Appendix E

Environmental Investigation Report SR 202 Widening and Trestle Replacement

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AECOM

Environmental Investigation Report SR 202 Widening and Trestle Replacement

NE 175th Street to NE 177th Street Woodinville Washington

Woodinville Water District

Project number: 60683538

April 17, 2025

Quality information

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1. Introduction

AECOM Technical Services, Inc. (AECOM) was retained by Woodinville Water District (WWD) to perform a limited environmental investigation in the City of Woodinville, Washington, to assess for the presence of soil and groundwater contamination that could be encountered during proposed construction activities, conducted along 131st Avenue NE and near NE 175th Street, an auto repair and service station, and a gas station (Figure 1). This investigation was conducted in conjunction with a geotechnical exploration and groundwater level investigation, as part of engineering design services for the SR 202 Widening and Trestle Replacement project. This project includes upsizing and replacement of an existing sanitary sewer trunk line with a new line along 131st Avenue NE from NE 175th Street to NE 177th Place. This report presents background information regarding the area of investigation and proposed construction, the purpose and scope of the subsurface investigation, and our findings and conclusions. The findings of this report apply to sanitary sewer and other construction associated with the SR 202 Widening and Trestle Replacement project.

1.1 Description of Investigation Area

The area of investigation was along 131st Avenue NE from NE 175th Street to NE 177th Place in Woodinville, King County, Washington and was located in the city right-of-way, adjacent to an auto repair and service center (Pep Boys; 12978 NE 175th Street), and gas station (Jacksons Shell; 13106 NE 175th Street), as shown on Figure 2.

Known and suspected contaminated sites adjacent to the area of proposed sanitary sewer upsizing and replacement were evaluated in advance of this investigation. The Pep Boys auto service center is not a known or suspected contaminated site but is located hydraulically downgradient from the Jacksons Shell site. The Jacksons Shell site had historical documented releases of gasoline, which impacted soil and groundwater in excess of Washington State Department of Ecology (Ecology) cleanup levels for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX). These historic releases were reportedly remediated by excavation and Ecology subsequently issued a no-further action determination for the property in 2012 (Ecology, 2012). Based upon the known historic releases of gasoline at the Jacksons Shell property, further evaluation for the presence of gasoline in soils and groundwater in proposed adjacent areas of excavation and construction was conducted.

The regional geology in this area consists of Quaternary alluvial deposits that include unconsolidated or semi-consolidated alluvial clay, silt, sand, gravel, and (or) cobble deposits and locally may include peat and muck. Groundwater in this area is present at shallow depths within the unconsolidated Sammamish River floodplain deposits and has been encountered between approximately 9 and 12 feet below ground surface (bgs). Regional groundwater flow is to the west and northwest towards the Sammamish River (Figure 1).

2. Objectives and Scope

AECOM was retained by WWD to conduct a geotechnical and environmental investigation. The objectives of the environmental investigation were to assess the soil and groundwater conditions within geotechnical borings. To accomplish these objectives, AECOM implemented the following scope of work:

- Conducted field screening of three borings (BT-1, BT-2, and BT-3) and collected soil and groundwater samples for chemical analysis. Soil samples were field screened using a photoionization detector (PID) and for evidence of contamination (e.g., sheen, odor and/or discoloration). Soil samples were collected from all three borings and groundwater samples were collected from temporary wells established in Boring BT-1 and BT-3.
- Analyzed select soil and groundwater samples for gasoline-range hydrocarbons by NWTPH-Gasoline extended (Gx), diesel- and oil-range petroleum hydrocarbons by NWTPH-Diesel extended (Dx), and volatile organic compounds (VOCs) by EPA Method 8260D.

- Prepared this report presenting our findings and conclusions regarding the environmental testing conducted.

3. Methods of Investigation

3.1 Sample Location Rationale

Two borings (BT-1 and BT-2) were advanced on the east side of 131st Avenue NE, off the street and in the accessway to the Jacksons Shell (Figure 2). The locations of Borings BT-1 and BT-2 are within the City of Woodinville right-of-way. Boring BT-3 was advanced on the west side of 131st Avenue NE, in a driveway to the Pep Boys service center. Boring BT-3 was advanced near the edge of the City of Woodinville right-of-way.

3.2 Drilling and Soil Sampling Procedures

AECOM retained Applied Professional Services, Inc. (APS) to perform GPR and EM surveys to mark out anomalies and utilities identified in the vicinity of the proposed boring locations in advance of the drilling operations. The survey was performed on January 4, 2023 and a copy of APS's field report is provided in Appendix A.

Holt Services, Inc. (Holt) provided the drilling and sampling-related services from February 6 through 8, 2023. Prior to initiating drilling activities, each boring location was excavated to a minimum depth of 5 ft below ground surface (bgs) with air knifing/vacuum excavation to clear for utilities. Borings BT-1, BT-2 and BT-3 were advanced to 16.5, 21.1, and 16.5 feet bgs, respectively, using hollow stem auger drilling methods. Soil samples were collected every 2.5 feet using a 2-inch-diameter split spoon to the total depth of the boring. Photographs of the drilling operation are provided in Appendix B. Two soil samples were collected from each boring for laboratory chemical analysis. Soils were logged by an AECOM geologist in accordance with the Unified Soil Classification System (USCS). Particular attention was given to noting visible evidence of contamination such as staining, odors, or other relevant factors indicative of the presence of contaminants of concern. A field log of each boring was prepared noting soil type, soil color, moisture (density, stiffness, and plasticity as applicable), and PID readings. Headspace measurements for organic vapors in soil samples were made using a PID with a standard 10.6 electron volt lamp. The highest PID readings were recorded for each headspace sample. The boring logs are provided in Appendix C.

Volatile organics samples were collected using a 5-gram (g) EnCore® sampler (EPA Method 5035). Soil samples were transferred to appropriate laboratory-provided sample containers. Each sample was properly labeled with a unique sample identification number, placed in a cooler with ice, and submitted to the laboratory for analysis. Chain-of-custody forms were completed and signed by the field representative and accompanied the samples to the laboratory.

As part of the investigation, two of the borings (BT-1 and BT-3) were converted into temporary 2-inch-diameter monitoring wells that were screened from 5 to 15 feet bgs, to obtain static groundwater levels and collect groundwater samples. The two temporary wells were purged by pumping up to one hour to allow turbidity readings to stabilize prior to sample collection. The two temporary monitoring wells were then sampled using a peristaltic pump and new polyethylene tubing. Following sample collection, Borings BT-1 and BT-3 were backfilled per state regulations and patched to match surrounding conditions.

Boring BT-2 was converted to an observation well with a flush mounted monument for subsequent collection of groundwater elevations, which were conducted as part of the geotechnical evaluation.

Drilling spoils (soil and water) were drummed, profiled, transported, and disposed of at an approved disposal facility as non-hazardous investigative derived waste.

3.3 Analytical Methods and Applicable Cleanup Levels

Soil and groundwater samples were submitted for analysis to Fremont Analytical, an Ecology-accredited laboratory located in Seattle, Washington. The analytical program included analyses for gasoline, diesel,

and heavy oil-range petroleum hydrocarbons by NWTPH-Gx and Dx, respectively, and VOCs by Method 8260D. The soil analytical results are summarized in Table 1, along with their respective Ecology Model Toxic Control Act (MTCA) Method A or B cleanup levels. The lowest cleanup level for each compound was used for comparison. The MTCA Method A or B values used were obtained from Ecology's CLARC Database (Ecology, 2023). The laboratory analytical reports are provided in Appendix D. An AECOM project chemist performed a data quality review of all analytical data, and no data usability issues were identified. A summary of the laboratory data quality review is provided in Appendix E.

4. Investigation Findings

4.1 Subsurface Conditions

The borings encountered asphalt and fill material, characterized by dark grey to dark brown silty sand with gravel, from ground surface to about 1 foot bgs. The fill was underlain by fine to medium grained, loose to very dense sands with trace gravel to boring termination depth in each of the borings (16.5 to 21.1 feet bgs).

During field screening, no petroleum odors or staining were noted in the soils from any boring and PID readings were all below 0.5 ppm, which was considered representative of ambient air (background) concentrations.

Groundwater was noted during drilling at approximately 10.7, 10.5, and 7 feet bgs in boring BT-1, BT-2, and BT-3, respectively. Following drilling, soil boring BT-2 (Figure 2) was converted into a monitoring well, which was screened from 10 to 20 feet bgs (Appendix C). Static groundwater levels were taken by AECOM from Well BT-2 five times from February 8 through May 9, 2023. The static groundwater levels during these four monitoring events ranged from 9.26 to 10.50 feet below the top of well casing, with the top of casing set 0.3 ft bgs.

4.2 Analytical Results

4.2.1 Soil

A total of six soil samples (two samples per boring) were submitted to the laboratory for chemical analysis. The results are summarized in Table 1. Soils were analyzed from depths of 8 and 12 feet bgs in BT-1, 7 and 10 feet bgs in BT-2, and 5.5 and 10 feet bgs in BT-3. The shallower depth samples from each boring were collected from soils in the unsaturated zone, above the groundwater interface. The deeper samples from each boring were collected just below the groundwater interface, in the saturated zone.

There were no detections of gasoline-range, diesel-range, or oil-range petroleum hydrocarbons in any of the six soil samples analyzed and the reporting limits for these analytes were below their respective Ecology Model Toxic Control Act (MTCA) Method A or B cleanup levels. While most VOCs were not detected above their associated reporting limits, one VOC, tetrachloroethene (PCE) was detected in Boring BT-3, at a depth of 10 feet BGS, in the saturated zone. PCE was detected at a concentration of 0.0326 mg/kg, which is below the associated MTCA Method A cleanup level of 0.05 mg/kg.

4.2.2 Groundwater

The groundwater sampling results from temporary monitoring wells BT-1 and BT-3 are summarized in Table 2.

Gasoline-range petroleum hydrocarbons were not detected in groundwater samples collected from the two wells. Diesel-range petroleum hydrocarbons were detected in BT-1, at a concentration of 147 µg/L, which is below the associated MTCA Method A cleanup level of 500 µg/L. The laboratory noted this detection to be an unresolved complex mixture, which may be weathered and/or organic material and may not be from a diesel source. Oil-range petroleum hydrocarbons were detected in BT-3 at a concentration of 123 µg/L, which is below the associated MTCA Method A cleanup level of 500 µg/L. This

detection was noted by the laboratory as not being consistent with a petroleum standard and may not be from a heavy oil source.

Two VOCs, PCE and toluene, were detected in BT-3. PCE was detected in BT-3 at a concentration of 3.53 µg/L, which is below the associated MTCA Method A cleanup level of 5 µg/L. Toluene was detected in BT-3 at a concentration of 4.82 µg/L, which is below the associated MTCA Method A cleanup level of 1,000 µg/L.

4.2.3 Conclusions and Recommendations

This environmental investigation was conducted to assess for the potential presence of soil and groundwater contamination that could be encountered during proposed SR 202 Widening and Trestle Replacement project activities, including proposed sanitary sewer construction near NE 175th Street, the Pep Boy's auto repair and service station, and the Jacksons Shell gas station in Woodinville, Washington (Figure 2 and Appendix F). AECOM has drawn the following conclusions based on the results of this environmental investigation:

- Fill material was encountered in the three soil borings to about 1 foot bgs, with native sands with limited gravel below.
- Field screening showed no indication of soil contamination to boring completion depths of 16.5 (BT-1 and BT-3) and 21.1 (BT-2) feet bgs.
- There were no laboratory detections of VOCs, gasoline-range, diesel-range, or oil-range petroleum hydrocarbons in soil in the two borings (BT-1 and BT-2) completed adjacent to the Jacksons Shell gas station and in shallow (5.5 feet bgs), unsaturated soils in the boring (BT-3) completed adjacent to Pep Boy's
- A single VOC, PCE, was detected in deeper (10 feet bgs), saturated, soils in Boring BT-3, at a concentration of 0.0326 mg/kg, below the associated MTCA Method A cleanup level of 0.05 mg/kg.
- Groundwater was encountered during drilling between 7 to 10.7 feet bgs and static groundwater levels in a boring converted into a monitoring well (BT-2) ranged from approximately 9.26 to 10.50 feet bgs over the next three months (February through May 2023). The inferred groundwater gradient is west to northwesterly, towards the Sammamish River.
- Groundwater samples collected from BT-1 and BT-3 did not detect petroleum-range hydrocarbons above MTCA Method A cleanup levels. A low-level detection of diesel-range hydrocarbons (147 µg/L) in Boring BT-1 was noted as being weathered/or organic in nature. A low-level detection of oil-range petroleum hydrocarbons (123 µg/L) in BT-3 was noted as being inconsistent with heavy oil. Any groundwater generated during construction activities, such as for dewatering, should be evaluated for concentrations of diesel and heavy oil and accounted for in transportation and disposal.
- Two low level detections of VOCs in groundwater (PCE at 3.53 µg/L and Toluene at 4.82) were identified in BT-3, located adjacent to the Pep Boy's service center, at concentrations below applicable MTCA cleanup levels. While the toluene detection was well below the associated MTCA Method A cleanup level of 1,000 µg/L, the 3.53 µg/L detection of PCE in BT-3 was near the associated MTCA Method A cleanup level of 5 µg/L. Toluene and PCE are both solvents, commonly used in industrial, automotive, and dry-cleaning industry.
- Evidence of contamination was not detected in shallow soils above the groundwater table in the vicinity of the three borings. Evidence of contamination was also not detected in groundwater or in soils within the saturated zone on the east side of 131st Ave NE and these media are not suspected to be contaminated with PCE or petroleum hydrocarbons. However, based on the proximity of the project area to the documented former release of gasoline to soil at the Jacksons Shell property, contingencies should be evaluated in case petroleum impacted soils are encountered during the project. Soils to be excavated during construction from the unsaturated zone, and saturated zone on the east side of 131st Ave NE, appear to fall within Ecology's Soil Category 1 for best management practices. These soils would not require special handling or disposal at a landfill and would be suitable for reuse as backfill within the project area, assuming the soils meet with other project

requirements (e.g., geotechnical). Soils within the saturated zone may be contaminated with PCE along the west side of 131st Ave NE, as depicted in the two sheets included in Appendix F.

- Soils excavated from within the saturated zone and/or construction dewatering occurring near Boring BT-3 and on the west side of 131st Ave NE should be evaluated for appropriate media management (i.e., laboratory testing and waste profiling/disposal) due to the potential presence of PCE contamination. The lateral extent of where removed media (soil and groundwater) should be evaluated for PCE contamination is estimated in Attachment F.
- If staining or odors are observed from soils excavated during construction, it is recommended that soils be stockpiled, sampled, and laboratory analyses performed prior to proceeding with soil disposal.

5. References

Washington State Department of Ecology (Ecology), 2012. Re: No Further Action at the following Site: Site Name Jackson. VCP Project No.: NW2518. December 17, 2012.

Ecology, 2023. CLARC tables. January, 2023. (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC/Data-tables)

Tables

Table 1. Summary of Soil Analytical Results
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Sample Location:	MTCA Soil Screening Levels	BT-1		BT-2		BT-3	
Sample Depth (feet bgs):		8	12	7	10	5.5	10
Sample Date:		2/8/2023	2/8/2023	2/8/2023	2/8/2023	2/7/2023	2/7/2023
VOCs (mg/kg)							
1,1,1,2-Tetrachloroethane	38 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
1,1,1-Trichloroethane (TCA)	2 (A)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
1,1,2,2-Tetrachloroethane	5 (B)	0.185 U	0.179 U	0.194 U	0.200 U	0.194 U	0.177 U
1,1,2-Trichloroethane	18 (B)	0.0116 U	0.0112 U	0.0121 U	0.0125 U	0.0121 U	0.0111 U
1,1-Dichloroethane	180 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
1,1-Dichloroethene	4,000 (B)	0.0927 U	0.0897 U	0.0971 U	0.0999 U	0.0969 U	0.0886 U
1,1-Dichloropropene	NE	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
1,2,3-Trichlorobenzene	64 (B)	0.0556 U	0.0538 U	0.0582 U	0.0600 U	0.0581 U	0.0531 U
1,2,3-Trichloropropane	0.0063 (B)	0.0278 U	0.0269 U	0.0291 U	0.0300 U	0.0291 U	0.0266 U
1,2,4-Trichlorobenzene	34 (B)	0.0556 U	0.0538 U	0.0582 U	0.0600 U	0.0581 U	0.0531 U
1,2,4-Trimethylbenzene	800 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
1,2-Dibromo-3-Chloropropane	0.23 (B)	0.0278 U	0.0269 U	0.0291 U	0.0300 U	0.0291 U	0.0266 U
1,2-Dibromoethane (EDB)	0.005 (A)	0.00927 U	0.00897 U	0.00971 U	0.00999 U	0.00969 U	0.00886 U
1,2-Dichlorobenzene	7,200 (B)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
1,2-Dichloroethane (EDC)	11 (B)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
1,2-Dichloropropane	27 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
1,3,5-Trimethylbenzene	800 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
1,3-Dichlorobenzene	NE	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
1,3-Dichloropropane	1,600 (B)	0.00927 U	0.00897 U	0.00971 U	0.00999 U	0.00969 U	0.00886 U
1,4-Dichlorobenzene	190 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
2-Butanone (MEK)	48,000 (B)	0.278 U	0.269 U	0.291 U	0.300 U	0.291 U	0.266 U
2-Chlorotoluene	1,600 (B)	0.0153 U	0.0148 U	0.0160 U	0.0165 U	0.0160 U	0.0146 U
2-Hexanone (MBK)	400 (B)	0.0579 U	0.0561 U	0.0607 U	0.0624 U	0.0606 U	0.0554 U
4-Chlorotoluene	1,600 (B)	0.0153 U	0.0148 U	0.0160 U	0.0165 U	0.0160 U	0.0146 U
4-Isopropyltoluene	NE	0.185 U	0.179 U	0.194 U	0.200 U	0.194 U	0.177 U
Acetone	72,000 (B)	0.232 U	0.224 U	0.243 U	0.250 U	0.242 U	0.221 U
Benzene	0.03 (A)	0.0162 U	0.0157 U	0.0170 U	0.0175 U	0.0170 U	0.0155 U
Bromobenzene	640 (B)	0.0116 U	0.0112 U	0.0121 U	0.0125 U	0.0121 U	0.0111 U
Bromodichloromethane	16 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
Bromoform	130 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Bromomethane	110 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
Carbon Tetrachloride	14 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
Chlorobenzene	1,600 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Chloroethane	NE	0.0695 UJ	0.0673 UJ	0.0728 UJ	0.0749 UJ	0.0727 UJ	0.0664 UJ
Chloroform	32 (B)	0.0162 U	0.0157 U	0.0170 U	0.0175 U	0.0170 U	0.0155 U
Chloromethane	NE	0.0464 U	0.0449 U	0.0485 U	0.0500 U	0.0484 U	0.0443 U
cis-1,2-Dichloroethene	160 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
cis-1,3-Dichloropropene	10 (B)[1]	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Dibromochloromethane	12 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Dibromomethane	800 (B)	0.0116 U	0.0112 U	0.0121 U	0.0125 U	0.0121 U	0.0111 U
Dichlorodifluoromethane (CFC-12)	16,000 (B)	0.0139 UJ	0.0135 UJ	0.0146 UJ	0.0150 UJ	0.0145 UJ	0.0133 UJ
Ethylbenzene	6 (A)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
Hexachlorobutadiene	13 (B)	0.0371 U	0.0359 U	0.0388 U	0.0400 U	0.0388 U	0.0354 U
Isopropylbenzene	8,000 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
m,p-Xylene	16,000 (B)	0.0464 U	0.0449 U	0.0485 U	0.0500 U	0.0484 U	0.0443 U
Methyl isobutyl ketone (MIBK)	6,400 (B)	0.0556 U	0.0538 U	0.0582 U	0.0600 U	0.0581 U	0.0531 U
Methyl tert-butyl ether (MTBE)	0.1 (A)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
Methylene Chloride	0.02 (A)	0.0324 U	0.0314 U	0.034 U	0.0350 U	0.0339 U	0.0310 U
Naphthalene	5 (A)	0.0927 U	0.0897 U	0.0971 U	0.0999 U	0.0969 U	0.0886 U
n-Butylbenzene	4,000 (B)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
n-Propylbenzene	8,000 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
o-Xylene	16,000 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
sec-Butylbenzene	8,000 (B)	0.139 U	0.135 U	0.146 U	0.150 U	0.145 U	0.133 U
Styrene	16,000 (B)	0.00927 U	0.00897 U	0.00971 U	0.00999 U	0.00969 U	0.00886 U
tert-Butylbenzene	8,000 (B)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Tetrachloroethene (PCE)	0.05 (A)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	**0.0326**
Toluene	7 (A)	0.0278 U	0.0269 U	0.0291 U	0.0300 U	0.0291 U	0.0266 U
trans-1,2-Dichloroethene	1,600 (B)	0.00927 U	0.00897 U	0.00971 U	0.00999 U	0.00969 U	0.00886 U
trans-1,3-Dichloropropylene	10 (B)[1]	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
Trichloroethene (TCE)	0.03 (A)	0.0139 U	0.0135 U	0.0146 U	0.0150 U	0.0145 U	0.0133 U
Trichlorofluoromethane (CFC-11)	24,000 (B)	0.0185 U	0.0179 U	0.0194 U	0.0200 U	0.0194 U	0.0177 U
Vinyl Chloride	0.67 (B)	0.0232 U	0.0224 U	0.0243 U	0.0250 U	0.0242 U	0.0221 U
TPHs (mg/kg)							
Gasoline-Range	30 / 100 (A) [2]	4.64 U	4.49 U	4.85 U	5.00 U	4.84 U	4.43 U
Diesel-Range	2,000 (A)	57.3 U	60.8 U	51.1 U	59.2 U	54.0 U	59.6 U
Heavy Oil-Range	2,000 (A)	115 U	122 U	102 U	118 U	108 U	119 U

Notes:

Values in **bold** font indicate that the analyte was detected.

