	WG1879850
(S) o-Terphenyl	*62.5*			*18.0-148*		*06/16/2022 11:28*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.85		0.232	0.557	1	06/17/2022 16:43	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~1.05~~	~~B J~~	1.05	3.09 UB	25	06/08/2022 14:35	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:35*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000576	0.00123	1	06/10/2022 03:22	WG1877111
Toluene	U		0.00160	0.00617	1	06/10/2022 03:22	WG1877111
Ethylbenzene	U		0.000910	0.00309	1	06/10/2022 03:22	WG1877111
Total Xylenes	0.00120	J	0.00109	0.00802	1	06/10/2022 03:22	WG1877111
Methyl tert-butyl ether	U		0.000432	0.00123	1	06/10/2022 03:22	WG1877111
1,2-Dichloroethane	U		0.000801	0.00309	1	06/10/2022 03:22	WG1877111
Naphthalene	U		0.00602	0.0154	1	06/10/2022 03:22	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 03:22*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 03:22*	WG1877111
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*06/10/2022 03:22*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.48	4.46	1	06/16/2022 10:42	WG1879850
Residual Range Organics (RRO)	U		3.71	11.1	1	06/16/2022 10:42	WG1879850
(S) o-Terphenyl	*72.8*			*18.0-148*		*06/16/2022 10:42*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	06/09/2022 13:35	WG1876096

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.87		0.237	0.569	1	06/17/2022 16:46	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~1.18~~	~~B J~~	1.10	3.23 UB	25	06/08/2022 14:58	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 14:58*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000604	0.00129	1	06/10/2022 03:41	WG1877111
Toluene	U		0.00168	0.00647	1	06/10/2022 03:41	WG1877111
Ethylbenzene	U		0.000954	0.00323	1	06/10/2022 03:41	WG1877111
Total Xylenes	U		0.00114	0.00841	1	06/10/2022 03:41	WG1877111
Methyl tert-butyl ether	U		0.000453	0.00129	1	06/10/2022 03:41	WG1877111
1,2-Dichloroethane	U		0.000840	0.00323	1	06/10/2022 03:41	WG1877111
Naphthalene	U		0.00631	0.0162	1	06/10/2022 03:41	WG1877111
(S) Toluene-d8	*96.7*			*75.0-131*		*06/10/2022 03:41*	WG1877111
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*06/10/2022 03:41*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.1*			*70.0-130*		*06/10/2022 03:41*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.51	4.55	1	06/16/2022 10:56	WG1879850
Residual Range Organics (RRO)	U		3.79	11.4	1	06/16/2022 10:56	WG1879850
(S) o-Terphenyl	*59.4*			*18.0-148*		*06/16/2022 10:56*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.8		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.00		0.240	0.576	1	06/17/2022 16:48	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.14	3.36	25	06/08/2022 15:21	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 15:21*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000627	0.00134	1	06/10/2022 04:00	WG1877111
Toluene	U		0.00175	0.00672	1	06/10/2022 04:00	WG1877111
Ethylbenzene	U		0.000990	0.00336	1	06/10/2022 04:00	WG1877111
Total Xylenes	U		0.00118	0.00873	1	06/10/2022 04:00	WG1877111
Methyl tert-butyl ether	U		0.000470	0.00134	1	06/10/2022 04:00	WG1877111
1,2-Dichloroethane	U		0.000872	0.00336	1	06/10/2022 04:00	WG1877111
Naphthalene	U		0.00655	0.0168	1	06/10/2022 04:00	WG1877111
(S) Toluene-d8	*96.8*			*75.0-131*		*06/10/2022 04:00*	WG1877111
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*06/10/2022 04:00*	WG1877111
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*		*06/10/2022 04:00*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	1.54	J	1.53	4.61	1	06/16/2022 11:15	WG1879850
Residual Range Organics (RRO)	5.91	J	3.84	11.5	1	06/16/2022 11:15	WG1879850
(S) o-Terphenyl	*61.4*			*18.0-148*		*06/16/2022 11:15*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.2		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	1.35		0.250	0.601	1	06/17/2022 16:51	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.23	3.62	25	06/08/2022 15:44	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 15:44*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000677	0.00145	1	06/10/2022 04:19	WG1877111
Toluene	U		0.00188	0.00725	1	06/10/2022 04:19	WG1877111
Ethylbenzene	U		0.00107	0.00362	1	06/10/2022 04:19	WG1877111
Total Xylenes	U		0.00128	0.00942	1	06/10/2022 04:19	WG1877111
Methyl tert-butyl ether	U		0.000507	0.00145	1	06/10/2022 04:19	WG1877111
1,2-Dichloroethane	U		0.000941	0.00362	1	06/10/2022 04:19	WG1877111
Naphthalene	U		0.00708	0.0181	1	06/10/2022 04:19	WG1877111
(S) Toluene-d8	*98.2*			*75.0-131*		*06/10/2022 04:19*	WG1877111
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*06/10/2022 04:19*	WG1877111
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*		*06/10/2022 04:19*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	2.15	J	1.60	4.81	1	06/16/2022 11:15	WG1879850
Residual Range Organics (RRO)	23.1		4.00	12.0	1	06/16/2022 11:15	WG1879850
(S) o-Terphenyl	*61.5*			*18.0-148*		*06/16/2022 11:15*	WG1879850