Model Toxics Control Act (MTCA) Cleanup Regulation, chapter 173-340 WAC; MTCA Method A and B from Ecology website CLARC tables posted January 2023 (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC/Data-tables).

(A) - MTCA Method A

(B) - MTCA Method B

MTCA Method A screening levels are presented when available. MTCA Method B values are presented when MTCA Method A values are not established.

[1]The screening level is for 1,3-dichloropropene.

[2]The MTCA Method A screening level is 30 mg/kg if benzene is present and 100 mg/kg if benzene is not present.

bgs - below ground surface

mg/kg - milligram per kilogram

NE - not established

U - Compound was analyzed for but not detected above the reporting limit shown.

UJ - Compound was qualified as estimated at the reporting limit shown.

Table 2. Summary of Groundwater Analytical Results
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Sample Location: Sample Date:	**MTCA Groundwater Screening Levels**	**BT-1-GW** 2/8/2023	**BT-3-GW** 2/7/2023
VOCs (ug/L)			
1,1,1,2-Tetrachloroethane	1.7 (B)	0.300 U	0.300 U
1,1,1-Trichloroethane (TCA)	200 (A)	0.300 U	0.300 U
1,1,2,2-Tetrachloroethane	0.22 (B)	0.200 U	0.200 U
1,1,2-Trichloroethane	0.77 (B)	0.250 U	0.250 U
1,1-Dichloroethane	7.7 (B)	0.500 U	0.500 U
1,1-Dichloroethene	400 (B)	0.500 U	0.500 U
1,1-Dichloropropene	NE	0.500 U	0.500 U
1,2,3-Trichlorobenzene	6.4 (B)	0.700 U	0.700 U
1,2,3-Trichloropropane	0.00038 (B)	0.400 U	0.400 U
1,2,4-Trichlorobenzene	1.5 (B)	0.750 U	0.750 U
1,2,4-Trimethylbenzene	80 (B)	0.500 U	0.500 U
1,2-Dibromo-3-Chloropropane	0.014 (B)	1.00 U	1.00 U
1,2-Dibromoethane (EDB)	0.01 (A)	0.200 U	0.200 U
1,2-Dichlorobenzene	720 (B)	0.500 U	0.500 U
1,2-Dichloroethane (EDC)	5 (A)	0.500 U	0.500 U
1,2-Dichloropropane	1.2 (B)	0.300 U	0.300 U
1,3,5-Trimethylbenzene	80 (B)	0.500 U	0.500 U
1,3-Dichlorobenzene	NE	0.500 U	0.500 U
1,3-Dichloropropane	160 (B)	0.300 U	0.300 U
1,4-Dichlorobenzene	8.1 (B)	0.500 U	0.500 U
2-Butanone (MEK)	4,800 (B)	1.50 U	1.50 U
2-Chlorotoluene	160 (B)	0.500 U	0.500 U
2-Hexanone (MBK)	40 (B)	1.25 U	1.25 U
4-Chlorotoluene	160 (B)	0.500 U	0.500 U
4-Isopropyltoluene	NE	0.500 U	0.500 U
Acetone	7,200 (B)	5.00 U	5.00 U
Benzene	5 (A)	0.440 U	0.440 U
Bromobenzene	64 (B)	0.500 U	0.500 U
Bromodichloromethane	0.71 (B)	0.250 U	0.250 U
Bromoform	5.5 (B)	0.300 U	0.300 U
Bromomethane	11 (B)	3.00 U	3.00 U
Carbon Tetrachloride	0.63 (B)	0.300 U	0.300 U
Chlorobenzene	160 (B)	0.500 U	0.500 U
Chloroethane	NE	1.00 U	1.00 U
Chloroform	1.4 (B)	0.500 U	0.500 U
Chloromethane	NE	0.750 U	0.750 U
cis-1,2-Dichloroethene	16 (B)	0.500 U	0.500 U
cis-1,3-Dichloropropene	0.44 (B)[a]	0.350 U	0.350 U
Dibromochloromethane	0.52 (B)	0.300 U	0.300 U
Dibromomethane	80 (B)	0.250 U	0.250 U
Dichlorodifluoromethane (CFC-12)	1,600 (B)	0.500 U	0.500 U
Ethylbenzene	700 (A)	0.400 U	0.400 U
Hexachlorobutadiene	0.56 (B)	0.500 U	0.500 U
Isopropylbenzene	800 (B)	0.500 U	0.500 U
m,p-Xylene	1,600 (B)	1.00 U	1.00 U
Methyl isobutyl ketone (MIBK)	640 (B)	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	20 (A)	0.350 U	0.350 U
Methylene Chloride	5 (A)	0.750 U	0.750 U
Naphthalene	160 (A)	1.25 U	1.25 U
n-Butylbenzene	400 (B)	0.500 U	0.500 U
n-Propylbenzene	800 (B)	0.500 U	0.500 U
o-Xylene	1,600 (B)	0.500 U	0.500 U
sec-Butylbenzene	800 (B)	0.500 U	0.500 U
Styrene	1,600 (B)	0.500 U	0.500 U
tert-Butylbenzene	800 (B)	0.500 U	0.500 U
Tetrachloroethene (PCE)	5 (A)	0.350 U	**3.53**
Toluene	1,000 (A)	1.00 U	**4.82**
trans-1,2-Dichloroethene	160 (B)	0.350 U	0.350 U
trans-1,3-Dichloropropylene	0.44 (B)[a]	0.500 U	0.500 U
Trichloroethene (TCE)	5 (A)	0.400 U	0.400 U
Trichlorofluoromethane (CFC-11)	2,400 (B)	0.300 U	0.300 U
Vinyl Chloride	0.2 (A)	0.200 U	0.200 U
TPHs (ug/L)			
Gasoline Range Organics	800 / 1,000 (A)[b]	50.0 U	50.0 U
Diesel Range Organics	500 (A)	**147**[c]	97.7 U
Heavy Oil-Range	500 (A)	95.3 U	**123**[d]

Notes:

Values in **bold** font indicate that the analyte was detected.

Model Toxics Control Act (MTCA) Cleanup Regulation, chapter 173-340 WAC; MTCA Method A and B from Ecology website CLARC tables posted January 2023 (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC/Data-tables).

(A) - MTCA Method A

(B) - MTCA Method B

MTCA Method A screening levels are presented when available. MTCA Method B values are presented when MTCA Method A values are not established.

[a]The screening level is for 1,3-dichloropropene.

[b]The MTCA Method A screening level is 800 ug/L if benzene is present and 1,000 ug/L if benzene is not present.

[c]Chromatographic pattern indicates an unresolved complex mixture, which may be weathered and/or organic material.

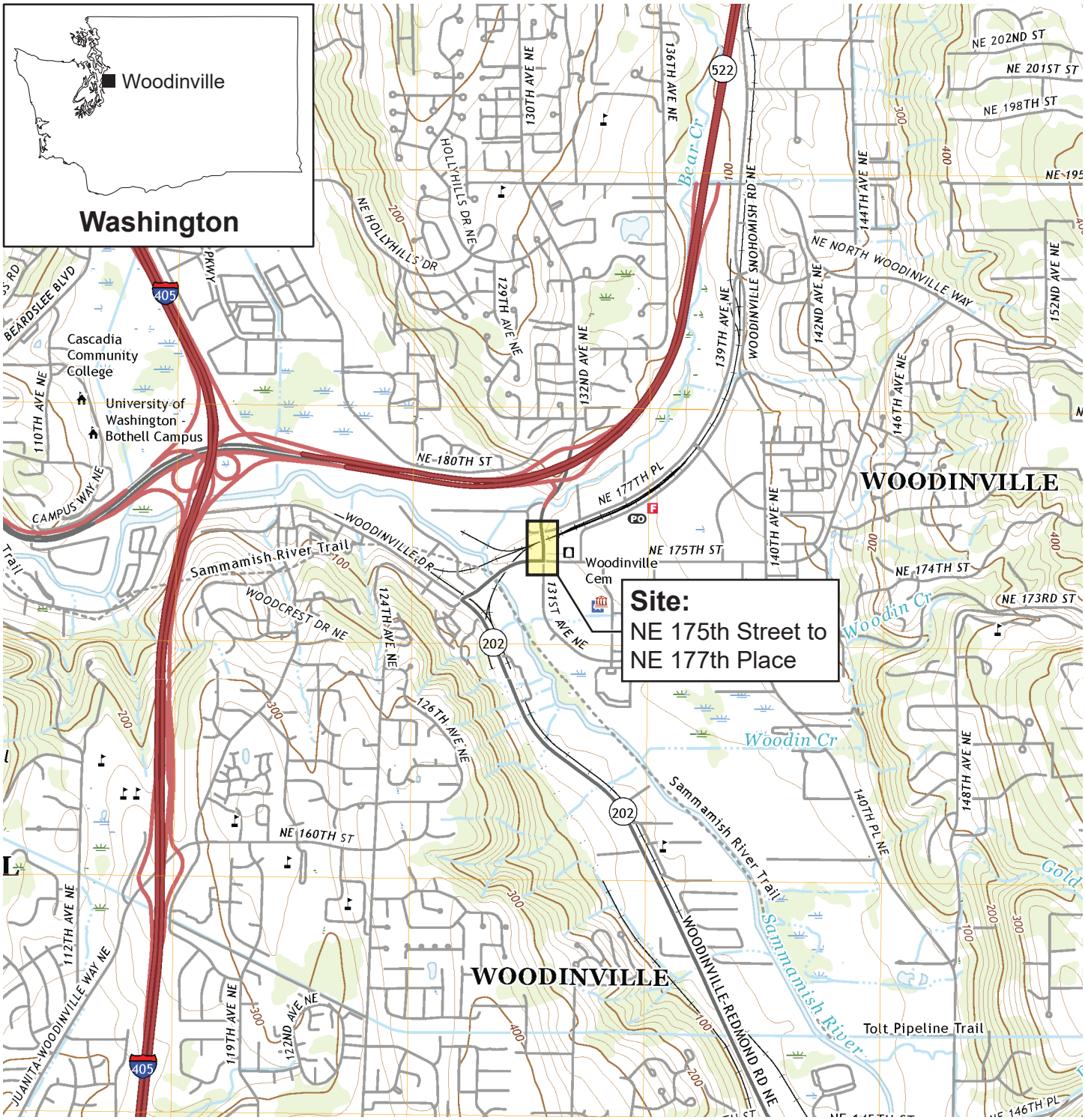
[d]Chromatographic pattern is not consistent with a petroleum standard.

NE - not established

ug/l - microgram per liter

U - Compound was analyzed for but not detected above the reporting limit shown.

Figures



Source: USGS 7.5-minute topographic quadrangles:
Woodinville, Washington, 2020; and Kirkland, Washington, 2020

0 2,000 4,000

Scale in Feet

Figure 1

Site Location

Job No. 60683538

AECOM

SR 202 Widening and Trestle Replacement
NE 175th Street to NE 177th Place, Woodinville, Washington

Source: Google Earth Pro, image dated 8/23/22

Legend

- Approximate parcel boundary
- Boring location
- Monitoring well

0 80 160

Approximate Scale in Feet

Job No. 60683538

Figure 2

Site Vicinity

SR 202 Widening and Trestle Replacement
NE 175th Street to NE 177th Place, Woodinville, Washington

Appendix A – Utility Locate Field Report

71195

LOCATE REQUEST
This is not an invoice

APPLIED PROFESSIONAL SERVICES INC.
Solutions That Exceed Expectations

43530 SE North Bend Way • North Bend, WA 98045
Phone: (425) 888-2590

RR + tracks

DATE: 1/4/23

Job#
PURCHASE ORDER #: 60683538 TASK 3.4
Task 6.5.2 Pep Boys & Jacksons Shell

CUSTOMER: AECOM

OFFICE PHONE:

BILLING ADDRESS:

EMAIL:

CITY: ST: ZIP:

CONTACT PERSON: MARKUS WALBAUM

PHONE: 206-910-9099

BILLING SUMMARY

SERVICES REQUESTED:

☑ **CONDUCTIBLES** ☐ **NON-CONDUCTIBLES** ☐ **GPR** ☐ **POLY WATER** ☐ **RM LOCATING™**

LOCATOR'S NAME: Jeff B

LOCATE ADDRESS: 13002 NE 177TH PL WOODINVILLE

DESCRIPTION OF LOCATE: Loc f/o Along R/R TRACKS in SILVER BOTH ENDS of R/R BRIDGE. SWEPT LOCATION AT Pep Boys N. CONDUCTABLES FOUND. Pwr in SIDEWALK MARKED By 1-CALL 2 LOCATION'S AT SHELL N. CONDUCTABLES FOUND Approved SENDR from M.H.

Power

TOTAL TIME INCLUDING TRAVEL: 3HRS

This locate is being performed on private property or as a design locate in the public ROW at the customer's request. APS has no knowledge of, and customer has not furnished as-installed plans, drawings or other information of other utilities in the area of the requested locate. It is not guaranteed or implied that APS will find all underground utilities within the area. APS shall not be liable for damage to any type of facility, utility, or any loss of injury caused by such damage.

PAYMENT TERMS: NET 30 DAYS

CUSTOMER SIGNATURE:

LOCATOR SIGNATURE: DATE: 1/4/23

CUSTOMER SHOULD CALL ONE-CALL FOR PUBLICLY OWNED UTILITIES 1-800-424-5555

CC CARD INFO: VISA/MC/AMEX: EXP DATE:

ZIP: 3 DIGIT CODE ON BACK: 4 DIGIT CODE ON FRONT(AMEX ONLY):

72501

LOCATE REQUEST
This is not an invoice

APPLIED PROFESSIONAL SERVICES INC.
Solutions That Exceed Expectations

43530 SE North Bend Way • North Bend, WA 98045
Phone: (425) 888-2590

DATE: 1-4-23

PURCHASE ORDER #: Task 6.5.2 Dep Boxes & Jackson Shell

CUSTOMER: AECOM

OFFICE PHONE:

BILLING ADDRESS: On File

EMAIL:

CITY: ST: ZIP:

CONTACT PERSON: Mark

PHONE: 206 910 9099

BILLING SUMMARY

SERVICES REQUESTED:

☐ **CONDUCTIBLES** ☐ **NON-CONDUCTIBLES** ☒ **GPR** ☐ **POLY WATER** ☐ **RM LOCATING™**

LOCATOR'S NAME: Andrew R

LOCATE ADDRESS: 13002 NE 177th Pl Woodinville WA

DESCRIPTION OF LOCATE: designated Storm line & Sewer near both work areas

TOTAL TIME INCLUDING TRAVEL: 1-5hrs

This locate is being performed on private property or as a design locate in the public ROW at the customer's request. APS has no knowledge of, and customer has not furnished as-installed plans, drawings or other information of other utilities in the area of the requested locate. It is not guaranteed or implied that APS will find all underground utilities within the area. APS shall not be liable for damage to any type of facility, utility, or any loss of injury caused by such damage.

PAYMENT TERMS: NET 30 DAYS

CUSTOMER SIGNATURE: Mark Stallcup

LOCATOR SIGNATURE: DATE: 1-4-23

CUSTOMER SHOULD CALL ONE-CALL FOR PUBLICLY OWNED UTILITIES 1-800-424-5555

CC CARD INFO: VISA/MC/AMEX: EXP DATE:

ZIP: 3 DIGIT CODE ON BACK: 4 DIGIT CODE ON FRONT(AMEX ONLY):

Washington One Call

Ticket number	23009983	**Type/header**	2 FULL BUSINESS DAYS CALL
Original call date	01/10/23 10:58 am		
Work to begin date	01/17/23 12:00 am		
Expiration date	02/24/23 11:00 am		

Excavator information

Company name	AECOM	**Type of excavator**	
Contact name	MARKUS WALBAUM	**Phone**	206-438-2197
Alt. contact	MARKUS - CALL 1ST	**Phone**	206-910-9099
Address	1111 3RD AVENUE SEATTLE, WA 98101	**Fax phone**	
Email address	markus.walbaum@aecom.com		

Excavation information

Type of work	ENVIREMENTAL DRIILING AND PAVEMENT COREING
Directional drilling	
Type(s) of excavation equipment	
Work being done for	CITY OF WOODENVILLE

Location information

State	WA	**County**	KING
Place	WOODINVILLE		
Address/Street	131ST AVE NE		
Intersecting street	NE 175TH ST		
Location of work	SITE STARTS AT THE ABV INTER MARK THE ENTIRE ST OF 131ST AVE NE INCLUDING 20FT BEHIND THE CURB LINES BOTH SIDES OF THE ST FROM THE ABV INTER UP TO NE 177TH ST AT THE ABV SITE		
Remarks	AREA MARKED IN WHITE PAINT.		

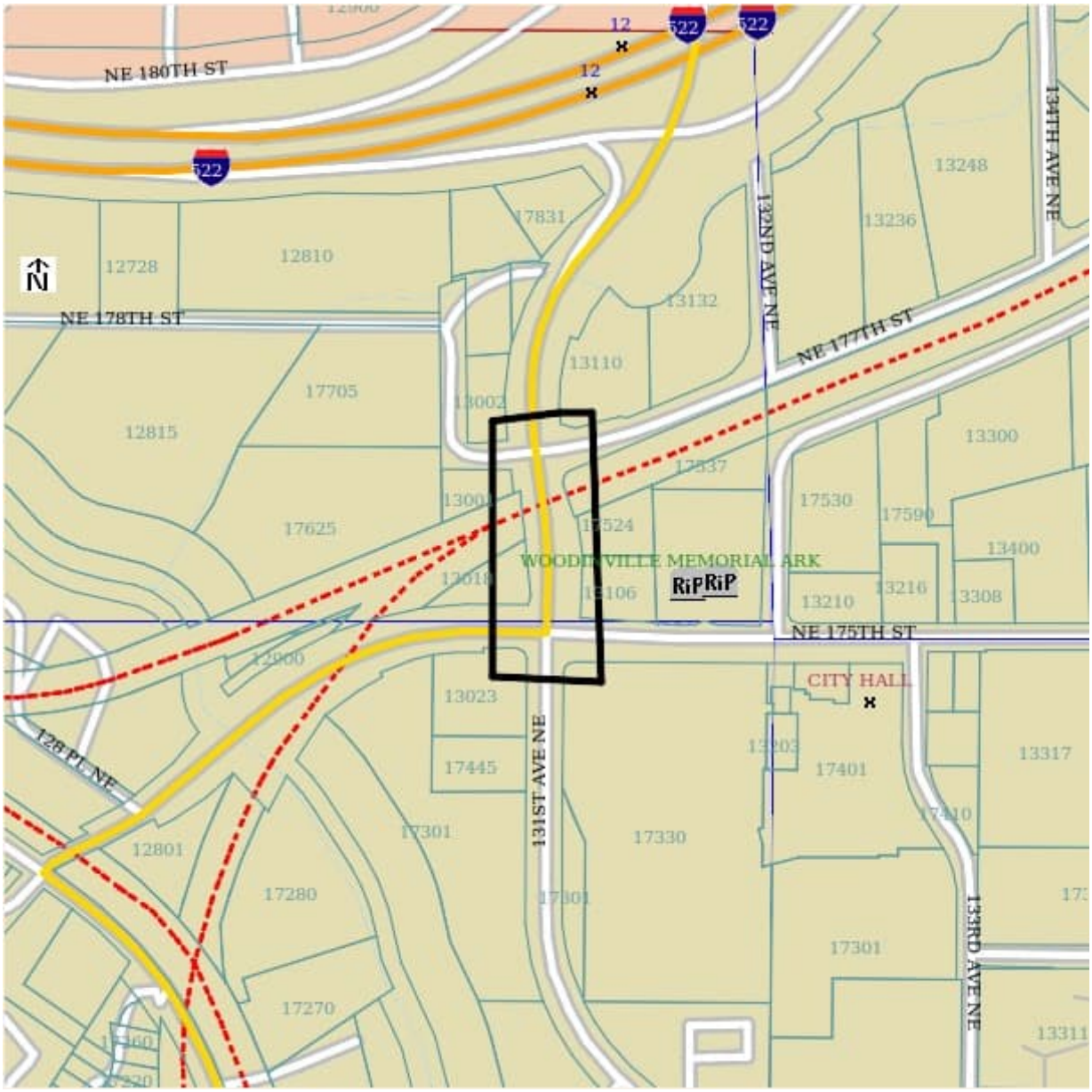
NW Lat 47.7558639 **Lon** -122.1658466 **SE Lat** 47.7542019 **Lon** -122.1648492

Members notified

District	Company name	Marking concerns	Customer service	Repair	Status
CCWAU01	COMCAST CABLE	800-778-9140	800-934-6489	855-537-6296	Not yet responded
GTE01	ZIPLY FIBER	800-778-9140	866-947-5995	866-947-5995	Clear, No Utility Owned Facility in Excavation Area
KCMTRO01	KING CNTY METRO SEWER	206-263-5722	206-263-3700	206-263-3840	Does not report
MCI01	MCI	800-289-3427	800-289-3427	800-289-3427	Does not report
NSD01	NORTHSHORE SCHOOL DISTRICT	360-829-5166	425-408-7754	425-478-6347	Duplicate Ticket (Please see contractor ticket

					WA23010599 for notes and charges.)
PUGE03	PUGET SOUND ENERGY ELECTRIC	888-728-9343	888-225-5773	888-225-5773	Marked, Complete
PUGG03	PUGET SOUND ENERGY GAS	888-728-9343	888-225-5773	888-225-5773	Marked, Complete
STARCM01	ZAYO CANADA/ALLSTREAM	800-961-6500	443-403-2023	866-236-2824	Ongoing Job
WDOTNW05	WSDOT MTCE AREA 5	425-739-3700	425-739-3700	206-440-4490	Does not report
WODH2001	WOODINVILLE WATER DISTRICT	425-487-4100	425-487-4100	425-487-4100	Does not report
WOODIN01	CITY OF WOODINVILLE	800-778-9140	425-877-2274	206-255-5088	Clear, No Utility Owned Facility in Excavation Area
WSDOT12	WSDOT - SIGNAL BRANCH OFFICE	206-442-2110	206-442-2110	206-442-2110	Does not report

Map



Appendix B – Photographic Log

AECOM

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Environmental Investigation SR 202 Widening and Trestle Replacement	NE 175th Street to NE 177th Street Woodinville, Washington	60683538

Photo No.	Date:
1	2/8/23

Direction Photo Taken:

North

Description:

Completion of Boring BT-1 with Hollow Stem Auger Rig. Pep Boys service center in background.

Photo No.	Date:
2	2/8/23

Direction Photo Taken:

Northwest

Description:

Completed boring BT-1, which has been patched to match surface conditions

AECOM

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Environmental Investigation SR 202 Widening and Trestle Replacement	NE 175th Street to NE 177th Street Woodinville, Washington	60683538

Photo No.	Date:
3	2/8/23

Direction Photo Taken:

West

Description:

Completed well with 8-inch flush mount monument at boring BT-2, Pet Boys service center in background.

Photo No.	Date:
4	2/8/23

Direction Photo Taken:

Northwest

Description:

Completed boring BT-3, which has been patched to match surface conditions.

Appendix C – Boring Logs

PROJECT NAME: SR-202 Widening and Trestle Replacement	**DATES DRILLED:** 1/4/2023 - 2/9/2023	**TEST HOLE LEGEND**
PROJECT NO: 60683538	**NUMBER OF HOLES DRILLED:** 9	PAGE 1 OF 1
LOCATION: Woodinville WA	**TOTAL LENGTH DRILLED (ft):** 248.6	

DEPTH (ft)	SOIL SAMPLES: SAMPLE SYMBOL	SOIL SAMPLES: SAMPLE TYPE AND NUMBER	SOIL SAMPLES: BLOW COUNTS (N VALUE)	SOIL SAMPLES: RECOVERY (%)	STRATIGRAPHY	MATERIAL DESCRIPTION AND REMARKS	LITHOLOGY	ROCK CORE: BOX NUMBER	ROCK CORE: RUN NUMBER	ROCK CORE: RECOVERY (%)	ROCK CORE: RQD (%)	ROCK CORE: FRACTURES PER FOOT
1	2	3	4	5	6	7	8	9	10	11	12	13

COLUMN DESCRIPTIONS

1. **Depth:** Depth in feet below the ground surface.
2. **Sample Symbol:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.
3. **Sample Type and Number:** Indicates the type of sampler used and identification number.
4. **Blow Counts:** Number of blows required to advance sampler each 6-inch interval, or length noted, using a 140-lb hammer falling 30-inches. N-value reported for SPT samples.
5. **Recovery:** Percentage of driven soil sample length actually recovered.
6. **Stratigraphy:** Abbreviation for soil depositional environment of rock formation name.
7. **Material Description and Remarks:** Description of material encountered; may include density/consistency, moisture, color, material type, grain size and other remarks.
8. **Lithology:** Graphic depiction of soil material or rock type encountered; typical symbols are explained below..
9. **Box Number:** Indicates core sample box number.
10. **Run Number:** Indicates core sample run number.
11. **Recovery:** Percentage of core run length actually recovered.
12. **RQD:** Rock Quality Designation; Percentage of intact rock core (pieces of sound core greater than 100 millimeters or about 4 inches long) in each core run.
13. **Fractures per Foot:** Approximate number of rock core fractures per foot.

TYPICAL SOIL MATERIAL GRAPHIC SYMBOLS

- Asphalt
- Concrete
- Poorly-graded Gravel
- Silt
- Poorly-graded Sand
- Low Plasticity Clay
- Fill
- Poorly-graded Gravel with silt
- Silty Sand
- Poorly-graded Sand

Relative Density or Consistency

Coarse-Grained Soils		Fine-Grained Soils	
Relative Density	N, SPT Blows / ft	Relative Consistency	N, SPT Blows / ft
Very loose sand	0 - 4	Very soft	< 2
Loose	4 - 10	Soft	2 - 4
Medium dense	10 - 30	Medium stiff	4 - 8
Dense	30 - 50	Stiff	8 - 15
Very dense	Over 50	Very stiff	15 - 30
		Hard	Over 30

TYPICAL SAMPLER GRAPHIC SYMBOLS

- GRAB: Grab Sample
- MC: Modified California Sampler
- SS: Split Spoon

WATER LEVEL LEGEND

- Water Level at Time of Drilling, or as Shown
- Water Level at End of Drilling, or as Shown
- Water Level After 24 Hours, or as Shown

Recovered Sample Length

Driven Sample Length

ABBREVIATIONS

ATD: At Time of Drilling
NR: No Recovery
NA: Not Applicable
bgs: Below Ground Surface

MINOR SOIL TYPE(s)

"trace" When the soil type's percentage is estimated, using visual/manual procedures, to be between 1 and 15 percent of the total sample.

"with" When the soil type's percentage is estimated, using visual/manual procedures, to be greater than 15 percent and less than 30 percent of the total sample.

"y" When the soil type's percentage is estimated, using visual/manual procedures, to be greater than 30 percent of the total sample.

Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

PROJECT NAME: SR-202 Widening and Trestle Replacement	**DATES DRILLED:** 2/6/23 - 2/9/23	**LOG NO: BT-1**
PROJECT NO: 60683538	**SURFACE ELEVATION (ft):** 35.5	PAGE 1 OF 1 AECOM
LOCATION: Woodinville WA	**TOTAL DEPTH (ft):** 16.5	

DRILLING COMPANY: Holt Services	**INCLINATION (deg):** N/A	**LOGGED BY:** Michael Black
DRILLER: Kevin B.	**AZIMUTH (deg):** N/A	**CHECKED BY:** M. Walbaum
DRILL EQUIP: Mobile B-60 Truck Rig (Rig #215)	**CASING DEPTH (ft bgs):** N/A	**HOLE LOCATION:** SW side of Shell Parking Lot
DRILL METHOD: Hollow Stem Auger / SPT	**GROUNDWATER (ft bgs):** 10.7	**LATITUDE (deg) or NORTHING (ft):** Not Surveyed
BIT SIZE/TYPE: 8", Bullet/Spade	**COMPLETION (ft):** Bentonite, Quickrete	**LONGITUDE (deg) or EASTING (ft):** Not Surveyed

ELEVATION (ft)	DEPTH (ft)	SAMPLE SYMBOL	SAMPLE TYPE AND NUMBER	BLOW COUNTS (N VALUE)	RECOVERY (%)	MATERIAL DESCRIPTION AND REMARKS	STRATIGRAPHY	Natural Moisture Content (%)	Total Unit Weight (pcf)	Liquid Limit	Plasticity Index	GRAVEL (%)	SAND (%)	FINES - Passing No. 200 Sieve (%)	CLAY - Passing 2 microns (%)
35	0					ASPHALT, Pavement 4"									
						Moist, light tan to dark gray, fine to medium grained, silty SAND, with GRAVEL, little fine gravel, (SM), (FILL)									
						Moist, brown, medium grained, SAND, few coarse sand, (SP)									
			GRAB BT-1-HA2.5		100	BT-1-HA2.5: PID Reading 0.0ppm									
	5					Top 5.25-feet airknife/vac ex/hand-augered on 2/6/2023. Backilled with import sand and finished with cold-patch. Stop at 11:05 PM. Drilling resumed 2/8/23 at 11:20 PM.									
30			SS BT-1-5.5	3-4-4 (8)	100	Loose, moist, tan to gray, fine to medium grained, SAND, (SP) BT-1-5.5: PID Reading 0.2ppm									
			SS BT-1-8	3-6-7 (13)	83	Medium dense, moist, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-1-8: PID Reading 0.4ppm									
	10														
25			SS BT-1-10	3-5-8 (13)	67	∇ Medium dense, wet, tan to gray, fine to medium grained, SAND, (SP) BT-1-10: PID Reading 0.5ppm									
			SS BT-1-12 BT-1-GW	5-6-7 (13)	78	Medium dense, wet, tan to gray, fine to medium grained, SAND, trace coarse gravel, (SP) BT-1-12: PID Reading 0.4ppm BT-1-GW: Groundwater sampled from temporary 2"-dia. monitoring well screened 5-15 ft bgs									
	15														
20			SS BT-1-15	14-24-29 (53)	89	Very dense, wet, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-1-15: PID Reading 0.5ppm									

Finish Drilling 11:51 PM on 2/8/23. Groundwater measured at 10.7 ft bgs at 12:22 AM on 2/9/23. Backfilled with bentonite chips and patched with Quikrete FastSet DOT Mix (dyed black).

Bottom of hole at 16.5 feet.

PROJECT NAME: SR-202 Widening and Trestle Replacement	**DATES DRILLED:** 2/6/23 - 2/8/23	**LOG NO: BT-2 (MW)**
PROJECT NO: 60683538	**SURFACE ELEVATION (ft):** 35.0	PAGE 1 OF 2 AECOM
LOCATION: Woodinville WA	**TOTAL DEPTH (ft):** 21.1	

DRILLING COMPANY: Holt Services	**INCLINATION (deg):** N/A	**LOGGED BY:** Michael Black
DRILLER: Kevin B.	**AZIMUTH (deg):** N/A	**CHECKED BY:** M. Walbaum
DRILL EQUIP: Mobile B-60 Truck Rig (Rig #215)	**CASING DEPTH (ft bgs):** N/A	**HOLE LOCATION:** West side of Shell Parking Lot
DRILL METHOD: Hollow Stem Auger / SPT	**GROUNDWATER (ft bgs):** 10.5	**LATITUDE (deg) or NORTHING (ft):** Not Surveyed
BIT SIZE/TYPE: 8", Bullet/Spade	**COMPLETION (ft):** Open Standpipe Piezometer	**LONGITUDE (deg) or EASTING (ft):** Not Surveyed

ELEVATION (ft)	DEPTH (ft)	SAMPLE SYMBOL	SAMPLE TYPE AND NUMBER	BLOW COUNTS (N VALUE)	RECOVERY (%)	MATERIAL DESCRIPTION AND REMARKS	STRATIGRAPHY	Natural Moisture Content (%)	Total Unit Weight (pcf)	Liquid Limit	Plasticity Index	GRAVEL (%)	SAND (%)	FINES - Passing No. 200 Sieve (%)	CLAY - Passing 2 microns (%)
35	0					ASPHALT, Pavement 2"									
						Tan to gray, fine to medium grained, SAND, (SP), (FILL)									
						Light brown, fine grained, SAND, (SP)									
			GRAB BT-2-HA2.5		100	Light brown, fine grained, SAND, (SP) BT-2-HA2.5: PID Reading 0.0ppm									
30	5					Top 5.25-feet airknife/vac ex/hand-augered on 2/6/2023. Backilled with import sand and finished with cold-patch. Stop at 10:20 PM. Drilling resumed 2/8/23 at 12:22 AM.									
			SS BT-2-5.5	5-7-8 (15)	33	Medium dense, moist, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-2-5.5: PID Reading 0.1ppm									
			SS BT-2-7	5-7-9 (16)	44	Medium dense, moist, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-2-7: PID Reading 0.3ppm									
25	10														
			SS BT-2-10	5-7-8 (15)	44	∇ Medium dense, wet, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-2-10: PID Reading 0.3ppm Groundwater 10'6" bgs at 10:35 PM on 2/8/23									
			SS BT-2-12.5	8-23-50/3"/3"	100	Very dense, wet, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-2-12.5: PID Reading 0.3ppm									
20	15														
			SS BT-2-15	16-20-50/4"/4"	100	Very dense, wet, tan to gray, fine to medium grained, SAND, trace fine gravel, (SP) BT-2-15: PID Reading 0.3ppm									
			SS BT-2-17.5	18-38-50/2"/2"	100	Very dense, wet, tan to gray, fine to medium grained, SAND, few fine gravel, (SP) BT-2-17.5: PID Reading 0.4ppm									
15	20														

(Continued Next Page)

PROJECT NAME: SR-202 Widening and Trestle Replacement	**DATES DRILLED:** 2/6/23 - 2/8/23	**LOG NO: BT-2 (MW)**
PROJECT NO: 60683538	**SURFACE ELEVATION (ft):** 35.0	PAGE 2 OF 2 AECOM
LOCATION: Woodinville WA	**TOTAL DEPTH (ft):** 21.1	

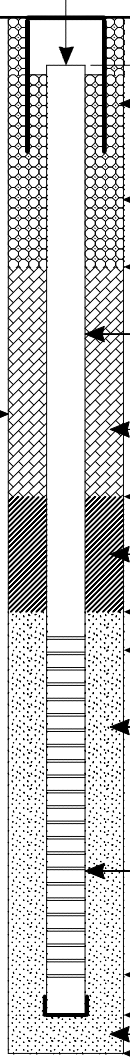
ELEVATION (ft)	DEPTH (ft)	SOIL SAMPLES: SAMPLE SYMBOL	SAMPLE TYPE AND NUMBER	BLOW COUNTS (N VALUE)	RECOVERY (%)	MATERIAL DESCRIPTION AND REMARKS	STRATIGRAPHY	LABORATORY TESTING RESULTS: Natural Moisture Content (%)	Total Unit Weight (pcf)	Liquid Limit	Plasticity Index	GRAVEL (%)	SAND (%)	FINES - Passing No. 200 Sieve (%)	CLAY - Passing 2 microns (%)
15	20														
		X	SS BT-2-20	15-37-50/1"	98	Very dense, wet, tan to gray, fine to medium grained, SAND, trace fine to coarse gravel, (SP) BT-2-20: PID Reading 0.3ppm									

Finish Drilling 2/8/23 at 1:21 AM. Installed 2" PVC monitoring well to 20' bgs (see well installation log). Well developed on 2/8/2023 at 10:35 PM . Screened interval 19.83' to 9.83'. Filter pack 20' - 9'. 3/8" Bentonite chips seal/backfill 9' to 2'. 10" diameter steel flush-mount locking monument 2' - 0'. Top of PVC riser 0.32' below the monument (two 9/16" bolts for locking cover)

Bottom of hole at 21.1 feet.

Project: SR 202 Widening and Trestle Replacement **Project Location:** Woodinville, WA 98072 **Project Number:** 60683538	**MONITORING WELL CONSTRUCTION LOG FOR WELL** BT-2 (MW)

Well Location In City ROW, W side of Shell Parking Lot	Date(s) Installed 02/08/23	Time 2:00 am
Installed By Holt Services (Kevin B.)	Observed By M. Black	Total Depth 20 ft
Method of Installation HSA		
Screened Interval 19.83 - 9.83 ft bgs	Completion Zone 20 - 9 ft	
Remarks WA Dept. of Ecology Unique Well BPW 357#		



Elevation of Top of Riser Pipe: 34.7 **ft MSL**

Depth of Riser Below Ground Surface: 0.32 **ft**

Ground Elevation: 35.0 **ft MSL**

ID/Type of Surface Casing: 10" steel, 24" long

Type of Surface Seal: Quikrete FastSet DOT Mix

Depth of Surface Seal: 2 **ft**

ID/Type of Riser Pipe: 2" SCH 40 PVC

Boring Diameter: 8 **inches**

Type of Backfill: 3/8" Sodium Bentonite Chips

Depth of Seal: 7 **ft**

Type of Seal: 3/8" Sodium Bentonite Chips

Depth of Top of Filter Pack: 9 **ft**

Depth of Top of Screen: 9.83 **ft**

Type of Filter Pack: 12-20 Sand

ID/Type of Screen: 2" SCH 40 PVC
Screen Slot Size: 0.010 "

Depth of Bottom of Screen: 19.83 **ft**

Depth of Bottom of Plugged Blank Casing: 20 **ft**

Type/Depth of Backfill/Seal Below Well:

Total Depth of Boring: 20 **ft**

Notes:
1) Groundwater surface measured at 10.5 ft bgs on 02/08/23 at 10:35 pm, just prior to well development
2) Well developed on 02/08/23 for 30 minutes using overpumping and surging

NOTE: DIAGRAM IS NOT TO SCALE

AECOM

PROJECT NAME: SR-202 Widening and Trestle Replacement	**DATES DRILLED:** 2/6/23 - 2/7/23	**LOG NO: BT-3**
PROJECT NO: 60683538	**SURFACE ELEVATION (ft):** 32.4	PAGE 1 OF 1 AECOM
LOCATION: Woodinville WA	**TOTAL DEPTH (ft):** 16.5	

DRILLING COMPANY: Holt Services	**INCLINATION (deg):** N/A	**LOGGED BY:** Michael Black
DRILLER: Kevin B.	**AZIMUTH (deg):** N/A	**CHECKED BY:** M. Walbaum
DRILL EQUIP: Mobile B-60 Truck Rig (Rig #215)	**CASING DEPTH (ft bgs):** N/A	**HOLE LOCATION:** NE corner Pep Boys Parking Lot
DRILL METHOD: Hollow Stem Auger / SPT	**GROUNDWATER (ft bgs):** 7	**LATITUDE (deg) or NORTHING (ft):** Not Surveyed
BIT SIZE/TYPE: 8", Bullet/Spade	**COMPLETION (ft):** Bentonite, Quickrete	**LONGITUDE (deg) or EASTING (ft):** Not Surveyed

ELEVATION (ft)	DEPTH (ft)	SAMPLE SYMBOL	SAMPLE TYPE AND NUMBER	BLOW COUNTS (N VALUE)	RECOVERY (%)	MATERIAL DESCRIPTION AND REMARKS	STRATIGRAPHY	Natural Moisture Content (%)	Total Unit Weight (pcf)	Liquid Limit	Plasticity Index	GRAVEL (%)	SAND (%)	FINES - Passing No. 200 Sieve (%)	CLAY - Passing 2 microns (%)
	0					ASPHALT, Pavement 2"									
						Moist, tan to gray, fine to medium grained, SAND, (SP), (FILL)									
						ASPHALT, Pavement 1"									
						Moist, tan to gray, fine to medium grained, SAND, (SP)									
30															
			GRAB BT-3-HA2.5		100	Fine to medium grained, SAND, (SP) BT-3-HA-2.5: PID Reading 0.0ppm									
	5					Top 5.5-feet airknife/vac ex/hand-augered on 2/6/2023. Backfilled with import sand and finished with cold-patch. Stop at 9:28 PM. Drilling resumed 2/7/23 at 9:12 PM.									
			SS BT-3-5.5	5-3-5 (8)	61	Loose, moist, tan to gray, fine to medium grained, SAND, (SP) BT-3-5.5: PID Reading 0.1ppm									
25			SS BT-3-7	5-7-10 (17)	78	Medium dense, wet, tan to gray, fine to medium grained, SAND, (SP) BT-3-7: PID Reading 0.1ppm Groundwater 7.0' bgs at 10:00 PM									
	10														
			SS BT-3-10 BT-3-GW	5-10-27 (37)	83	Dense, wet, tan to gray, fine to medium grained, SAND, (SP) BT-3-10: PID Reading 0.3ppm BT-3-GW: Groundwater sampled from temporary 2"-dia. monitoring well screened 5-15 ft bgs									
20															
			SS BT-3-12.5	16-29-50/4"/4"	100	Very dense, wet, tan to gray, fine to medium grained, SAND, (SP) BT-3-12.5: PID Reading 0.2ppm									
	15														
			SS BT-3-15	17-17-23 (40)	100	Dense, wet, tan to gray, fine to medium grained, SAND, (SP) BT-3-15: PID Reading 0.2ppm									

Finish Drilling on 2/7/23 at 9:50 PM. Backfilled with bentonite chips and patched with Quikrete FastSet DOT Mix (dyed black).

Bottom of hole at 16.5 feet.