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	06/09/2022 11:19	WG1876097

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.06		0.252	0.607	1	06/17/2022 16:53	WG1876897

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	~~1.77~~	~~B J~~	1.25	3.69 UB	25	06/08/2022 17:49	WG1875992
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*06/08/2022 17:49*	WG1875992

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0442		0.000690	0.00148	1	06/10/2022 04:39	WG1877111
Toluene	0.00607	J	0.00192	0.00739	1	06/10/2022 04:39	WG1877111
Ethylbenzene	U		0.00109	0.00369	1	06/10/2022 04:39	WG1877111
Total Xylenes	U		0.00130	0.00960	1	06/10/2022 04:39	WG1877111
Methyl tert-butyl ether	U		0.000517	0.00148	1	06/10/2022 04:39	WG1877111
1,2-Dichloroethane	U		0.000959	0.00369	1	06/10/2022 04:39	WG1877111
Naphthalene	U		0.00721	0.0185	1	06/10/2022 04:39	WG1877111
(S) Toluene-d8	*97.6*			*75.0-131*		*06/10/2022 04:39*	WG1877111
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*06/10/2022 04:39*	WG1877111
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*06/10/2022 04:39*	WG1877111

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.61	4.85	1	06/15/2022 04:55	WG1879138
Residual Range Organics (RRO)	U		4.04	12.1	1	06/15/2022 04:55	WG1879138
(S) o-Terphenyl	*48.1*			*18.0-148*		*06/15/2022 04:55*	WG1879138

Chevron - 90129

DATA REVIEW

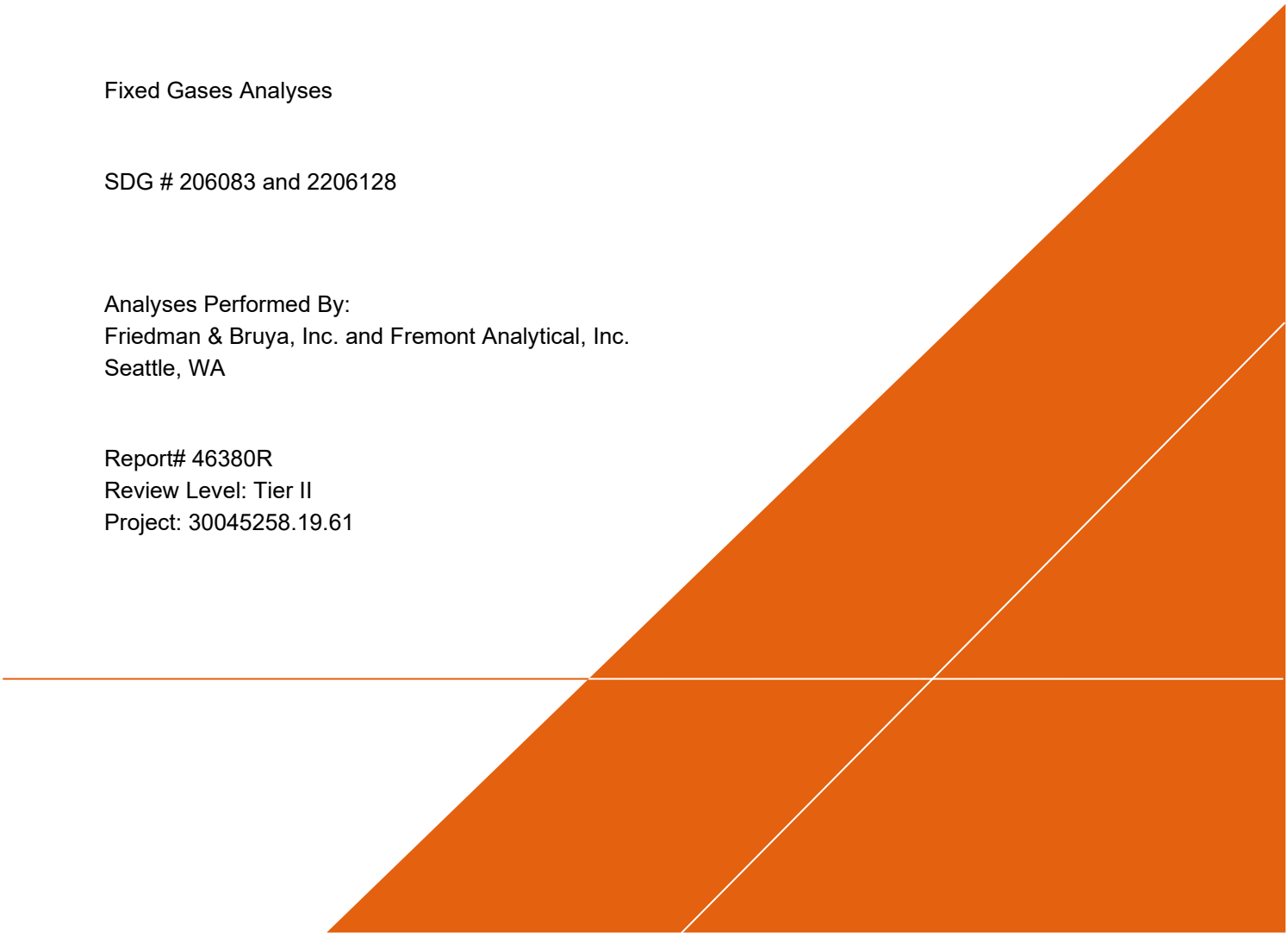
4700 BROOKLYN AVE NE SEATTLE, WA

Fixed Gases Analyses

SDG # 206083 and 2206128

Analyses Performed By:
Friedman & Bruya, Inc. and Fremont Analytical, Inc.
Seattle, WA

Report# 46380R
Review Level: Tier II
Project: 30045258.19.61



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # 206083 and 2206128 for samples collected in association with the Chevron –90129. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis		
						TO-15 (BTEXN)	Fixed Gases	APH
206083	SVP-1	206083-1	Air	06/03/2022		X		X
	SVP-3	206083-2	Air	06/03/2022		X		X
	DUP-1	206083-3	Air	06/03/2022	SVP-1	X		X
	EB-1	206083-4	Air	06/03/2022		X		X
2206128	SVP-1	2206128-001	Air	06/07/2022			X	
	SVP-3	2206128-002	Air	06/07/2022			X	
	DUP-1	2206128-003	Air	06/07/2022	SVP-1		X	
	EB-1	2206128-004	Air	06/07/2022			X	

Notes:

Fixed Gases- Includes Carbon dioxide, Methane and Oxygen and Helium Analysis

APH - Air phase hydrocarbon

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Methods TO-15 and EPA Method 3C and MA-APH. Data were reviewed in accordance with Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15; SOP No. HW-31, Revision 6.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound is considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation	Return Canister Pressure
USEPA TO-15 (Full Scan)	Air	30 days from collection to analysis (Canister)	Ambient Temperature	< -1" Hg

All samples were analyzed within the specified holding time and canister return pressure / vacuum criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the RL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The TO-15 analysis requires that all surrogates associated with the analysis exhibit a percent recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Laboratory Control Sample Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrix is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrix.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compounds	Sample Result (ug/m3)	Duplicate Result (ug/m3)	RPD
SVP-1 / DUP-1	All Compounds	U	U	AC

The calculated RPDs between the parent sample and field duplicate were acceptable.

6. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: USEPA TO-15 (BTEXN)	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)	X				X
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD)	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD)	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

AIR-PHASE PETROLEUM HYDROCARBONS (APH) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation	Return Canister Pressure
MA-APH	Air	30 days from collection to analysis (Canister)	Ambient Temperature	< -1" Hg

All samples were analyzed within the specified holding time and canister return pressure / vacuum criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks (Equipment Blank); however, the RB associated with air samples are not used to qualify data for blank contamination as it is a measure of ambient conditions No other qualification of the sample results was required.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The TO-15 analysis requires that all surrogates associated with the analysis exhibit a percent recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Laboratory Control Sample Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrix is applied to the RPD between the parent sample

and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrix.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compound	Sample Result (ug/m3)	Duplicate Result (ug/m3)	RPD
SVP-1 / DUP-1	APH EC5-8 aliphatic	410	340 U	AC
	APH EC9-12 aliphatic	380	300	23 %

The calculated RPDs between the parent sample and field duplicate were acceptable.

6. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR APH

APH By Method MA-APH	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)	X				X
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD)	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD)	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

FIXED GASES ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation	Return Canister Pressure
ASTM D-1946	Air	30 days from collection to analysis (Canister)	Ambient Temperature	< -1" Hg

All samples were analyzed within the specified holding time and canister return pressure / vacuum criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks (Equipment Blank); however, the RB associated with air samples are not used to qualify data for blank contamination as it is a measure of ambient conditions No other qualification of the sample results was required.

3. Laboratory Control Sample Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrix is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrix.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compounds	Sample Result (%)	Duplicate Result (%)	RPD
SVP-1 / DUP-1	Carbon Dioxide	2.97	2.72	9 %
	Oxygen	26.7	28.1	5 %

The calculated RPDs between the parent sample and field duplicate were acceptable.

5. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR FIXED GASES

VOCs: ASTM D-1946 / ASTM 1946	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/FLAME IONIZATION DETECTOR (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks	X				X
B. Equipment blanks		X		X	
C. Trip blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD)	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD)	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries	X				X
Dilution Factor		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Bhagyashree Fulzele

SIGNATURE: 

DATE: August 16, 2022

PEER REVIEW: Dennis Capria

DATE: August 18, 2022

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

206083

SAMPLE CHAIN OF CUSTODY 6/3/22

Report To Ada Hamilton

Company Arcadis

Address 1100 Olive Way Suite 800

City, State, ZIP Seattle, WA 98101

Phone — Email Ada.Hamilton@arcadis.com

SAMPLERS (signature) [signature]

PROJECT NAME & ADDRESS 90129 4700 Brooklyn Ave NE, Seattle, WA

PO # 30064302

NOTES:

INVOICE TO

Page # 1 of 1

TURNAROUND TIME
☒ Standard
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	~~TO15 cVOCs~~	APH	CH4, O2, CO2 Helium		Notes
SVP-1	01	8346	55	IA / (SG)	6/3/22	-30	1056	-4	1101		X	~~X~~	X	X		*Fixed gases
SVP-3	02	4178	301	IA / (SG)	↓	-29.5	0942	-5	0946		↓		↓	↓		by ASTM-1946
DUP-1	03	4185	61	IA / (SG)	↓	-29	—	-5	—		↓		↓	↓		
EB-1	04	8531	241	IA / SG	↓	-29.5	0900	-5	0904		↓		↓	↓		
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Trevor Bryant	Arcadis	6/3/22	1503
Received by: W. Madden	Windy Madden	F+BI	6/3/22	1504
Relinquished by:				
Received by:		Samples received at 19 °C		

FORMS\COC\COCTO-15.DOC

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SVP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-01 1/4.3
Date Analyzed:	06/07/22	Data File:	060220.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	78	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	410
APH EC9-12 aliphatics	380
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SVP-3	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-02 1/4.5
Date Analyzed:	06/07/22	Data File:	060222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	100	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	730
APH EC9-12 aliphatics	1,100
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	DUP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-03 1/4.6
Date Analyzed:	06/07/22	Data File:	060223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<340
APH EC9-12 aliphatics	300
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	EB-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	05/03/22	Lab ID:	206083-04 1/4.5
Date Analyzed:	06/07/22	Data File:	060224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<340
APH EC9-12 aliphatics	380
APH EC9-10 aromatics	<110

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Arcadis
Date Received:	Not Applicable	Project:	30064302, F&BI 206083
Date Collected:	Not Applicable	Lab ID:	02-1348 MB
Date Analyzed:	06/06/22	Data File:	060212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-01 1/4.3
Date Analyzed:	06/07/22	Data File:	060220.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	79	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.43
Toluene	<81	<21
Ethylbenzene	<1.9	<0.43
m,p-Xylene	<3.7	<0.86
o-Xylene	<1.9	<0.43
Naphthalene	<1.1	<0.21