Appendix D – Laboratory Analytical Reports

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

AECOM
Markus Walbaum
1111 3rd Avenue Suite 1600
Seattle, WA 98101

RE: Woodinville SR202 Trestle Widening
Work Order Number: 2302195

February 20, 2023

Attention Markus Walbaum:

Fremont Analytical, Inc. received 11 sample(s) on 2/9/2023 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Gasoline by NWTPH-Gx
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

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: *03/07/2023*

CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening
Work Order: 2302195

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2302195-001	BT-1-8	02/08/2023 11:32 PM	02/09/2023 4:44 PM
2302195-002	BT-1-10	02/08/2023 11:39 PM	02/09/2023 4:44 PM
2302195-003	BT-1-12	02/08/2023 11:46 PM	02/09/2023 4:44 PM
2302195-004	BT-1-GW	02/08/2023 12:30 AM	02/09/2023 4:44 PM
2302195-005	BT-2-5.5	02/08/2023 12:32 AM	02/09/2023 4:44 PM
2302195-006	BT-2-7	02/08/2023 12:36 AM	02/09/2023 4:44 PM
2302195-007	BT-2-10	02/08/2023 12:42 AM	02/09/2023 4:44 PM
2302195-008	BT-3-5.5	02/07/2023 9:22 PM	02/09/2023 4:44 PM
2302195-009	BT-3-7	02/07/2023 9:27 PM	02/09/2023 4:44 PM
2302195-010	BT-3-10	02/07/2023 9:32 PM	02/09/2023 4:44 PM
2302195-011	BT-3-GW	02/07/2023 11:00 PM	02/09/2023 4:44 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2302195**

Date: **2/20/2023**

CLIENT: AECOM

Project: Woodinville SR202 Trestle Widening

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD 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: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-001
Matrix: Soil
Client Sample ID: **BT-1-8**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	57.3		mg/Kg-dry	1	2/14/2023 9:01:19 AM
Heavy Oil	ND	115		mg/Kg-dry	1	2/14/2023 9:01:19 AM
Total Petroleum Hydrocarbons	ND	172		mg/Kg-dry	1	2/14/2023 9:01:19 AM
Surr: 2-Fluorobiphenyl	95.3	50 - 150		%Rec	1	2/14/2023 9:01:19 AM
Surr: o-Terphenyl	99.0	50 - 150		%Rec	1	2/14/2023 9:01:19 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	4.64		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Surr: Toluene-d8	92.1	65 - 135		%Rec	1	2/14/2023 11:20:24 PM
Surr: 4-Bromofluorobenzene	88.2	65 - 135		%Rec	1	2/14/2023 11:20:24 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0139	Q	mg/Kg-dry	1	2/14/2023 11:20:24 PM
Chloromethane	ND	0.0464		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Vinyl chloride	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Bromomethane	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Trichlorofluoromethane (CFC-11)	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Chloroethane	ND	0.0695		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1-Dichloroethene	ND	0.0927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Acetone	ND	0.232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Methylene chloride	ND	0.0324		mg/Kg-dry	1	2/14/2023 11:20:24 PM
trans-1,2-Dichloroethene	ND	0.00927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Methyl tert-butyl ether (MTBE)	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1-Dichloroethane	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
cis-1,2-Dichloroethene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
(MEK) 2-Butanone	ND	0.278		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Chloroform	ND	0.0162		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1,1-Trichloroethane (TCA)	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1-Dichloropropene	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Carbon tetrachloride	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2-Dichloroethane (EDC)	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Benzene	ND	0.0162		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Trichloroethene (TCE)	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2-Dichloropropane	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Bromodichloromethane	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Dibromomethane	ND	0.0116		mg/Kg-dry	1	2/14/2023 11:20:24 PM
cis-1,3-Dichloropropene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-001
Matrix: Soil
Client Sample ID: **BT-1-8**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0278		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Trans-1,3-Dichloropropylene	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0556		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1,2-Trichloroethane	ND	0.0116		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,3-Dichloropropane	ND	0.00927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Tetrachloroethene (PCE)	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Dibromochloromethane	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2-Dibromoethane (EDB)	ND	0.00927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
2-Hexanone (MBK)	ND	0.0579		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Chlorobenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1,1,2-Tetrachloroethane	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Ethylbenzene	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
m,p-Xylene	ND	0.0464		mg/Kg-dry	1	2/14/2023 11:20:24 PM
o-Xylene	ND	0.0232		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Styrene	ND	0.00927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Isopropylbenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Bromoform	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,1,2,2-Tetrachloroethane	ND	0.185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
n-Propylbenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Bromobenzene	ND	0.0116		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,3,5-Trimethylbenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
2-Chlorotoluene	ND	0.0153		mg/Kg-dry	1	2/14/2023 11:20:24 PM
4-Chlorotoluene	ND	0.0153		mg/Kg-dry	1	2/14/2023 11:20:24 PM
tert-Butylbenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2,3-Trichloropropane	ND	0.0278		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2,4-Trichlorobenzene	ND	0.0556		mg/Kg-dry	1	2/14/2023 11:20:24 PM
sec-Butylbenzene	ND	0.139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
4-Isopropyltoluene	ND	0.185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,3-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,4-Dichlorobenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
n-Butylbenzene	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2-Dibromo-3-chloropropane	ND	0.0278		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2,4-Trimethylbenzene	ND	0.0139		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Hexachloro-1,3-butadiene	ND	0.0371		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Naphthalene	ND	0.0927		mg/Kg-dry	1	2/14/2023 11:20:24 PM
1,2,3-Trichlorobenzene	ND	0.0556		mg/Kg-dry	1	2/14/2023 11:20:24 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	2/14/2023 11:20:24 PM
Surr: Toluene-d8	110	80 - 120		%Rec	1	2/14/2023 11:20:24 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-001
Matrix: Soil
Client Sample ID: **BT-1-8**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	97.7	80 - 120		%Rec	1	2/14/2023 11:20:24 PM

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased

Sample Moisture (Percent Moisture)				Batch ID: R81805		Analyst: MP
Percent Moisture	18.2	0.500		wt%	1	2/13/2023 8:28:57 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:46:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-003
Matrix: Soil
Client Sample ID: **BT-1-12**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	60.8		mg/Kg-dry	1	2/14/2023 9:34:04 AM
Heavy Oil	ND	122		mg/Kg-dry	1	2/14/2023 9:34:04 AM
Total Petroleum Hydrocarbons	ND	182		mg/Kg-dry	1	2/14/2023 9:34:04 AM
Surr: 2-Fluorobiphenyl	87.7	50 - 150		%Rec	1	2/14/2023 9:34:04 AM
Surr: o-Terphenyl	90.7	50 - 150		%Rec	1	2/14/2023 9:34:04 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	4.49		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Surr: Toluene-d8	92.2	65 - 135		%Rec	1	2/14/2023 5:38:42 PM
Surr: 4-Bromofluorobenzene	89.3	65 - 135		%Rec	1	2/14/2023 5:38:42 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Chloromethane	ND	0.0449		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Vinyl chloride	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Bromomethane	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Trichlorofluoromethane (CFC-11)	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Chloroethane	ND	0.0673		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1-Dichloroethene	ND	0.0897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Acetone	ND	0.224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Methylene chloride	ND	0.0314		mg/Kg-dry	1	2/14/2023 5:38:42 PM
trans-1,2-Dichloroethene	ND	0.00897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Methyl tert-butyl ether (MTBE)	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
cis-1,2-Dichloroethene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
(MEK) 2-Butanone	ND	0.269		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Chloroform	ND	0.0157		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1,1-Trichloroethane (TCA)	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1-Dichloropropene	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Carbon tetrachloride	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2-Dichloroethane (EDC)	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Benzene	ND	0.0157		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Trichloroethene (TCE)	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Bromodichloromethane	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Dibromomethane	ND	0.0112		mg/Kg-dry	1	2/14/2023 5:38:42 PM
cis-1,3-Dichloropropene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:46:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-003
Matrix: Soil
Client Sample ID: **BT-1-12**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0269		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Trans-1,3-Dichloropropylene	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0538		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1,2-Trichloroethane	ND	0.0112		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,3-Dichloropropane	ND	0.00897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Tetrachloroethene (PCE)	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Dibromochloromethane	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2-Dibromoethane (EDB)	ND	0.00897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
2-Hexanone (MBK)	ND	0.0561		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Chlorobenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1,1,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Ethylbenzene	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
m,p-Xylene	ND	0.0449		mg/Kg-dry	1	2/14/2023 5:38:42 PM
o-Xylene	ND	0.0224		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Styrene	ND	0.00897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Isopropylbenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Bromoform	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,1,2,2-Tetrachloroethane	ND	0.179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
n-Propylbenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Bromobenzene	ND	0.0112		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,3,5-Trimethylbenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
2-Chlorotoluene	ND	0.0148		mg/Kg-dry	1	2/14/2023 5:38:42 PM
4-Chlorotoluene	ND	0.0148		mg/Kg-dry	1	2/14/2023 5:38:42 PM
tert-Butylbenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2,3-Trichloropropane	ND	0.0269		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2,4-Trichlorobenzene	ND	0.0538		mg/Kg-dry	1	2/14/2023 5:38:42 PM
sec-Butylbenzene	ND	0.135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
4-Isopropyltoluene	ND	0.179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,3-Dichlorobenzene	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,4-Dichlorobenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
n-Butylbenzene	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2-Dichlorobenzene	ND	0.0179		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2-Dibromo-3-chloropropane	ND	0.0269		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2,4-Trimethylbenzene	ND	0.0135		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Hexachloro-1,3-butadiene	ND	0.0359		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Naphthalene	ND	0.0897		mg/Kg-dry	1	2/14/2023 5:38:42 PM
1,2,3-Trichlorobenzene	ND	0.0538		mg/Kg-dry	1	2/14/2023 5:38:42 PM
Surr: Dibromofluoromethane	98.7	80 - 120		%Rec	1	2/14/2023 5:38:42 PM
Surr: Toluene-d8	108	80 - 120		%Rec	1	2/14/2023 5:38:42 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 11:46:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-003
Matrix: Soil
Client Sample ID: **BT-1-12**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	98.9	80 - 120		%Rec	1	2/14/2023 5:38:42 PM
Sample Moisture (Percent Moisture)				Batch ID: R81805		Analyst: MP
Percent Moisture	21.0	0.500		wt%	1	2/13/2023 8:28:57 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:30:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-004
Matrix: Groundwater
Client Sample ID: **BT-1-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39419		Analyst: KJ
Diesel Range Organics	147	95.3		µg/L	1	2/14/2023 12:53:31 PM
Heavy Oil	ND	95.3		µg/L	1	2/14/2023 12:53:31 PM
Total Petroleum Hydrocarbons	ND	191		µg/L	1	2/14/2023 12:53:31 PM
Surr: 2-Fluorobiphenyl	89.6	50 - 150		%Rec	1	2/14/2023 12:53:31 PM
Surr: o-Terphenyl	96.0	50 - 150		%Rec	1	2/14/2023 12:53:31 PM

NOTES:
Chromatographic pattern indicates an unresolved complex mixture, which may be weathered and/or organic material

Gasoline by NWTPH-Gx				Batch ID: 39414		Analyst: SH
Gasoline Range Organics	ND	50.0		µg/L	1	2/13/2023 8:18:35 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	2/13/2023 8:18:35 PM
Surr: 4-Bromofluorobenzene	99.8	65 - 135		%Rec	1	2/13/2023 8:18:35 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39414		Analyst: SH
Dichlorodifluoromethane (CFC-12)	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Chloromethane	ND	0.750		µg/L	1	2/13/2023 8:18:35 PM
Vinyl chloride	ND	0.200		µg/L	1	2/13/2023 8:18:35 PM
Bromomethane	ND	3.00		µg/L	1	2/13/2023 8:18:35 PM
Trichlorofluoromethane (CFC-11)	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
Chloroethane	ND	1.00		µg/L	1	2/13/2023 8:18:35 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Acetone	ND	5.00		µg/L	1	2/13/2023 8:18:35 PM
Methylene chloride	ND	0.750		µg/L	1	2/13/2023 8:18:35 PM
trans-1,2-Dichloroethene	ND	0.350		µg/L	1	2/13/2023 8:18:35 PM
Methyl tert-butyl ether (MTBE)	ND	0.350		µg/L	1	2/13/2023 8:18:35 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	2/13/2023 8:18:35 PM
Chloroform	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,1,1-Trichloroethane (TCA)	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Carbon tetrachloride	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
1,2-Dichloroethane (EDC)	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Benzene	ND	0.440		µg/L	1	2/13/2023 8:18:35 PM
Trichloroethene (TCE)	ND	0.400		µg/L	1	2/13/2023 8:18:35 PM
1,2-Dichloropropane	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
Bromodichloromethane	ND	0.250		µg/L	1	2/13/2023 8:18:35 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:30:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-004
Matrix: Groundwater
Client Sample ID: **BT-1-GW**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39414 Analyst: SH

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dibromomethane	ND	0.250		µg/L	1	2/13/2023 8:18:35 PM
cis-1,3-Dichloropropene	ND	0.350		µg/L	1	2/13/2023 8:18:35 PM
Toluene	ND	1.00		µg/L	1	2/13/2023 8:18:35 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.00		µg/L	1	2/13/2023 8:18:35 PM
1,1,2-Trichloroethane	ND	0.250		µg/L	1	2/13/2023 8:18:35 PM
1,3-Dichloropropane	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
Tetrachloroethene (PCE)	ND	0.350		µg/L	1	2/13/2023 8:18:35 PM
Dibromochloromethane	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
1,2-Dibromoethane (EDB)	ND	0.200		µg/L	1	2/13/2023 8:18:35 PM
2-Hexanone (MBK)	ND	1.25		µg/L	1	2/13/2023 8:18:35 PM
Chlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
Ethylbenzene	ND	0.400		µg/L	1	2/13/2023 8:18:35 PM
m,p-Xylene	ND	1.00		µg/L	1	2/13/2023 8:18:35 PM
o-Xylene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Styrene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Isopropylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Bromoform	ND	0.300		µg/L	1	2/13/2023 8:18:35 PM
1,1,2,2-Tetrachloroethane	ND	0.200		µg/L	1	2/13/2023 8:18:35 PM
n-Propylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Bromobenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,3,5-Trimethylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
2-Chlorotoluene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
4-Chlorotoluene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
tert-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	2/13/2023 8:18:35 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	2/13/2023 8:18:35 PM
sec-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
n-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	2/13/2023 8:18:35 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	2/13/2023 8:18:35 PM
Naphthalene	ND	1.25		µg/L	1	2/13/2023 8:18:35 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	2/13/2023 8:18:35 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:30:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-004
Matrix: Groundwater
Client Sample ID: **BT-1-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39414		Analyst: SH
Surr: Dibromofluoromethane	100	80 - 120		%Rec	1	2/13/2023 8:18:35 PM
Surr: Toluene-d8	102	80 - 120		%Rec	1	2/13/2023 8:18:35 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	80 - 120		%Rec	1	2/13/2023 8:18:35 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:36:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-006
Matrix: Soil
Client Sample ID: **BT-2-7**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	51.1		mg/Kg-dry	1	2/14/2023 9:55:50 AM
Heavy Oil	ND	102		mg/Kg-dry	1	2/14/2023 9:55:50 AM
Total Petroleum Hydrocarbons	ND	153		mg/Kg-dry	1	2/14/2023 9:55:50 AM
Surr: 2-Fluorobiphenyl	92.2	50 - 150		%Rec	1	2/14/2023 9:55:50 AM
Surr: o-Terphenyl	95.0	50 - 150		%Rec	1	2/14/2023 9:55:50 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	4.85		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Surr: Toluene-d8	93.0	65 - 135		%Rec	1	2/14/2023 6:09:40 PM
Surr: 4-Bromofluorobenzene	89.4	65 - 135		%Rec	1	2/14/2023 6:09:40 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Chloromethane	ND	0.0485		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Vinyl chloride	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Bromomethane	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Trichlorofluoromethane (CFC-11)	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Chloroethane	ND	0.0728		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1-Dichloroethene	ND	0.0971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Acetone	ND	0.243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Methylene chloride	ND	0.0340		mg/Kg-dry	1	2/14/2023 6:09:40 PM
trans-1,2-Dichloroethene	ND	0.00971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Methyl tert-butyl ether (MTBE)	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
cis-1,2-Dichloroethene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
(MEK) 2-Butanone	ND	0.291		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Chloroform	ND	0.0170		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1,1-Trichloroethane (TCA)	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1-Dichloropropene	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Carbon tetrachloride	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2-Dichloroethane (EDC)	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Benzene	ND	0.0170		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Trichloroethene (TCE)	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Dibromomethane	ND	0.0121		mg/Kg-dry	1	2/14/2023 6:09:40 PM
cis-1,3-Dichloropropene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:36:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-006
Matrix: Soil
Client Sample ID: **BT-2-7**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0291		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Trans-1,3-Dichloropropylene	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0582		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1,2-Trichloroethane	ND	0.0121		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,3-Dichloropropane	ND	0.00971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Tetrachloroethene (PCE)	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Dibromochloromethane	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2-Dibromoethane (EDB)	ND	0.00971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
2-Hexanone (MBK)	ND	0.0607		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Chlorobenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1,1,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Ethylbenzene	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
m,p-Xylene	ND	0.0485		mg/Kg-dry	1	2/14/2023 6:09:40 PM
o-Xylene	ND	0.0243		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Styrene	ND	0.00971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Isopropylbenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Bromoform	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,1,2,2-Tetrachloroethane	ND	0.194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
n-Propylbenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Bromobenzene	ND	0.0121		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,3,5-Trimethylbenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
2-Chlorotoluene	ND	0.0160		mg/Kg-dry	1	2/14/2023 6:09:40 PM
4-Chlorotoluene	ND	0.0160		mg/Kg-dry	1	2/14/2023 6:09:40 PM
tert-Butylbenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2,3-Trichloropropane	ND	0.0291		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2,4-Trichlorobenzene	ND	0.0582		mg/Kg-dry	1	2/14/2023 6:09:40 PM
sec-Butylbenzene	ND	0.146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
4-Isopropyltoluene	ND	0.194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,3-Dichlorobenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,4-Dichlorobenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
n-Butylbenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2-Dichlorobenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2-Dibromo-3-chloropropane	ND	0.0291		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2,4-Trimethylbenzene	ND	0.0146		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Hexachloro-1,3-butadiene	ND	0.0388		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Naphthalene	ND	0.0971		mg/Kg-dry	1	2/14/2023 6:09:40 PM
1,2,3-Trichlorobenzene	ND	0.0582		mg/Kg-dry	1	2/14/2023 6:09:40 PM
Surr: Dibromofluoromethane	98.7	80 - 120		%Rec	1	2/14/2023 6:09:40 PM
Surr: Toluene-d8	109	80 - 120		%Rec	1	2/14/2023 6:09:40 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:36:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-006
Matrix: Soil
Client Sample ID: **BT-2-7**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	98.9	80 - 120		%Rec	1	2/14/2023 6:09:40 PM
Sample Moisture (Percent Moisture)				Batch ID: R81805		Analyst: MP
Percent Moisture	6.17	0.500		wt%	1	2/13/2023 8:28:57 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:42:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-007
Matrix: Soil
Client Sample ID: **BT-2-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	59.2		mg/Kg-dry	1	2/14/2023 10:06:55 AM
Heavy Oil	ND	118		mg/Kg-dry	1	2/14/2023 10:06:55 AM
Total Petroleum Hydrocarbons	ND	178		mg/Kg-dry	1	2/14/2023 10:06:55 AM
Surr: 2-Fluorobiphenyl	111	50 - 150		%Rec	1	2/14/2023 10:06:55 AM
Surr: o-Terphenyl	114	50 - 150		%Rec	1	2/14/2023 10:06:55 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	5.00		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Surr: Toluene-d8	91.0	65 - 135		%Rec	1	2/14/2023 6:40:41 PM
Surr: 4-Bromofluorobenzene	87.7	65 - 135		%Rec	1	2/14/2023 6:40:41 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Chloromethane	ND	0.0500		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Vinyl chloride	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Bromomethane	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Trichlorofluoromethane (CFC-11)	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Chloroethane	ND	0.0749		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1-Dichloroethene	ND	0.0999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Acetone	ND	0.250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Methylene chloride	ND	0.0350		mg/Kg-dry	1	2/14/2023 6:40:41 PM
trans-1,2-Dichloroethene	ND	0.00999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Methyl tert-butyl ether (MTBE)	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1-Dichloroethane	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
cis-1,2-Dichloroethene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
(MEK) 2-Butanone	ND	0.300		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Chloroform	ND	0.0175		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Carbon tetrachloride	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2-Dichloroethane (EDC)	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Benzene	ND	0.0175		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Trichloroethene (TCE)	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2-Dichloropropane	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Bromodichloromethane	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Dibromomethane	ND	0.0125		mg/Kg-dry	1	2/14/2023 6:40:41 PM
cis-1,3-Dichloropropene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:42:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-007
Matrix: Soil
Client Sample ID: **BT-2-10**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0300		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Trans-1,3-Dichloropropylene	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0600		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1,2-Trichloroethane	ND	0.0125		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,3-Dichloropropane	ND	0.00999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Tetrachloroethene (PCE)	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Dibromochloromethane	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2-Dibromoethane (EDB)	ND	0.00999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
2-Hexanone (MBK)	ND	0.0624		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Chlorobenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1,1,2-Tetrachloroethane	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Ethylbenzene	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
m,p-Xylene	ND	0.0500		mg/Kg-dry	1	2/14/2023 6:40:41 PM
o-Xylene	ND	0.0250		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Styrene	ND	0.00999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Isopropylbenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Bromoform	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,1,2,2-Tetrachloroethane	ND	0.200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
n-Propylbenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Bromobenzene	ND	0.0125		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,3,5-Trimethylbenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
2-Chlorotoluene	ND	0.0165		mg/Kg-dry	1	2/14/2023 6:40:41 PM
4-Chlorotoluene	ND	0.0165		mg/Kg-dry	1	2/14/2023 6:40:41 PM
tert-Butylbenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2,3-Trichloropropane	ND	0.0300		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2,4-Trichlorobenzene	ND	0.0600		mg/Kg-dry	1	2/14/2023 6:40:41 PM
sec-Butylbenzene	ND	0.150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
4-Isopropyltoluene	ND	0.200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,4-Dichlorobenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2-Dibromo-3-chloropropane	ND	0.0300		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2,4-Trimethylbenzene	ND	0.0150		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Hexachloro-1,3-butadiene	ND	0.0400		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Naphthalene	ND	0.0999		mg/Kg-dry	1	2/14/2023 6:40:41 PM
1,2,3-Trichlorobenzene	ND	0.0600		mg/Kg-dry	1	2/14/2023 6:40:41 PM
Surr: Dibromofluoromethane	99.2	80 - 120		%Rec	1	2/14/2023 6:40:41 PM
Surr: Toluene-d8	109	80 - 120		%Rec	1	2/14/2023 6:40:41 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/8/2023 12:42:00 AM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-007
Matrix: Soil
Client Sample ID: **BT-2-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	97.1	80 - 120		%Rec	1	2/14/2023 6:40:41 PM
Sample Moisture (Percent Moisture)				Batch ID: R81805		Analyst: MP
Percent Moisture	20.9	0.500		wt%	1	2/13/2023 8:28:57 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:22:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-008
Matrix: Soil
Client Sample ID: **BT-3-5.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	54.0		mg/Kg-dry	1	2/14/2023 10:20:23 AM
Heavy Oil	ND	108		mg/Kg-dry	1	2/14/2023 10:20:23 AM
Total Petroleum Hydrocarbons	ND	162		mg/Kg-dry	1	2/14/2023 10:20:23 AM
Surr: 2-Fluorobiphenyl	89.1	50 - 150		%Rec	1	2/14/2023 10:20:23 AM
Surr: o-Terphenyl	92.0	50 - 150		%Rec	1	2/14/2023 10:20:23 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	4.84		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Surr: Toluene-d8	91.6	65 - 135		%Rec	1	2/14/2023 7:11:48 PM
Surr: 4-Bromofluorobenzene	88.6	65 - 135		%Rec	1	2/14/2023 7:11:48 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Chloromethane	ND	0.0484		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Vinyl chloride	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Bromomethane	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Chloroethane	ND	0.0727		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1-Dichloroethene	ND	0.0969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Acetone	ND	0.242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Methylene chloride	ND	0.0339		mg/Kg-dry	1	2/14/2023 7:11:48 PM
trans-1,2-Dichloroethene	ND	0.00969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1-Dichloroethane	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
cis-1,2-Dichloroethene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
(MEK) 2-Butanone	ND	0.291		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Chloroform	ND	0.0170		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1-Dichloropropene	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Carbon tetrachloride	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2-Dichloroethane (EDC)	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Benzene	ND	0.0170		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Trichloroethene (TCE)	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2-Dichloropropane	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Bromodichloromethane	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Dibromomethane	ND	0.0121		mg/Kg-dry	1	2/14/2023 7:11:48 PM
cis-1,3-Dichloropropene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:22:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-008
Matrix: Soil
Client Sample ID: **BT-3-5.5**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0291		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Trans-1,3-Dichloropropylene	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0581		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1,2-Trichloroethane	ND	0.0121		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,3-Dichloropropane	ND	0.00969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Tetrachloroethene (PCE)	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Dibromochloromethane	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2-Dibromoethane (EDB)	ND	0.00969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
2-Hexanone (MBK)	ND	0.0606		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Chlorobenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Ethylbenzene	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
m,p-Xylene	ND	0.0484		mg/Kg-dry	1	2/14/2023 7:11:48 PM
o-Xylene	ND	0.0242		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Styrene	ND	0.00969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Isopropylbenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Bromoform	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,1,2,2-Tetrachloroethane	ND	0.194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
n-Propylbenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Bromobenzene	ND	0.0121		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,3,5-Trimethylbenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
2-Chlorotoluene	ND	0.0160		mg/Kg-dry	1	2/14/2023 7:11:48 PM
4-Chlorotoluene	ND	0.0160		mg/Kg-dry	1	2/14/2023 7:11:48 PM
tert-Butylbenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2,3-Trichloropropane	ND	0.0291		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2,4-Trichlorobenzene	ND	0.0581		mg/Kg-dry	1	2/14/2023 7:11:48 PM
sec-Butylbenzene	ND	0.145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
4-Isopropyltoluene	ND	0.194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,3-Dichlorobenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,4-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
n-Butylbenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2-Dichlorobenzene	ND	0.0194		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2-Dibromo-3-chloropropane	ND	0.0291		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2,4-Trimethylbenzene	ND	0.0145		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Hexachloro-1,3-butadiene	ND	0.0388		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Naphthalene	ND	0.0969		mg/Kg-dry	1	2/14/2023 7:11:48 PM
1,2,3-Trichlorobenzene	ND	0.0581		mg/Kg-dry	1	2/14/2023 7:11:48 PM
Surr: Dibromofluoromethane	99.0	80 - 120		%Rec	1	2/14/2023 7:11:48 PM
Surr: Toluene-d8	109	80 - 120		%Rec	1	2/14/2023 7:11:48 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:22:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-008
Matrix: Soil
Client Sample ID: **BT-3-5.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	98.0	80 - 120		%Rec	1	2/14/2023 7:11:48 PM
Sample Moisture (Percent Moisture)				Batch ID: R81805		Analyst: MP
Percent Moisture	11.4	0.500		wt%	1	2/13/2023 8:28:57 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-010
Matrix: Soil
Client Sample ID: **BT-3-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39422		Analyst: KJ
Diesel Range Organics	ND	59.6		mg/Kg-dry	1	2/14/2023 10:31:12 AM
Heavy Oil	ND	119		mg/Kg-dry	1	2/14/2023 10:31:12 AM
Total Petroleum Hydrocarbons	ND	179		mg/Kg-dry	1	2/14/2023 10:31:12 AM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	2/14/2023 10:31:12 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	2/14/2023 10:31:12 AM
Gasoline by NWTPH-Gx				Batch ID: 39415		Analyst: CC
Gasoline Range Organics	ND	4.43		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Surr: Toluene-d8	91.7	65 - 135		%Rec	1	2/14/2023 7:42:52 PM
Surr: 4-Bromofluorobenzene	88.7	65 - 135		%Rec	1	2/14/2023 7:42:52 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Dichlorodifluoromethane (CFC-12)	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Chloromethane	ND	0.0443		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Vinyl chloride	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Bromomethane	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Trichlorofluoromethane (CFC-11)	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Chloroethane	ND	0.0664		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1-Dichloroethene	ND	0.0886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Acetone	ND	0.221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Methylene chloride	ND	0.0310		mg/Kg-dry	1	2/14/2023 7:42:52 PM
trans-1,2-Dichloroethene	ND	0.00886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Methyl tert-butyl ether (MTBE)	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1-Dichloroethane	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
cis-1,2-Dichloroethene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
(MEK) 2-Butanone	ND	0.266		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Chloroform	ND	0.0155		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1,1-Trichloroethane (TCA)	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1-Dichloropropene	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Carbon tetrachloride	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2-Dichloroethane (EDC)	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Benzene	ND	0.0155		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Trichloroethene (TCE)	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2-Dichloropropane	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Bromodichloromethane	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Dibromomethane	ND	0.0111		mg/Kg-dry	1	2/14/2023 7:42:52 PM
cis-1,3-Dichloropropene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-010
Matrix: Soil
Client Sample ID: **BT-3-10**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39415 Analyst: CC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Toluene	ND	0.0266		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Trans-1,3-Dichloropropylene	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0531		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1,2-Trichloroethane	ND	0.0111		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,3-Dichloropropane	ND	0.00886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Tetrachloroethene (PCE)	0.0326	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Dibromochloromethane	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2-Dibromoethane (EDB)	ND	0.00886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
2-Hexanone (MBK)	ND	0.0554		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Chlorobenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1,1,2-Tetrachloroethane	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Ethylbenzene	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
m,p-Xylene	ND	0.0443		mg/Kg-dry	1	2/14/2023 7:42:52 PM
o-Xylene	ND	0.0221		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Styrene	ND	0.00886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Isopropylbenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Bromoform	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,1,2,2-Tetrachloroethane	ND	0.177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
n-Propylbenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Bromobenzene	ND	0.0111		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,3,5-Trimethylbenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
2-Chlorotoluene	ND	0.0146		mg/Kg-dry	1	2/14/2023 7:42:52 PM
4-Chlorotoluene	ND	0.0146		mg/Kg-dry	1	2/14/2023 7:42:52 PM
tert-Butylbenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2,3-Trichloropropane	ND	0.0266		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2,4-Trichlorobenzene	ND	0.0531		mg/Kg-dry	1	2/14/2023 7:42:52 PM
sec-Butylbenzene	ND	0.133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
4-Isopropyltoluene	ND	0.177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,3-Dichlorobenzene	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,4-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
n-Butylbenzene	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2-Dichlorobenzene	ND	0.0177		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2-Dibromo-3-chloropropane	ND	0.0266		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2,4-Trimethylbenzene	ND	0.0133		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Hexachloro-1,3-butadiene	ND	0.0354		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Naphthalene	ND	0.0886		mg/Kg-dry	1	2/14/2023 7:42:52 PM
1,2,3-Trichlorobenzene	ND	0.0531		mg/Kg-dry	1	2/14/2023 7:42:52 PM
Surr: Dibromofluoromethane	100	80 - 120		%Rec	1	2/14/2023 7:42:52 PM
Surr: Toluene-d8	110	80 - 120		%Rec	1	2/14/2023 7:42:52 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 9:32:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-010
Matrix: Soil
Client Sample ID: **BT-3-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39415		Analyst: CC
Surr: 1-Bromo-4-fluorobenzene	98.2	80 - 120		%Rec	1	2/14/2023 7:42:52 PM
Sample Moisture (Percent Moisture)				Batch ID: R81813		Analyst: MP
Percent Moisture	17.9	0.500		wt%	1	2/13/2023 11:14:33 AM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 11:00:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-011
Matrix: Groundwater
Client Sample ID: **BT-3-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 39419		Analyst: KJ
Diesel Range Organics	ND	97.7		µg/L	1	2/14/2023 1:04:28 PM
Heavy Oil	123	97.7		µg/L	1	2/14/2023 1:04:28 PM
Total Petroleum Hydrocarbons	ND	195		µg/L	1	2/14/2023 1:04:28 PM
Surr: 2-Fluorobiphenyl	108	50 - 150		%Rec	1	2/14/2023 1:04:28 PM
Surr: o-Terphenyl	81.2	50 - 150		%Rec	1	2/14/2023 1:04:28 PM

NOTES:
Chromatographic pattern is not consistent with a petroleum standard

Gasoline by NWTPH-Gx				Batch ID: 39414		Analyst: SH
Gasoline Range Organics	ND	50.0		µg/L	1	2/13/2023 8:48:42 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	2/13/2023 8:48:42 PM
Surr: 4-Bromofluorobenzene	98.6	65 - 135		%Rec	1	2/13/2023 8:48:42 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39414		Analyst: SH
Dichlorodifluoromethane (CFC-12)	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Chloromethane	ND	0.750		µg/L	1	2/13/2023 8:48:42 PM
Vinyl chloride	ND	0.200		µg/L	1	2/13/2023 8:48:42 PM
Bromomethane	ND	3.00		µg/L	1	2/13/2023 8:48:42 PM
Trichlorofluoromethane (CFC-11)	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
Chloroethane	ND	1.00		µg/L	1	2/13/2023 8:48:42 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Acetone	ND	5.00		µg/L	1	2/13/2023 8:48:42 PM
Methylene chloride	ND	0.750		µg/L	1	2/13/2023 8:48:42 PM
trans-1,2-Dichloroethene	ND	0.350		µg/L	1	2/13/2023 8:48:42 PM
Methyl tert-butyl ether (MTBE)	ND	0.350		µg/L	1	2/13/2023 8:48:42 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	2/13/2023 8:48:42 PM
Chloroform	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,1,1-Trichloroethane (TCA)	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Carbon tetrachloride	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
1,2-Dichloroethane (EDC)	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Benzene	ND	0.440		µg/L	1	2/13/2023 8:48:42 PM
Trichloroethene (TCE)	ND	0.400		µg/L	1	2/13/2023 8:48:42 PM
1,2-Dichloropropane	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
Bromodichloromethane	ND	0.250		µg/L	1	2/13/2023 8:48:42 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 11:00:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-011
Matrix: Groundwater
Client Sample ID: **BT-3-GW**

Volatile Organic Compounds by EPA Method 8260D Batch ID: 39414 Analyst: SH

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dibromomethane	ND	0.250		µg/L	1	2/13/2023 8:48:42 PM
cis-1,3-Dichloropropene	ND	0.350		µg/L	1	2/13/2023 8:48:42 PM
Toluene	4.82	1.00		µg/L	1	2/13/2023 8:48:42 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.00		µg/L	1	2/13/2023 8:48:42 PM
1,1,2-Trichloroethane	ND	0.250		µg/L	1	2/13/2023 8:48:42 PM
1,3-Dichloropropane	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
Tetrachloroethene (PCE)	3.53	0.350		µg/L	1	2/13/2023 8:48:42 PM
Dibromochloromethane	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
1,2-Dibromoethane (EDB)	ND	0.200		µg/L	1	2/13/2023 8:48:42 PM
2-Hexanone (MBK)	ND	1.25		µg/L	1	2/13/2023 8:48:42 PM
Chlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
Ethylbenzene	ND	0.400		µg/L	1	2/13/2023 8:48:42 PM
m,p-Xylene	ND	1.00		µg/L	1	2/13/2023 8:48:42 PM
o-Xylene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Styrene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Isopropylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Bromoform	ND	0.300		µg/L	1	2/13/2023 8:48:42 PM
1,1,2,2-Tetrachloroethane	ND	0.200		µg/L	1	2/13/2023 8:48:42 PM
n-Propylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Bromobenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,3,5-Trimethylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
2-Chlorotoluene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
4-Chlorotoluene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
tert-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	2/13/2023 8:48:42 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	2/13/2023 8:48:42 PM
sec-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
n-Butylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	2/13/2023 8:48:42 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	2/13/2023 8:48:42 PM
Naphthalene	ND	1.25		µg/L	1	2/13/2023 8:48:42 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	2/13/2023 8:48:42 PM

Analytical Report

Work Order: **2302195**
Date Reported: **2/20/2023**

Client: AECOM
Collection Date: 2/7/2023 11:00:00 PM
Project: Woodinville SR202 Trestle Widening
Lab ID: 2302195-011
Matrix: Groundwater
Client Sample ID: **BT-3-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 39414		Analyst: SH
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	2/13/2023 8:48:42 PM
Surr: Toluene-d8	103	80 - 120		%Rec	1	2/13/2023 8:48:42 PM
Surr: 1-Bromo-4-fluorobenzene	98.0	80 - 120		%Rec	1	2/13/2023 8:48:42 PM

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **MB-39422** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **MBLKS** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697056**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	50.0									
Heavy Oil	ND	100									
Total Petroleum Hydrocarbons	ND	150									
Surr: 2-Fluorobiphenyl	11.5		10.00		115	50	150				
Surr: o-Terphenyl	12.0		10.00		120	50	150				

Sample ID: **LCS-39422** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **LCSS** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697057**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	503	150	500.0	0	101	74.5	125				
Surr: 2-Fluorobiphenyl	8.83		10.00		88.3	50	150				
Surr: o-Terphenyl	11.3		10.00		113	50	150				

Sample ID: **2302195-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **BT-1-8** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697059**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	569	172	574.2	0	99.1	50.3	140				
Surr: 2-Fluorobiphenyl	11.0		11.48		96.0	50	150				
Surr: o-Terphenyl	12.4		11.48		108	50	150				

Sample ID: **2302195-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **BT-1-8** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697060**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	556	172	574.8	0	96.8	50.3	140	568.9	2.26	30	
Surr: 2-Fluorobiphenyl	10.6		11.50		91.9	50	150		0		
Surr: o-Terphenyl	12.3		11.50		107	50	150		0		

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **2302195-003ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **BT-1-12** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697062**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	60.4						0		30	
Heavy Oil	ND	121						0		30	
Total Petroleum Hydrocarbons	ND	181						0		30	
Surr: 2-Fluorobiphenyl	10.6		12.08		87.6	50	150		0		
Surr: o-Terphenyl	11.0		12.08		90.9	50	150		0		

Sample ID: **2302203-003ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81847**
Client ID: **BATCH** Batch ID: **39422** Analysis Date: **2/14/2023** SeqNo: **1697369**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	52.7						0		30	
Heavy Oil	ND	105						0		30	
Total Petroleum Hydrocarbons	ND	158						0		30	
Surr: 2-Fluorobiphenyl	12.7		10.53		121	50	150		0		
Surr: o-Terphenyl	13.1		10.53		125	50	150		0		

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **MB-39419** SampType: **MBLK** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81833**
Client ID: **MBLKW** Batch ID: **39419** Analysis Date: **2/13/2023** SeqNo: **1696845**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	94.1									
Heavy Oil	ND	94.1									
Total Petroleum Hydrocarbons	ND	188									
Surr: 2-Fluorobiphenyl	15.9		23.53		67.5	50	150				
Surr: o-Terphenyl	21.7		23.53		92.1	50	150				

Sample ID: **LCS-39419** SampType: **LCS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81833**
Client ID: **LCSW** Batch ID: **39419** Analysis Date: **2/13/2023** SeqNo: **1696846**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	856	190	1,187	0	72.1	45.7	115				
Surr: 2-Fluorobiphenyl	22.4		23.74		94.3	50	150				
Surr: o-Terphenyl	29.5		23.74		124	50	150				

Sample ID: **LCSD-39419** SampType: **LCSD** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81833**
Client ID: **LCSW02** Batch ID: **39419** Analysis Date: **2/13/2023** SeqNo: **1696847**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	933	190	1,187	0	78.6	45.7	115	856.3	8.55	30	
Surr: 2-Fluorobiphenyl	21.1		23.74		88.8	50	150		0		
Surr: o-Terphenyl	29.8		23.74		125	50	150		0		

Sample ID: **2302215-010BMS** SampType: **MS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81833**
Client ID: **BATCH** Batch ID: **39419** Analysis Date: **2/16/2023** SeqNo: **1699065**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	1,090	187	1,167	202.4	76.0	31.9	125				
Surr: 2-Fluorobiphenyl	20.7		23.35		88.5	50	150				
Surr: o-Terphenyl	27.1		23.35		116	50	150				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **2302215-010BMSD** SampType: **MSD** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81833**
Client ID: **BATCH** Batch ID: **39419** Analysis Date: **2/16/2023** SeqNo: **1699066**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	1,240	186	1,165	202.4	89.1	31.9	125	1,089	13.0	30	
Surr: 2-Fluorobiphenyl	21.8		23.29		93.7	50	150		0		
Surr: o-Terphenyl	28.7		23.29		123	50	150		0		

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **2302057-025BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81882**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1697959**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	10.5						0		30	
Surr: Toluene-d8	2.44		2.629		92.8	65	135		0		
Surr: 4-Bromofluorobenzene	2.35		2.629		89.3	65	135		0		

Sample ID: **2302195-003BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81882**
Client ID: **BT-1-12** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1697967**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	15.5	4.49	22.43	0	69.0	65	135				
Surr: Toluene-d8	1.04		1.122		92.6	65	135				
Surr: 4-Bromofluorobenzene	1.02		1.122		90.9	65	135				

Sample ID: **2302195-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81882**
Client ID: **BT-1-8** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1697965**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	4.64						0		30	
Surr: Toluene-d8	1.07		1.159		92.3	65	135		0		
Surr: 4-Bromofluorobenzene	1.03		1.159		88.5	65	135		0		

Sample ID: **LCS-39415** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81882**
Client ID: **LCSS** Batch ID: **39415** Analysis Date: **2/15/2023** SeqNo: **1698003**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	25.0	5.00	25.00	0	99.9	65	135				
Surr: Toluene-d8	1.17		1.250		93.9	65	135				
Surr: 4-Bromofluorobenzene	1.15		1.250		91.8	65	135				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **MB-39415**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **2/13/2023**	RunNo: **81882**
Client ID: **MBLKS**	Batch ID: **39415**		Analysis Date: **2/15/2023**	SeqNo: **1697998**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	5.00									
Surr: Toluene-d8	1.17		1.250		93.5	65	135				
Surr: 4-Bromofluorobenzene	1.11		1.250		89.1	65	135				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-39414** SampType: **LCS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81839**
Client ID: **LCSW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696962**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	553	50.0	500.0	0	111	65	135				
Surr: Toluene-d8	25.2		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	25.4		25.00		102	65	135				

Sample ID: **MB-39414** SampType: **MBLK** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81839**
Client ID: **MBLKW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696955**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	50.0									
Surr: Toluene-d8	25.7		25.00		103	65	135				
Surr: 4-Bromofluorobenzene	25.2		25.00		101	65	135				

Sample ID: **2302186-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81839**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696929**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	50.0						0		30	
Surr: Toluene-d8	25.6		25.00		102	65	135		0		
Surr: 4-Bromofluorobenzene	25.2		25.00		101	65	135		0		

Sample ID: **2302215-015ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81839**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696948**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	50.0						0		30	
Surr: Toluene-d8	26.1		25.00		104	65	135		0		
Surr: 4-Bromofluorobenzene	25.4		25.00		102	65	135		0		

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **2302195-011AMS** SampType: **MS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81839**
Client ID: **BT-3-GW** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696932**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	457	50.0	500.0	47.38	82.0	65	135				
Surr: Toluene-d8	24.2		25.00		96.6	65	135				
Surr: 4-Bromofluorobenzene	24.3		25.00		97.0	65	135				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39415** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **LCSS** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1700313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.892	0.0150	1.000	0	89.2	80	120				
Chloromethane	0.964	0.0500	1.000	0	96.4	80	120				
Vinyl chloride	0.919	0.0250	1.000	0	91.9	80	120				
Bromomethane	0.881	0.0250	1.000	0	88.1	80	120				
Trichlorofluoromethane (CFC-11)	1.03	0.0200	1.000	0	103	80	120				
Chloroethane	0.990	0.0750	1.000	0	99.0	80	120				
1,1-Dichloroethene	1.04	0.100	1.000	0	104	80	120				
Acetone	2.25	0.250	2.500	0	89.9	80	120				
Methylene chloride	1.14	0.0350	1.000	0	114	80	120				
trans-1,2-Dichloroethene	1.04	0.0100	1.000	0	104	80	120				
Methyl tert-butyl ether (MTBE)	1.02	0.0200	1.000	0	102	80	120				
1,1-Dichloroethane	1.05	0.0250	1.000	0	105	80	120				
cis-1,2-Dichloroethene	1.03	0.0150	1.000	0	103	80	120				
(MEK) 2-Butanone	2.12	0.300	2.500	0	84.8	80	120				
Chloroform	0.993	0.0175	1.000	0	99.3	80	120				
1,1,1-Trichloroethane (TCA)	0.986	0.0200	1.000	0	98.6	80	120				
1,1-Dichloropropene	1.00	0.0200	1.000	0	100	80	120				
Carbon tetrachloride	1.06	0.0250	1.000	0	106	80	120				
1,2-Dichloroethane (EDC)	0.995	0.0200	1.000	0	99.5	80	120				
Benzene	0.990	0.0175	1.000	0	99.0	80	120				
Trichloroethene (TCE)	0.881	0.0150	1.000	0	88.1	80	120				
1,2-Dichloropropane	1.00	0.0250	1.000	0	100	80	120				
Bromodichloromethane	1.10	0.0250	1.000	0	110	80	120				
Dibromomethane	0.980	0.0125	1.000	0	98.0	80	120				
cis-1,3-Dichloropropene	1.00	0.0150	1.000	0	100	80	120				
Toluene	1.01	0.0300	1.000	0	101	80	120				
Trans-1,3-Dichloropropylene	1.03	0.0200	1.000	0	103	80	120				
Methyl Isobutyl Ketone (MIBK)	2.16	0.0600	2.500	0	86.4	80	120				
1,1,2-Trichloroethane	0.943	0.0125	1.000	0	94.3	80	120				
1,3-Dichloropropane	0.954	0.0100	1.000	0	95.4	80	120				
Tetrachloroethene (PCE)	1.04	0.0150	1.000	0	104	80	120				
Dibromochloromethane	1.01	0.0150	1.000	0	101	80	120				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39415** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **LCSS** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1700313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	0.929	0.0100	1.000	0	92.9	80	120				
2-Hexanone (MBK)	2.14	0.0625	2.500	0	85.6	80	120				
Chlorobenzene	1.00	0.0150	1.000	0	100	80	120				
1,1,1,2-Tetrachloroethane	1.02	0.0250	1.000	0	102	80	120				
Ethylbenzene	1.01	0.0250	1.000	0	101	80	120				
m,p-Xylene	2.26	0.0500	2.000	0	113	80	120				
o-Xylene	1.02	0.0250	1.000	0	102	80	120				
Styrene	0.995	0.0100	1.000	0	99.5	80	120				
Isopropylbenzene	1.02	0.0150	1.000	0	102	80	120				
Bromoform	1.02	0.0150	1.000	0	102	80	120				
1,1,2,2-Tetrachloroethane	0.956	0.200	1.000	0	95.6	80	120				
n-Propylbenzene	1.03	0.0150	1.000	0	103	80	120				
Bromobenzene	1.12	0.0125	1.000	0	112	80	120				
1,3,5-Trimethylbenzene	1.02	0.0150	1.000	0	102	80	120				
2-Chlorotoluene	1.02	0.0165	1.000	0	102	80	120				
4-Chlorotoluene	1.03	0.0165	1.000	0	103	80	120				
tert-Butylbenzene	1.03	0.0150	1.000	0	103	80	120				
1,2,3-Trichloropropane	0.917	0.0300	1.000	0	91.7	80	120				
1,2,4-Trichlorobenzene	1.01	0.0600	1.000	0	101	80	120				
sec-Butylbenzene	1.05	0.150	1.000	0	105	80	120				
4-Isopropyltoluene	1.05	0.200	1.000	0	105	80	120				
1,3-Dichlorobenzene	1.03	0.0200	1.000	0	103	80	120				
1,4-Dichlorobenzene	0.983	0.0150	1.000	0	98.3	80	120				
n-Butylbenzene	1.06	0.0200	1.000	0	106	80	120				
1,2-Dichlorobenzene	1.00	0.0200	1.000	0	100	80	120				
1,2-Dibromo-3-chloropropane	0.956	0.0300	1.000	0	95.6	80	120				
1,2,4-Trimethylbenzene	1.02	0.0150	1.000	0	102	80	120				
Hexachloro-1,3-butadiene	1.07	0.0400	1.000	0	107	80	120				
Naphthalene	0.924	0.100	1.000	0	92.4	80	120				
1,2,3-Trichlorobenzene	1.01	0.0600	1.000	0	101	80	120				
Surr: Dibromofluoromethane	1.25		1.250		99.9	80	120				
Surr: Toluene-d8	1.25		1.250		100	80	120				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39415** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **LCSS** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1700313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	80	120				