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVP-3	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-02 1/4.5
Date Analyzed:	06/07/22	Data File:	060222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.45
Toluene	<85	<22
Ethylbenzene	<2	<0.45
m,p-Xylene	<3.9	<0.9
o-Xylene	<2	<0.45
Naphthalene	<1.2	<0.22

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	DUP-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-03 1/4.6
Date Analyzed:	06/07/22	Data File:	060223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.5	<0.46
Toluene	<87	<23
Ethylbenzene	<2	<0.46
m,p-Xylene	<4	<0.92
o-Xylene	<2	<0.46
Naphthalene	<1.2	<0.23

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	EB-1	Client:	Arcadis
Date Received:	06/03/22	Project:	30064302, F&BI 206083
Date Collected:	06/03/22	Lab ID:	206083-04 1/4.5
Date Analyzed:	06/07/22	Data File:	060224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.4	<0.45
Toluene	<85	<22
Ethylbenzene	<2	<0.45
m,p-Xylene	<3.9	<0.9
o-Xylene	<2	<0.45
Naphthalene	<1.2	<0.22

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Arcadis
Date Received:	Not Applicable	Project:	30064302, F&BI 206083
Date Collected:	Not Applicable	Lab ID:	02-1348 MB
Date Analyzed:	06/06/22	Data File:	060212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

Date of Report: 06/16/22
Date Received: 06/03/22
Project: 90129 4700 Brooklyn Ave NE, Seattle WA 30064302, F&BI 206083
Date Extracted: 06/07/22
Date Analyzed: 06/07/22

RESULTS FROM THE ANALYSIS OF AIR SAMPLES FOR HELIUM USING METHOD ASTM D1946

Results Reported as % Helium

Sample ID Laboratory ID	Helium
SVP-1 206083-01	<0.6
SVP-3 206083-02	<0.6
DUP-1 206083-03	<0.6
EB-1 206083-04	<0.6
Method Blank	<0.6

SUBCONTRACT SAMPLE CHAIN OF CUSTODY 2206128

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
206083	C-210

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard TAT

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	CH4, O2, CO2						Notes
SVP-1		6/7/22	1240	vapor					X						Dilution Factor
SVP-3		↓	↓	↓					X						2.28
DUP-1									X						2.29
EB-1				✓					X						2.28
															2.14

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	6/7/22	1241
Received by:	FAI	Justine Pogue	6/7/22	14:13
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Analytical Report

Work Order: **2206128**
Date Reported: **6/14/2022**

CLIENT: Friedman & Bruya
Project: 206083

Lab ID: 2206128-001 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **SVP-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	2.97	0.114	D	%	2.28	6/9/2022 12:41:00 PM
Methane	ND	0.114	D	%	2.28	6/9/2022 12:41:00 PM
Oxygen	26.7	0.114	D	%	2.28	6/9/2022 12:41:00 PM

Lab ID: 2206128-002 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **SVP-3** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	3.39	0.114	D	%	2.29	6/9/2022 1:57:00 PM
Methane	ND	0.114	D	%	2.29	6/9/2022 1:57:00 PM
Oxygen	30.7	0.114	D	%	2.29	6/9/2022 1:57:00 PM

Lab ID: 2206128-003 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **DUP-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	2.72	0.114	D	%	2.28	6/9/2022 2:10:00 PM
Methane	ND	0.114	D	%	2.28	6/9/2022 2:10:00 PM
Oxygen	28.1	0.114	D	%	2.28	6/9/2022 2:10:00 PM

Analytical Report

Work Order: **2206128**
Date Reported: **6/14/2022**

CLIENT: Friedman & Bruya
Project: 206083

Lab ID: 2206128-004 **Collection Date:** 6/7/2022 12:40:00 PM
Client Sample ID: **EB-1** **Matrix:** SVE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Major Gases by EPA Method 3C				Batch ID: R76141		Analyst: MS
Carbon Dioxide	ND	0.107	D	%	2.14	6/9/2022 3:02:00 PM
Methane	ND	0.107	D	%	2.14	6/9/2022 3:02:00 PM
Oxygen	4.86	0.107	D	%	2.14	6/9/2022 3:02:00 PM

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