Sample ID: **2302057-025BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698103**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0316						0		30	
Chloromethane	ND	0.105						0		30	
Vinyl chloride	ND	0.0526						0		30	
Bromomethane	ND	0.0526						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0421						0		30	
Chloroethane	ND	0.158						0		30	
1,1-Dichloroethene	ND	0.210						0		30	
Acetone	ND	0.526						0		30	
Methylene chloride	ND	0.0736						0		30	
trans-1,2-Dichloroethene	ND	0.0210						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0421						0		30	
1,1-Dichloroethane	ND	0.0526						0		30	
cis-1,2-Dichloroethene	ND	0.0316						0		30	
(MEK) 2-Butanone	ND	0.631						0		30	
Chloroform	ND	0.0368						0		30	
1,1,1-Trichloroethane (TCA)	0.258	0.0421						0.2596	0.668	30	
1,1-Dichloropropene	ND	0.0421						0		30	
Carbon tetrachloride	ND	0.0526						0		30	
1,2-Dichloroethane (EDC)	ND	0.0421						0		30	
Benzene	ND	0.0368						0		30	
Trichloroethene (TCE)	0.434	0.0316						0.4302	0.974	30	
1,2-Dichloropropane	ND	0.0526						0		30	
Bromodichloromethane	ND	0.0526						0		30	
Dibromomethane	ND	0.0263						0		30	
cis-1,3-Dichloropropene	ND	0.0316						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302057-025BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698103**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	0.0631						0		30	
Trans-1,3-Dichloropropylene	ND	0.0421						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	0.126						0		30	
1,1,2-Trichloroethane	ND	0.0263						0		30	
1,3-Dichloropropane	ND	0.0210						0		30	
Tetrachloroethene (PCE)	0.0706	0.0316						0.07117	0.731	30	
Dibromochloromethane	ND	0.0316						0		30	
1,2-Dibromoethane (EDB)	ND	0.0210						0		30	
2-Hexanone (MBK)	ND	0.131						0		30	
Chlorobenzene	ND	0.0316						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0526						0		30	
Ethylbenzene	ND	0.0526						0		30	
m,p-Xylene	ND	0.105						0		30	
o-Xylene	ND	0.0526						0		30	
Styrene	ND	0.0210						0		30	
Isopropylbenzene	ND	0.0316						0		30	
Bromoform	ND	0.0316						0		30	
1,1,2,2-Tetrachloroethane	ND	0.421						0		30	
n-Propylbenzene	ND	0.0316						0		30	
Bromobenzene	ND	0.0263						0		30	
1,3,5-Trimethylbenzene	ND	0.0316						0		30	
2-Chlorotoluene	ND	0.0347						0		30	
4-Chlorotoluene	ND	0.0347						0		30	
tert-Butylbenzene	ND	0.0316						0		30	
1,2,3-Trichloropropane	ND	0.0631						0		30	
1,2,4-Trichlorobenzene	ND	0.126						0		30	
sec-Butylbenzene	ND	0.316						0		30	
4-Isopropyltoluene	ND	0.421						0		30	
1,3-Dichlorobenzene	ND	0.0421						0		30	
1,4-Dichlorobenzene	ND	0.0316						0		30	
n-Butylbenzene	ND	0.0421						0		30	
1,2-Dichlorobenzene	ND	0.0421						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302057-025BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698103**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	0.0631						0		30	
1,2,4-Trimethylbenzene	ND	0.0316						0		30	
Hexachloro-1,3-butadiene	ND	0.0841						0		30	
Naphthalene	ND	0.210						0		30	
1,2,3-Trichlorobenzene	ND	0.126						0		30	
Surr: Dibromofluoromethane	2.68		2.629		102	80	120		0		
Surr: Toluene-d8	2.93		2.629		111	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	2.60		2.629		98.9	80	120		0		

Sample ID: **2302057-034BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698063**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.713	0.0145	0.9669	0	73.7	13.6	193				
Chloromethane	0.801	0.0483	0.9669	0	82.8	37.6	165				
Vinyl chloride	0.746	0.0242	0.9669	0	77.1	49.9	166				
Bromomethane	0.782	0.0242	0.9669	0	80.9	29.1	184				
Trichlorofluoromethane (CFC-11)	0.977	0.0193	0.9669	0	101	49.8	160				
Chloroethane	0.704	0.0725	0.9669	0	72.8	41.1	171				
1,1-Dichloroethene	1.05	0.0967	0.9669	0	108	64.6	149				
Acetone	2.21	0.242	2.417	0.1477	85.3	54.6	152				
Methylene chloride	1.09	0.0338	0.9669	0	113	66.1	140				
trans-1,2-Dichloroethene	0.821	0.00967	0.9669	0	84.9	73.1	137				
Methyl tert-butyl ether (MTBE)	0.920	0.0193	0.9669	0	95.1	72.4	129				
1,1-Dichloroethane	1.01	0.0242	0.9669	0	104	68.6	139				
cis-1,2-Dichloroethene	0.905	0.0145	0.9669	0	93.6	76.4	134				
(MEK) 2-Butanone	2.16	0.290	2.417	0	89.2	58.2	156				
Chloroform	0.842	0.0169	0.9669	0	87.0	77.9	132				
1,1,1-Trichloroethane (TCA)	0.816	0.0193	0.9669	0.09754	74.3	77.6	139				S
1,1-Dichloropropene	0.814	0.0193	0.9669	0	84.2	78.1	138				
Carbon tetrachloride	0.834	0.0242	0.9669	0	86.2	75.8	140				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302057-034BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698063**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	0.899	0.0193	0.9669	0	93.0	74.5	133				
Benzene	0.832	0.0169	0.9669	0.04187	81.7	76.2	134				
Trichloroethene (TCE)	0.853	0.0145	0.9669	0.1035	77.5	75.5	144				
1,2-Dichloropropane	0.975	0.0242	0.9669	0	101	70.9	135				
Bromodichloromethane	1.04	0.0242	0.9669	0	107	72.4	135				
Dibromomethane	1.04	0.0121	0.9669	0	107	75.8	134				
cis-1,3-Dichloropropene	0.936	0.0145	0.9669	0	96.8	67.1	135				
Toluene	0.950	0.0290	0.9669	0.1628	81.4	77.9	135				
Trans-1,3-Dichloropropylene	0.961	0.0193	0.9669	0	99.4	66.8	135				
Methyl Isobutyl Ketone (MIBK)	2.42	0.0580	2.417	0	99.9	55	155				
1,1,2-Trichloroethane	0.996	0.0121	0.9669	0.007287	102	71.7	137				
1,3-Dichloropropane	0.990	0.00967	0.9669	0	102	72.9	135				
Tetrachloroethene (PCE)	0.967	0.0145	0.9669	0.07066	92.7	78.3	138				
Dibromochloromethane	1.02	0.0145	0.9669	0	106	69.4	137				
1,2-Dibromoethane (EDB)	1.00	0.00967	0.9669	0	104	75.2	133				
2-Hexanone (MBK)	2.36	0.0604	2.417	0	97.8	45.8	156				
Chlorobenzene	0.859	0.0145	0.9669	0	88.9	83.2	128				
1,1,1,2-Tetrachloroethane	0.878	0.0242	0.9669	0	90.8	81	131				
Ethylbenzene	0.830	0.0242	0.9669	0.01529	84.3	81.1	138				
m,p-Xylene	1.87	0.0483	1.934	0.08680	92.3	82.2	135				
o-Xylene	0.851	0.0242	0.9669	0.04989	82.8	81.3	136				
Styrene	0.857	0.00967	0.9669	0	88.6	81.9	132				
Isopropylbenzene	0.834	0.0145	0.9669	0.008674	85.4	80.3	142				
Bromoform	0.914	0.0145	0.9669	0	94.5	63.3	143				
1,1,2,2-Tetrachloroethane	0.869	0.193	0.9669	0	89.9	61	136				
n-Propylbenzene	0.821	0.0145	0.9669	0.009091	83.9	77.4	145				
Bromobenzene	0.976	0.0121	0.9669	0	101	80.1	131				
1,3,5-Trimethylbenzene	0.850	0.0145	0.9669	0.01041	86.8	78.6	138				
2-Chlorotoluene	0.850	0.0160	0.9669	0	87.9	79.6	136				
4-Chlorotoluene	0.858	0.0160	0.9669	0	88.8	80.2	133				
tert-Butylbenzene	0.842	0.0145	0.9669	0	87.1	76.8	138				
1,2,3-Trichloropropane	0.839	0.0290	0.9669	0	86.8	68.4	134				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302057-034BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BATCH** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698063**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	0.916	0.0580	0.9669	0	94.7	71.4	134				
sec-Butylbenzene	0.826	0.145	0.9669	0	85.5	74.3	148				
4-Isopropyltoluene	0.835	0.193	0.9669	0.03073	83.2	75.4	142				
1,3-Dichlorobenzene	0.906	0.0193	0.9669	0	93.6	83.8	130				
1,4-Dichlorobenzene	0.910	0.0145	0.9669	0	94.1	83.7	130				
n-Butylbenzene	0.826	0.0193	0.9669	0	85.4	77.1	142				
1,2-Dichlorobenzene	0.916	0.0193	0.9669	0	94.8	84.8	128				
1,2-Dibromo-3-chloropropane	0.865	0.0290	0.9669	0	89.5	61.3	138				
1,2,4-Trimethylbenzene	0.850	0.0145	0.9669	0.02262	85.5	77.1	138				
Hexachloro-1,3-butadiene	0.941	0.0387	0.9669	0	97.3	70.3	148				
Naphthalene	0.915	0.0967	0.9669	0	94.6	58.7	144				
1,2,3-Trichlorobenzene	0.959	0.0580	0.9669	0	99.1	61.4	142				
Surr: Dibromofluoromethane	1.21		1.209		99.8	80	120				
Surr: Toluene-d8	1.35		1.209		112	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.209		102	80	120				

NOTES:
S - Outlying spike recoveries were associated with this sample.

Sample ID: **2302195-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BT-1-8** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698068**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0139						0		30	Q
Chloromethane	ND	0.0464						0		30	
Vinyl chloride	ND	0.0232						0		30	
Bromomethane	ND	0.0232						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0185						0		30	
Chloroethane	ND	0.0695						0		30	
1,1-Dichloroethene	ND	0.0927						0		30	
Acetone	ND	0.232						0		30	
Methylene chloride	ND	0.0324						0		30	
trans-1,2-Dichloroethene	ND	0.00927						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302195-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BT-1-8** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698068**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.0185						0		30	
1,1-Dichloroethane	ND	0.0232						0		30	
cis-1,2-Dichloroethene	ND	0.0139						0		30	
(MEK) 2-Butanone	ND	0.278						0		30	
Chloroform	ND	0.0162						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0185						0		30	
1,1-Dichloropropene	ND	0.0185						0		30	
Carbon tetrachloride	ND	0.0232						0		30	
1,2-Dichloroethane (EDC)	ND	0.0185						0		30	
Benzene	ND	0.0162						0		30	
Trichloroethene (TCE)	ND	0.0139						0		30	
1,2-Dichloropropane	ND	0.0232						0		30	
Bromodichloromethane	ND	0.0232						0		30	
Dibromomethane	ND	0.0116						0		30	
cis-1,3-Dichloropropene	ND	0.0139						0		30	
Toluene	ND	0.0278						0		30	
Trans-1,3-Dichloropropylene	ND	0.0185						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	0.0556						0		30	
1,1,2-Trichloroethane	ND	0.0116						0		30	
1,3-Dichloropropane	ND	0.00927						0		30	
Tetrachloroethene (PCE)	ND	0.0139						0		30	
Dibromochloromethane	ND	0.0139						0		30	
1,2-Dibromoethane (EDB)	ND	0.00927						0		30	
2-Hexanone (MBK)	ND	0.0579						0		30	
Chlorobenzene	ND	0.0139						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0232						0		30	
Ethylbenzene	ND	0.0232						0		30	
m,p-Xylene	ND	0.0464						0		30	
o-Xylene	ND	0.0232						0		30	
Styrene	ND	0.00927						0		30	
Isopropylbenzene	ND	0.0139						0		30	
Bromoform	ND	0.0139						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302195-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **BT-1-8** Batch ID: **39415** Analysis Date: **2/14/2023** SeqNo: **1698068**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	0.185						0		30	
n-Propylbenzene	ND	0.0139						0		30	
Bromobenzene	ND	0.0116						0		30	
1,3,5-Trimethylbenzene	ND	0.0139						0		30	
2-Chlorotoluene	ND	0.0153						0		30	
4-Chlorotoluene	ND	0.0153						0		30	
tert-Butylbenzene	ND	0.0139						0		30	
1,2,3-Trichloropropane	ND	0.0278						0		30	
1,2,4-Trichlorobenzene	ND	0.0556						0		30	
sec-Butylbenzene	ND	0.139						0		30	
4-Isopropyltoluene	ND	0.185						0		30	
1,3-Dichlorobenzene	ND	0.0185						0		30	
1,4-Dichlorobenzene	ND	0.0139						0		30	
n-Butylbenzene	ND	0.0185						0		30	
1,2-Dichlorobenzene	ND	0.0185						0		30	
1,2-Dibromo-3-chloropropane	ND	0.0278						0		30	
1,2,4-Trimethylbenzene	ND	0.0139						0		30	
Hexachloro-1,3-butadiene	ND	0.0371						0		30	
Naphthalene	ND	0.0927						0		30	
1,2,3-Trichlorobenzene	ND	0.0556						0		30	
Surr: Dibromofluoromethane	1.16		1.159		99.9	80	120		0		
Surr: Toluene-d8	1.27		1.159		110	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	1.13		1.159		97.9	80	120		0		

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased

Sample ID: **MB-39415** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **MBLKS** Batch ID: **39415** Analysis Date: **2/15/2023** SeqNo: **1698099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0150									Q
Chloromethane	ND	0.0500									

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-39415**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **2/13/2023**	RunNo: **81881**
Client ID: **MBLKS**	Batch ID: **39415**		Analysis Date: **2/15/2023**	SeqNo: **1698099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0250									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0750									Q
1,1-Dichloroethene	ND	0.100									
Acetone	ND	0.250									
Methylene chloride	ND	0.0350									
trans-1,2-Dichloroethene	ND	0.0100									
Methyl tert-butyl ether (MTBE)	ND	0.0200									
1,1-Dichloroethane	ND	0.0250									
cis-1,2-Dichloroethene	ND	0.0150									
(MEK) 2-Butanone	ND	0.300									
Chloroform	ND	0.0175									
1,1,1-Trichloroethane (TCA)	ND	0.0200									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0175									
Trichloroethene (TCE)	ND	0.0150									
1,2-Dichloropropane	ND	0.0250									
Bromodichloromethane	ND	0.0250									
Dibromomethane	ND	0.0125									
cis-1,3-Dichloropropene	ND	0.0150									
Toluene	ND	0.0300									
Trans-1,3-Dichloropropylene	ND	0.0200									
Methyl Isobutyl Ketone (MIBK)	ND	0.0600									
1,1,2-Trichloroethane	ND	0.0125									
1,3-Dichloropropane	ND	0.0100									
Tetrachloroethene (PCE)	ND	0.0150									
Dibromochloromethane	ND	0.0150									
1,2-Dibromoethane (EDB)	ND	0.0100									
2-Hexanone (MBK)	ND	0.0625									

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-39415** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/13/2023** RunNo: **81881**
Client ID: **MBLKS** Batch ID: **39415** Analysis Date: **2/15/2023** SeqNo: **1698099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.0150									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0100									
Isopropylbenzene	ND	0.0150									
Bromoform	ND	0.0150									
1,1,2,2-Tetrachloroethane	ND	0.200									
n-Propylbenzene	ND	0.0150									
Bromobenzene	ND	0.0125									
1,3,5-Trimethylbenzene	ND	0.0150									
2-Chlorotoluene	ND	0.0165									
4-Chlorotoluene	ND	0.0165									
tert-Butylbenzene	ND	0.0150									
1,2,3-Trichloropropane	ND	0.0300									
1,2,4-Trichlorobenzene	ND	0.0600									
sec-Butylbenzene	ND	0.150									
4-Isopropyltoluene	ND	0.200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0150									
n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.0300									
1,2,4-Trimethylbenzene	ND	0.0150									
Hexachloro-1,3-butadiene	ND	0.0400									
Naphthalene	ND	0.100									
1,2,3-Trichlorobenzene	ND	0.0600									
Surr: Dibromofluoromethane	1.24		1.250		99.2	80	120				
Surr: Toluene-d8	1.36		1.250		108	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.6	80	120				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-39415**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **2/13/2023**	RunNo: **81881**
Client ID: **MBLKS**	Batch ID: **39415**		Analysis Date: **2/15/2023**	SeqNo: **1698099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39414** SampType: **LCS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **LCSW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.0	0.500	20.00	0	95.2	80	120				
Chloromethane	19.6	0.750	20.00	0	97.9	80	120				
Vinyl chloride	21.0	0.200	20.00	0	105	80	120				
Bromomethane	22.7	3.00	20.00	0	113	80	120				
Trichlorofluoromethane (CFC-11)	21.4	0.300	20.00	0	107	80	120				
Chloroethane	22.1	1.00	20.00	0	110	80	120				
1,1-Dichloroethene	22.3	0.500	20.00	0	111	80	120				
Acetone	60.0	5.00	50.00	0	120	80	120				
Methylene chloride	21.0	0.750	20.00	0	105	80	120				
trans-1,2-Dichloroethene	21.5	0.350	20.00	0	107	80	120				
Methyl tert-butyl ether (MTBE)	22.5	0.350	20.00	0	112	80	120				
1,1-Dichloroethane	20.6	0.500	20.00	0	103	80	120				
cis-1,2-Dichloroethene	21.4	0.500	20.00	0	107	80	120				
2-Butanone (MEK)	52.3	1.50	50.00	0	105	80	120				
Chloroform	21.5	0.500	20.00	0	107	80	120				
1,1,1-Trichloroethane (TCA)	20.7	0.300	20.00	0	104	80	120				
1,1-Dichloropropene	22.1	0.500	20.00	0	110	80	120				
Carbon tetrachloride	21.6	0.300	20.00	0	108	80	120				
1,2-Dichloroethane (EDC)	20.5	0.500	20.00	0	103	80	120				
Benzene	21.1	0.440	20.00	0	105	80	120				
Trichloroethene (TCE)	22.0	0.400	20.00	0	110	80	120				
1,2-Dichloropropane	20.9	0.300	20.00	0	105	80	120				
Bromodichloromethane	20.9	0.250	20.00	0	105	80	120				
Dibromomethane	21.0	0.250	20.00	0	105	80	120				
cis-1,3-Dichloropropene	21.1	0.350	20.00	0	105	80	120				
Toluene	21.6	1.00	20.00	0	108	80	120				
trans-1,3-Dichloropropylene	20.7	0.500	20.00	0	104	80	120				
Methyl Isobutyl Ketone (MIBK)	47.7	1.00	50.00	0	95.4	80	120				
1,1,2-Trichloroethane	21.2	0.250	20.00	0	106	80	120				
1,3-Dichloropropane	21.1	0.300	20.00	0	106	80	120				
Tetrachloroethene (PCE)	22.6	0.350	20.00	0	113	80	120				
Dibromochloromethane	20.6	0.300	20.00	0	103	80	120				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39414** SampType: **LCS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **LCSW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	21.0	0.200	20.00	0	105	80	120				
2-Hexanone (MBK)	48.3	1.25	50.00	0	96.7	80	120				
Chlorobenzene	20.9	0.500	20.00	0	104	80	120				
1,1,1,2-Tetrachloroethane	21.6	0.300	20.00	0	108	80	120				
Ethylbenzene	21.2	0.400	20.00	0	106	80	120				
m,p-Xylene	43.1	1.00	40.00	0	108	80	120				
o-Xylene	21.0	0.500	20.00	0	105	80	120				
Styrene	21.5	0.500	20.00	0	107	80	120				
Isopropylbenzene	21.3	0.500	20.00	0	106	80	120				
Bromoform	20.0	0.300	20.00	0	99.8	80	120				
1,1,2,2-Tetrachloroethane	22.1	0.200	20.00	0	110	80	120				
n-Propylbenzene	21.6	0.500	20.00	0	108	80	120				
Bromobenzene	20.7	0.500	20.00	0	103	80	120				
1,3,5-Trimethylbenzene	21.7	0.500	20.00	0	108	80	120				
2-Chlorotoluene	21.3	0.500	20.00	0	106	80	120				
4-Chlorotoluene	21.3	0.500	20.00	0	106	80	120				
tert-Butylbenzene	21.4	0.500	20.00	0	107	80	120				
1,2,3-Trichloropropane	20.1	0.400	20.00	0	100	80	120				
1,2,4-Trichlorobenzene	20.3	0.750	20.00	0	101	80	120				
sec-Butylbenzene	21.5	0.500	20.00	0	108	80	120				
4-Isopropyltoluene	21.5	0.500	20.00	0	107	80	120				
1,3-Dichlorobenzene	21.3	0.500	20.00	0	106	80	120				
1,4-Dichlorobenzene	21.4	0.500	20.00	0	107	80	120				
n-Butylbenzene	21.6	0.500	20.00	0	108	80	120				
1,2-Dichlorobenzene	20.6	0.500	20.00	0	103	80	120				
1,2-Dibromo-3-chloropropane	17.8	1.00	20.00	0	89.2	80	120				
1,2,4-Trimethylbenzene	21.4	0.500	20.00	0	107	80	120				
Hexachloro-1,3-butadiene	21.4	0.500	20.00	0	107	80	120				
Naphthalene	19.2	1.25	20.00	0	96.0	80	120				
1,2,3-Trichlorobenzene	19.7	0.700	20.00	0	98.7	80	120				
Surr: Dibromofluoromethane	25.2		25.00		101	80	120				
Surr: Toluene-d8	24.9		25.00		99.5	80	120				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-39414** SampType: **LCS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **LCSW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.9	80	120				

Sample ID: **MB-39414** SampType: **MBLK** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **MBLKW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.500									
Chloromethane	ND	0.750									
Vinyl chloride	ND	0.200									
Bromomethane	ND	3.00									
Trichlorofluoromethane (CFC-11)	ND	0.300									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	0.500									
Acetone	ND	5.00									
Methylene chloride	ND	0.750									
trans-1,2-Dichloroethene	ND	0.350									
Methyl tert-butyl ether (MTBE)	ND	0.350									
1,1-Dichloroethane	ND	0.500									
cis-1,2-Dichloroethene	ND	0.500									
2-Butanone (MEK)	ND	1.50									
Chloroform	ND	0.500									
1,1,1-Trichloroethane (TCA)	ND	0.300									
1,1-Dichloropropene	ND	0.500									
Carbon tetrachloride	ND	0.300									
1,2-Dichloroethane (EDC)	ND	0.500									
Benzene	ND	0.440									
Trichloroethene (TCE)	ND	0.400									
1,2-Dichloropropane	ND	0.300									
Bromodichloromethane	ND	0.250									
Dibromomethane	ND	0.250									
cis-1,3-Dichloropropene	ND	0.350									

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-39414** SampType: **MBLK** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **MBLKW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	ND	0.500									
Methyl Isobutyl Ketone (MIBK)	ND	1.00									
1,1,2-Trichloroethane	ND	0.250									
1,3-Dichloropropane	ND	0.300									
Tetrachloroethene (PCE)	ND	0.350									
Dibromochloromethane	ND	0.300									
1,2-Dibromoethane (EDB)	ND	0.200									
2-Hexanone (MBK)	ND	1.25									
Chlorobenzene	ND	0.500									
1,1,1,2-Tetrachloroethane	ND	0.300									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Styrene	ND	0.500									
Isopropylbenzene	ND	0.500									
Bromoform	ND	0.300									
1,1,2,2-Tetrachloroethane	ND	0.200									
n-Propylbenzene	ND	0.500									
Bromobenzene	ND	0.500									
1,3,5-Trimethylbenzene	ND	0.500									
2-Chlorotoluene	ND	0.500									
4-Chlorotoluene	ND	0.500									
tert-Butylbenzene	ND	0.500									
1,2,3-Trichloropropane	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.750									
sec-Butylbenzene	ND	0.500									
4-Isopropyltoluene	ND	0.500									
1,3-Dichlorobenzene	ND	0.500									
1,4-Dichlorobenzene	ND	0.500									
n-Butylbenzene	ND	0.500									
1,2-Dichlorobenzene	ND	0.500									

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-39414** SampType: **MBLK** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **MBLKW** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	0.500									
Hexachloro-1,3-butadiene	ND	0.500									
Naphthalene	ND	1.25									
1,2,3-Trichlorobenzene	ND	0.700									
Surr: Dibromofluoromethane	25.8		25.00		103	80	120				
Surr: Toluene-d8	25.5		25.00		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.2	80	120				

Sample ID: **2302186-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696875**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.500						0		30	
Chloromethane	ND	0.750						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	3.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.300						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	0.500						0		30	
Acetone	ND	5.00						0		30	
Methylene chloride	ND	0.750						0		30	
trans-1,2-Dichloroethene	ND	0.350						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.350						0		30	
1,1-Dichloroethane	ND	0.500						0		30	
cis-1,2-Dichloroethene	ND	0.500						0		30	
2-Butanone (MEK)	ND	1.50						0		30	
Chloroform	ND	0.500						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.300						0		30	
1,1-Dichloropropene	ND	0.500						0		30	
Carbon tetrachloride	ND	0.300						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302186-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696875**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	0.500						0		30	
Benzene	ND	0.440						0		30	
Trichloroethene (TCE)	ND	0.400						0		30	
1,2-Dichloropropane	ND	0.300						0		30	
Bromodichloromethane	ND	0.250						0		30	
Dibromomethane	ND	0.250						0		30	
cis-1,3-Dichloropropene	ND	0.350						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	0.500						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	0.250						0		30	
1,3-Dichloropropane	ND	0.300						0		30	
Tetrachloroethene (PCE)	ND	0.350						0		30	
Dibromochloromethane	ND	0.300						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
2-Hexanone (MBK)	ND	1.25						0		30	
Chlorobenzene	ND	0.500						0		30	
1,1,1,2-Tetrachloroethane	ND	0.300						0		30	
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	
Styrene	ND	0.500						0		30	
Isopropylbenzene	ND	0.500						0		30	
Bromoform	ND	0.300						0		30	
1,1,2,2-Tetrachloroethane	ND	0.200						0		30	
n-Propylbenzene	ND	0.500						0		30	
Bromobenzene	ND	0.500						0		30	
1,3,5-Trimethylbenzene	ND	0.500						0		30	
2-Chlorotoluene	ND	0.500						0		30	
4-Chlorotoluene	ND	0.500						0		30	
tert-Butylbenzene	ND	0.500						0		30	
1,2,3-Trichloropropane	ND	0.400						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302186-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/13/2023** SeqNo: **1696875**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.750						0		30	
sec-Butylbenzene	ND	0.500						0		30	
4-Isopropyltoluene	ND	0.500						0		30	
1,3-Dichlorobenzene	ND	0.500						0		30	
1,4-Dichlorobenzene	ND	0.500						0		30	
n-Butylbenzene	ND	0.500						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	0.500						0		30	
Hexachloro-1,3-butadiene	ND	0.500						0		30	
Naphthalene	ND	1.25						0		30	
1,2,3-Trichlorobenzene	ND	0.700						0		30	
Surr: Dibromofluoromethane	25.8		25.00		103	80	120		0		
Surr: Toluene-d8	25.9		25.00		104	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.4	80	120		0		

Sample ID: **2302215-015ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696894**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.500						0		30	
Chloromethane	ND	0.750						0		30	
Vinyl chloride	0.411	0.200						0.3328	21.0	30	
Bromomethane	ND	3.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.300						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	0.500						0		30	
Acetone	ND	5.00						0		30	
Methylene chloride	ND	0.750						0		30	
trans-1,2-Dichloroethene	ND	0.350						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.350						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302215-015ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696894**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.500						0		30	
cis-1,2-Dichloroethene	ND	0.500						0		30	
2-Butanone (MEK)	ND	1.50						0		30	
Chloroform	ND	0.500						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.300						0		30	
1,1-Dichloropropene	ND	0.500						0		30	
Carbon tetrachloride	ND	0.300						0		30	
1,2-Dichloroethane (EDC)	ND	0.500						0		30	
Benzene	ND	0.440						0		30	
Trichloroethene (TCE)	ND	0.400						0		30	
1,2-Dichloropropane	ND	0.300						0		30	
Bromodichloromethane	ND	0.250						0		30	
Dibromomethane	ND	0.250						0		30	
cis-1,3-Dichloropropene	ND	0.350						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	0.500						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	0.250						0		30	
1,3-Dichloropropane	ND	0.300						0		30	
Tetrachloroethene (PCE)	ND	0.350						0		30	
Dibromochloromethane	ND	0.300						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
2-Hexanone (MBK)	ND	1.25						0		30	
Chlorobenzene	ND	0.500						0		30	
1,1,1,2-Tetrachloroethane	ND	0.300						0		30	
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	
Styrene	ND	0.500						0		30	
Isopropylbenzene	ND	0.500						0		30	
Bromoform	ND	0.300						0		30	
1,1,2,2-Tetrachloroethane	ND	0.200						0		30	

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302215-015ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BATCH** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696894**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	ND	0.500						0		30	
Bromobenzene	ND	0.500						0		30	
1,3,5-Trimethylbenzene	ND	0.500						0		30	
2-Chlorotoluene	ND	0.500						0		30	
4-Chlorotoluene	ND	0.500						0		30	
tert-Butylbenzene	ND	0.500						0		30	
1,2,3-Trichloropropane	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.750						0		30	
sec-Butylbenzene	ND	0.500						0		30	
4-Isopropyltoluene	ND	0.500						0		30	
1,3-Dichlorobenzene	ND	0.500						0		30	
1,4-Dichlorobenzene	ND	0.500						0		30	
n-Butylbenzene	ND	0.500						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	0.500						0		30	
Hexachloro-1,3-butadiene	ND	0.500						0		30	
Naphthalene	ND	1.25						0		30	
1,2,3-Trichlorobenzene	ND	0.700						0		30	
Surr: Dibromofluoromethane	25.3		25.00		101	80	120		0		
Surr: Toluene-d8	25.7		25.00		103	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	80	120		0		

Sample ID: **2302195-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BT-1-GW** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696877**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.2	0.500	20.00	0	76.1	1.35	172				
Chloromethane	24.0	0.750	20.00	0.4492	118	27.2	164				
Vinyl chloride	18.1	0.200	20.00	0	90.7	52.3	147				
Bromomethane	18.2	3.00	20.00	0	90.8	24.2	186				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302195-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BT-1-GW** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696877**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	18.0	0.300	20.00	0	90.0	71.2	137				
Chloroethane	18.9	1.00	20.00	0	94.3	62.9	141				
1,1-Dichloroethene	18.8	0.500	20.00	0	93.9	68	152				
Acetone	59.4	5.00	50.00	0	119	56.1	148				
Methylene chloride	18.9	0.750	20.00	0	94.7	73.7	132				
trans-1,2-Dichloroethene	19.6	0.350	20.00	0	98.1	79.1	131				
Methyl tert-butyl ether (MTBE)	22.2	0.350	20.00	0	111	60.2	140				
1,1-Dichloroethane	17.7	0.500	20.00	0	88.7	64.8	148				
cis-1,2-Dichloroethene	18.8	0.500	20.00	0	94.1	78.3	131				
2-Butanone (MEK)	48.3	1.50	50.00	1.078	94.5	53.6	145				
Chloroform	18.0	0.500	20.00	0	90.1	78.9	131				
1,1,1-Trichloroethane (TCA)	18.0	0.300	20.00	0	90.1	76.6	143				
1,1-Dichloropropene	17.8	0.500	20.00	0	88.8	73.9	146				
Carbon tetrachloride	18.1	0.300	20.00	0	90.3	79.5	133				
1,2-Dichloroethane (EDC)	18.4	0.500	20.00	0	91.8	67.8	140				
Benzene	17.7	0.440	20.00	0	88.7	78.5	133				
Trichloroethene (TCE)	18.0	0.400	20.00	0	90.1	75	133				
1,2-Dichloropropane	18.3	0.300	20.00	0	91.7	71.4	139				
Bromodichloromethane	18.5	0.250	20.00	0	92.4	76.1	130				
Dibromomethane	19.0	0.250	20.00	0	95.1	75.5	130				
cis-1,3-Dichloropropene	17.9	0.350	20.00	0	89.5	68.4	128				
Toluene	23.2	1.00	20.00	0	116	77	133				
trans-1,3-Dichloropropylene	18.2	0.500	20.00	0	91.1	63.8	132				
Methyl Isobutyl Ketone (MIBK)	48.8	1.00	50.00	0	97.6	55.6	145				
1,1,2-Trichloroethane	19.6	0.250	20.00	0	98.1	70.1	138				
1,3-Dichloropropane	19.9	0.300	20.00	0	99.3	67.7	139				
Tetrachloroethene (PCE)	23.0	0.350	20.00	0	115	78	131				
Dibromochloromethane	19.3	0.300	20.00	0	96.5	72.6	129				
1,2-Dibromoethane (EDB)	20.0	0.200	20.00	0	100	67.7	137				
2-Hexanone (MBK)	49.0	1.25	50.00	0	98.0	48.5	148				
Chlorobenzene	18.6	0.500	20.00	0	92.8	80.9	124				
1,1,1,2-Tetrachloroethane	18.5	0.300	20.00	0	92.7	75	133				

Work Order: 2302195
CLIENT: AECOM
Project: Woodinville SR202 Trestle Widening

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2302195-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **2/13/2023** RunNo: **81835**
Client ID: **BT-1-GW** Batch ID: **39414** Analysis Date: **2/14/2023** SeqNo: **1696877**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	18.6	0.400	20.00	0	92.8	77.9	133				
m,p-Xylene	37.0	1.00	40.00	0	92.6	74.8	133				
o-Xylene	19.0	0.500	20.00	0	94.9	81.2	126				
Styrene	18.6	0.500	20.00	0	93.0	75.7	126				
Isopropylbenzene	18.9	0.500	20.00	0	94.6	79.1	132				
Bromoform	19.8	0.300	20.00	0	99.1	68.3	132				
1,1,2,2-Tetrachloroethane	23.1	0.200	20.00	0	116	62.8	148				
n-Propylbenzene	18.2	0.500	20.00	0	90.8	77.2	137				
Bromobenzene	19.0	0.500	20.00	0	95.0	79.9	124				
1,3,5-Trimethylbenzene	18.5	0.500	20.00	0	92.4	73.9	142				
2-Chlorotoluene	18.3	0.500	20.00	0	91.5	73.5	140				
4-Chlorotoluene	18.6	0.500	20.00	0	93.2	73.5	140				
tert-Butylbenzene	18.3	0.500	20.00	0	91.6	79.5	131				
1,2,3-Trichloropropane	19.0	0.400	20.00	0	94.9	63.1	139				
1,2,4-Trichlorobenzene	18.3	0.750	20.00	0	91.6	60.4	135				
sec-Butylbenzene	18.6	0.500	20.00	0	92.8	77.9	136				
4-Isopropyltoluene	18.7	0.500	20.00	0	93.7	69.9	147				
1,3-Dichlorobenzene	18.4	0.500	20.00	0	91.8	79.3	131				
1,4-Dichlorobenzene	18.8	0.500	20.00	0	93.9	79.1	131				
n-Butylbenzene	17.0	0.500	20.00	0	85.2	76	137				
1,2-Dichlorobenzene	18.6	0.500	20.00	0	92.8	79.3	131				
1,2-Dibromo-3-chloropropane	19.0	1.00	20.00	0	94.9	47.7	153				
1,2,4-Trimethylbenzene	18.6	0.500	20.00	0	93.0	74.3	142				
Hexachloro-1,3-butadiene	17.6	0.500	20.00	0	87.8	68.5	136				
Naphthalene	18.5	1.25	20.00	0	92.5	51.6	149				
1,2,3-Trichlorobenzene	18.6	0.700	20.00	0	92.8	56.6	142				
Surr: Dibromofluoromethane	25.0		25.00		100	80	120				
Surr: Toluene-d8	24.7		25.00		98.8	80	120				
Surr: 1-Bromo-4-fluorobenzene	25.4		25.00		102	80	120				

Sample Log-In Check List

Client Name:	**AECOM**	Work Order Number:	**2302195**
Logged by:	**Clare Griggs**	Date Received:	**2/9/2023 4:44:00 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 ☐
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

Item #	Temp ºC
Sample	1.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 2/9/2023 Page: 1 of: 2

Laboratory Project No (internal): 2302195

Project Name: Woodinville SR202 Trestle Widening

Special Remarks: Samples from HSA with SPT sampling. GW samples collected with temp. wells, peristaltic pump, disposable tubing

Client: AECOM Technical Services, Inc.

Project No: 60683438 Task 6.5.6

Address: 1111 3rd Ave. Suite 1600

Collected by: Michael Black (AECOM)

City, State, Zip: Seattle, WA, 98101

Location: Woodinville, WA

Telephone: 206-438-2197

Report To (PM): Markus Walbaum

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email: markus.walbaum@aecom.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)					Comments
1	BT-1-8	2/8/23	23:32	S	3	X		X		X												2x vials, 1x 4oz jar
2	BT-1-10	2/8/23	23:39	S	3	X		X		X												" "
3	BT-1-12	2/8/23	23:46	S	3	X		X		X												" "
4	BT-1-GW	2/9/23	00:30	GW	4	X		X		X												3x VOAs, 1x 500ml amber
5	BT-2-5.5	2/8/23	00:32	S	3	X		X		X												2x vials, 1x 4oz jar
6	BT-2-7	2/8/23	00:36	S	3	X		X		X												" "
7	BT-2-10	2/8/23	00:42	S	3	X		X		X												" "
8	BT-3-5.5	2/7/23	21:22	S	3	X		X		X												" "
9	BT-3-7	2/7/23	21:27	S	3	X		X		X												" "
10	BT-3-10	2/7/23	21:32	S	3	X		X		X												" "

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	Michael Black	2/9/23 4:45pm	x	Ramiro Garcia	2/9 16:44
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 2/9/2023 Page: 2 of: 2

Laboratory Project No (internal): 2302195

Project Name: Woodinville SR202 Trestle Widening

Project No: 60683438 Task 6.5.6

Collected by: Michael Black (AECOM)

Location: Woodinville, WA

Report To (PM): Markus Walbaum

PM Email: markus.walbaum@aecom.com

Client: AECOM Technical Services Inc.

Address: 1111 3rd Ave. Suite 1600

City, State, Zip: Seattle, WA 98101

Telephone: 206-438-2197

Fax:

Special Remarks: GW Samples collected with temp. well, peristaltic pump, disposable tubing

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)						Comments
1	BT-3-GW	2/7/23	23:00	GW	4	X		X		X												3x VOAs, 1x 500ml amber
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

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Turn-around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ____ (specify)

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Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x [signature]	Michael Black	2/9/23 4:45pm	x [signature]	Ramiro Garcia	2/9 16-44
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

COC 1.3 - 11.06.20

60683538

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 2/9/2023 Page: 1 of: 2

Laboratory Project No (internal): 2302195

Project Name: Woodinville SR202 Trestle Widening

Project No: ~~60683438~~ Task 6.5.6

Collected by: Michael Black (AECOM)

Location: Woodinville, WA

Report To (PM): Markus Walbaum

PM Email: markus.walbaum@aecom.com

Client: AECOM Technical Services, Inc.

Address: 1111 3rd Ave. Suite 1600

City, State, Zip: Seattle, WA, 98101

Telephone: 206-438-2197

Fax:

Special Remarks: Samples from HSA with SPT sampling. GW samples collected with temp. wells, peristaltic pump, disposable tubing

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

edits per MW 2/10/23 -cg

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	BT-1-8	2/8/23	23:32	S	3	X		X		X							2x vials, 1x 4oz jar
2	BT-1-10	2/8/23	23:39	S	3	X		X		X							On hold "
3	BT-1-12	2/8/23	23:46	S	3	X		X		X							" "
4	BT-1-GW	2/9/23	00:30	GW	4	X		X		X							3x VOAs, 1x 500ml amber
5	BT-2-5.5	2/8/23	00:32	S	3	X		X		X							On hold, 1x 4oz jar
6	BT-2-7	2/8/23	00:36	S	3	X		X		X							" "
7	BT-2-10	2/8/23	00:42	S	3	X		X		X							" "
8	BT-3-5.5	2/7/23	21:22	S	3	X		X		X							" "
9	BT-3-7	2/7/23	21:27	S	3	X		X		X							On hold "
10	BT-3-10	2/7/23	21:32	S	3	X		X		X							" "

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

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Turn-around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ____ (specify)

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Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x M. Black	Michael Black	2/9/23 4:45pm	x	Ramiro Garcia	2/9 16:44
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 2/9/2023 Page: 2 of: 2

Laboratory Project No (internal): 2302195

Project Name: Woodinville SR202 Trestle Widening

Project No: ~~60683438~~ Task 6.5.6

Collected by: Michael Black (AECOM)

Location: Woodinville, WA

Report To (PM): Markus Walbaum

PM Email: markus.walbaum@aecom.com

Client: AECOM Technical Services Inc.

Address: 1111 3rd Ave. Suite 1600

City, State, Zip: Seattle, WA 98101

Telephone: 206-438-2197

Fax:

Special Remarks: GW Samples collected with temp. well, peristaltic pump, disposable tubing

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)					Comments
1	BT-3-GW	2/7/23	23:00	GW	4	X		X		X											3x VOAs, 1x 500ml amber
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ____ (specify)

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x [signature]	Michael Black	2/9/23 4:45pm	x [signature]	Ramiro Garcia	2/9 16-44
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Appendix E – Laboratory Data Quality Review

AECOM
1111 Third Ave
Suite 1600
Seattle, WA 98101
www.aecom.com

206 438 2700 tel
866 495 5288 fax

Memorandum

Subject	Laboratory Data Quality Review Summary Woodinville SR202 Trestle Widening
Date	April 10, 2023

The summary data quality review of 6 soil samples and 2 groundwater samples, collected on February 7 through February 9, 2023, has been completed. The samples were collected by AECOM personnel and were analyzed at Fremont Analytical (FA), located in Seattle, Washington, for volatile organic compounds (VOCs) by EPA Method 8260D; total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and heavy oil-range TPH) as described below. The analyses were performed in general accordance with the methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Ecology's *Analytical Methods for Petroleum Hydrocarbons*, June 1997. The laboratory provided summary reports containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with FA laboratory group 2302195:

Sample ID	Sample Matrix	Laboratory Group	FA ID	Requested Analyses
BT-1-8	Soil	2302195	2302195-001	VOCs, TPHs
BT-1-10	Soil		2302195-002	NA
BT-1-12	Soil		2302195-003	VOCs, TPHs
BT-1-GW	Groundwater		2302195-004	VOCs, TPHs
BT-2-5.5	Soil		2302195-005	NA
BT-2-7	Soil		2302195-006	VOCs, TPHs
BT-2-10	Soil		2302195-007	VOCs, TPHs
BT-3-5.5	Soil		2302195-008	VOCs, TPHs
BT-3-7	Soil		2302195-009	NA
BT-3-10	Soil		2302195-010	VOCs, TPHs
BT-3-GW	Groundwater		2302195-011	VOCs, TPHs

NA – Not analyzed

Upon receipt by FA, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies related to sample ID were noted by the laboratory and the coolers were received at temperatures within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. The COCs for laboratory group 2302195 were edited by AECOM personnel to update the project number. Samples BT-1-10, BT-2-5.5 and BT-3-7 were put on hold without analysis. No results were reported for these samples.

Holding times, field/method/trip blanks, surrogate recoveries, matrix spike/matrix spike duplicate recoveries, laboratory and/or field duplicate results, blank spike recoveries (laboratory control samples), and reporting limits were reviewed to assess compliance with applicable methods. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA documents *National Functional Guidelines for Organic Superfund Methods Data Review,* November 2020, and *National Functional Guidelines for Inorganic Superfund Methods Data Review*, November 2020. A summary of data qualifiers assigned to this sample set is included as Table 1.

Organic Analyses

Samples were analyzed for VOCs and TPHs by the methods described in the introduction to this report.

1. Holding Times – Acceptable

2. Blanks – Acceptable

3. Surrogates – Acceptable

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable except as noted below:

   VOCs by Method 8260D – An MS was performed using BT-1-GW. Results were acceptable.

   An MS was performed using a soil sample from a project unrelated to the Woodinville Trestle Widening project. No data were qualified based on non-project QC results.

   Gasoline Range Organics by Method NWTPH-Gx – Matrix spikes were performed using soil sample BT-1-12 and groundwater sample BT-3-GW. Results were acceptable.

   Diesel and Oil Range Organics by Method NWTPH-Dx – MS/MSDs were performed using BT-1-8 and a soil sample from a project unrelated to the Woodinville Trestle Widening project. Results were acceptable.

6. Laboratory Duplicate – Acceptable

   VOCs by Method 8260D – Laboratory duplicates were performed using BT-1-8 and one soil sample and two groundwater samples from projects unrelated to the Woodinville Trestle Widening project. Results were comparable.

   Gasoline Range Organics by Method NWTPH-Gx – Laboratory duplicates were performed using BT-1-8 and one soil sample and two groundwater samples from projects unrelated to the Woodinville Trestle Widening project. Results were comparable.

   Diesel and Oil Range Organics by Method NWTPH-Dx – Laboratory duplicates for soil samples were performed using BT-1-12 and one sample from a project unrelated to the Woodinville Trestle Widening project. Results were comparable.

7. Reporting Limits – Acceptable

   General – The reporting limits for one or more analytes reported as not detected in multiple samples were elevated due to moisture content and/or limited sample volume. The elevated reporting limits do not impact the use of the data for regulatory comparison.

8. Other Items of Note:

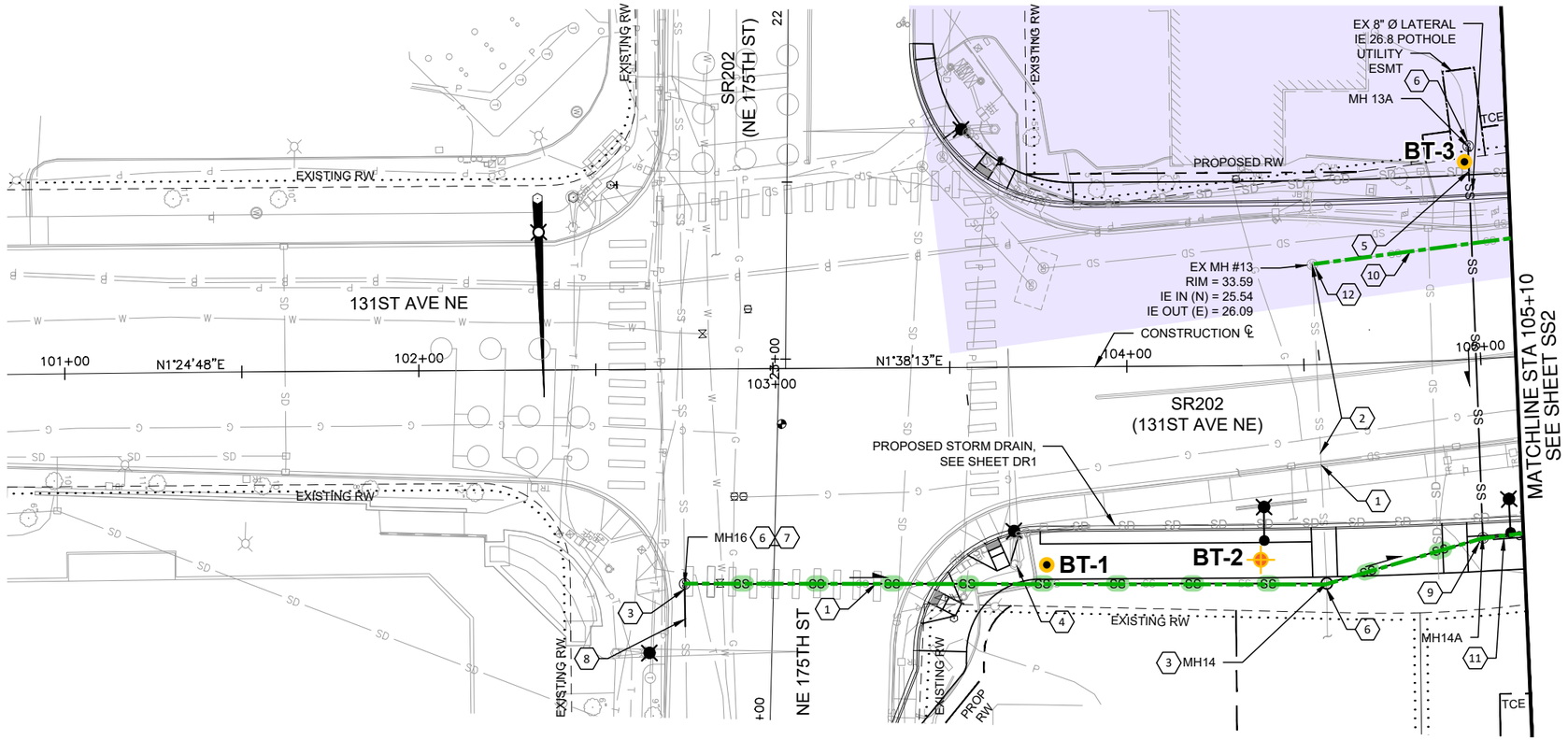
   VOCs by Method 8260D – The laboratory noted that the percent differences for dichlorodifluoromethane and chloroethane were outside acceptance criteria (low) in the continuing calibration verification (CCV) associated with batch 39415. The results for dichlorofluoromethane and chloroethane in samples BT-1-8, BT-1-12, BT-2-7, BT-2-10, BT-3-5.5, and BT-3-10 were qualified as estimated and flagged 'UJ' due this CCV result.

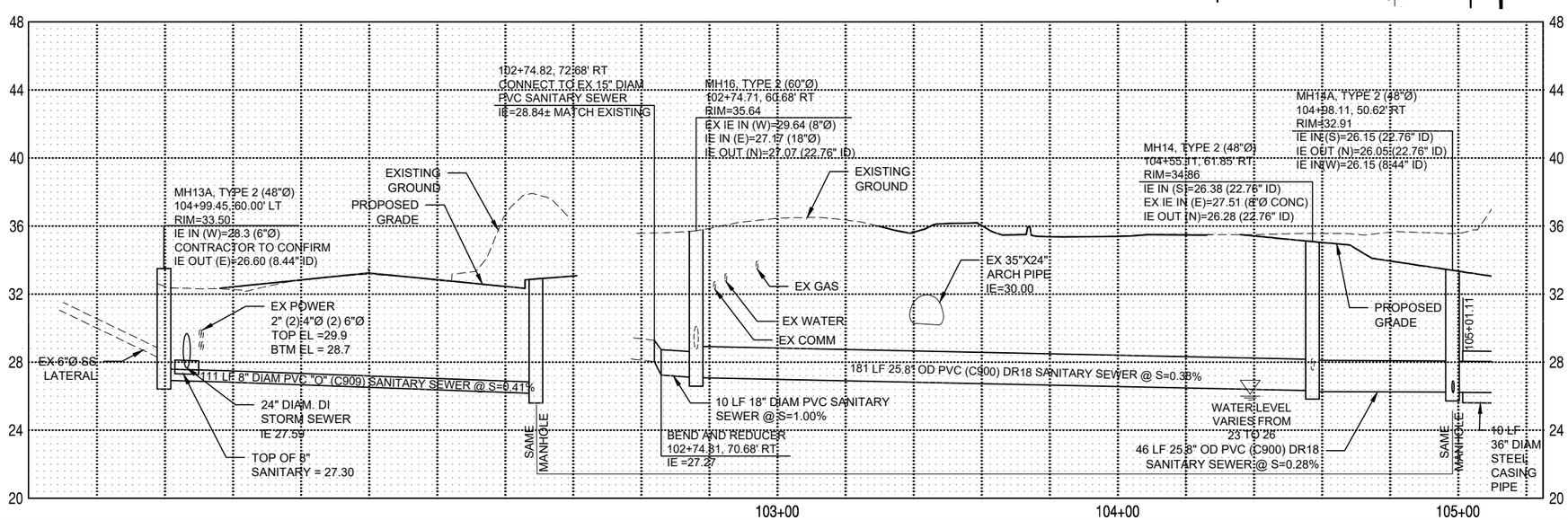
Overall Assessment of Data

The data reported in these laboratory groups, as qualified, are usable for meeting project objectives. The completeness for laboratory group 2302195 is 100%.

Appendix F – Sanitary Sewer Plan and Profile - Area of PCE Media Management

SEC. 9, T.26N., R.5E., W.M.
CITY OF WOODINVILLE





CONSTRUCTION NOTES

1. REMOVE EXISTING PIPE
2. ABANDON 36" DIA EXISTING STEEL CASING PIPE, REMOVE EXISTING 18" DIAM SANITARY SEWER PIPE, PLUG EXISTING PIPE ENDS
3. REMOVE EXISTING MANHOLE
4. PROTECT TRAFFIC SIGNAL / LIGHT POLE IN PLACE
5. PROVIDE CONCRETE SADDLE, SEE SHEET SSD1
6. CONNECTION TO EXISTING SANITARY MANHOLE OR EXISTING PIPE CONNECTION TO MANHOLE (PAID AS CONNECTION TO SANITARY MANHOLE)
7. INSTALL DROP MANHOLE CONNECTION PER WOODINVILLE WATER DISTRICT DETAIL #7
8. PROVIDE 18" DIAM PVC SANITARY SEWER PIPE, BEND, AND REDUCER FITTINGS AND CONNECTION TO EXISTING 15" DIAM PVC SANITARY SEWER PIPE
9. PROVIDE CONCRETE COLLAR PER WOODINVILLE WATER DISTRICT DETAIL #21
10. ABANDON EXISTING SANITARY SEWER, PLUG ENDS PER SPECIFICATIONS AND FILL REMAINING PIPE WITH LEAN CONCRETE (INCIDENTAL TO PAY ITEM "PLUGGING EXISTING PIPE")
11. INSTALL 36" DIAM STEEL CASING PIPE, SEE WOODINVILLE WATER DISTRICT #13 FOR INSTALLATION DETAILS
12. ABANDON EXISTING MANHOLES

GENERAL NOTES

1. ALL PROPOSED MANHOLES WILL BE FIBERGLASS LINED PER SPECIFICATIONS AND ORIENTED PER WOODINVILLE WATER DISTRICT DETAIL #18.
2. ALL FRAMES AND LIDS WILL BE WATERTIGHT PER WOODINVILLE WATER DISTRICT DETAIL #20.
3. ALL INVERTS ARE TO INSIDE DIAMETER OF PIPE.

Legend

- Boring Location
- Monitoring Well
- Planned Piping Removal or Install
- Potential Area of PCE Impacted Media (saturated zone soils & groundwater)

20 0 20 40
HORIZ SCALE IN FEET
4 0 4 8
VERT SCALE IN FEET

AECOM
1111 THIRD AVENUE, SUITE 1600
SEATTLE, WASHINGTON 98101
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REX W. MEIER, STATE OF WASHINGTON, 29998, REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	DATE	BY	CK

CITY OF WOODINVILLE
17301 133rd AVE NE
WOODINVILLE, WA 98072
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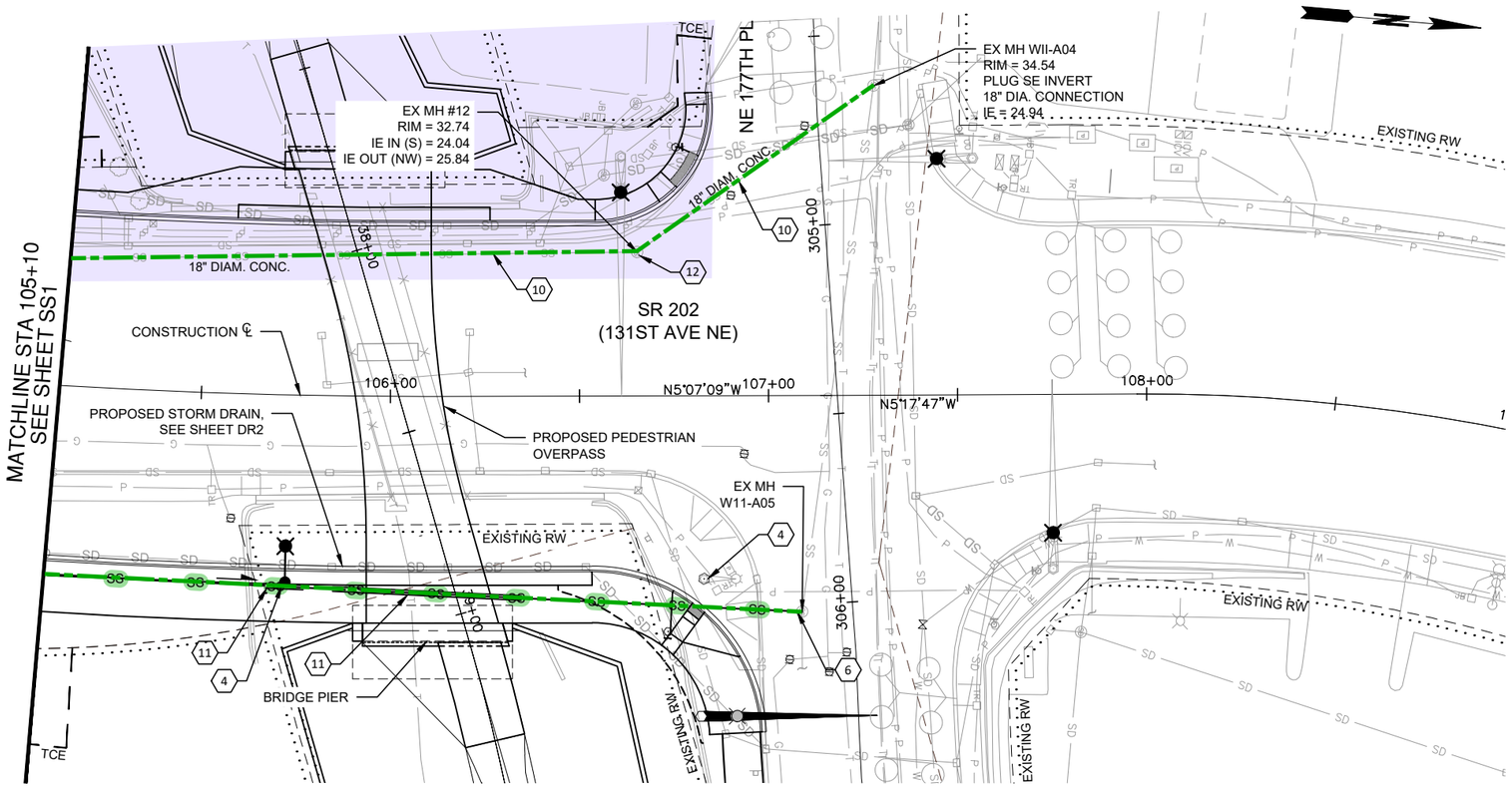
PROJECT INFORMATION
SR 202 WIDENING AND TRESTLE REPLACEMENT PROJECT

SHEET TITLE:
SANITARY SEWER PLAN AND PROFILE

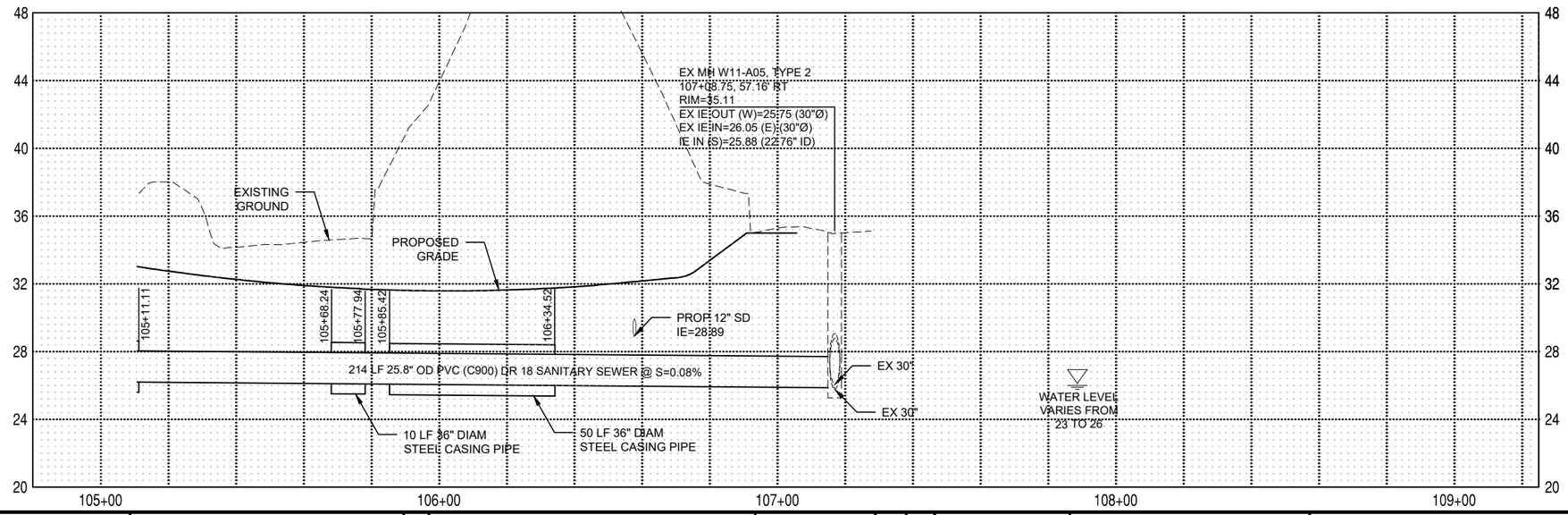
DATE: 4/11/25	CHECKED BY: RM
DESIGNED BY: BM	PROJECT NO.: ST-26-XXX
DRAWN BY: BM	SCALE: AS SHOWN
SHEET 18 OF XX	
DRAWING NO.: SS1	

SEC. 9, T.26N., R.5E., W.M.
CITY OF WOODINVILLE



CONSTRUCTION NOTES

1. REMOVE EXISTING PIPE
3. REMOVE EXISTING MANHOLE
4. PROTECT TRAFFIC SIGNAL / LIGHT POLE IN PLACE
6. CONNECTION TO EXISTING SANITARY MANHOLE OR EXISTING PIPE CONNECTION TO MANHOLE (PAID AS CONNECTION TO SANITARY MANHOLE)
10. ABANDON EXISTING SANITARY SEWER, PLUG ENDS PER SPECIFICATIONS AND FILL REMAINING PIPE WITH LEAN CONCRETE (INCIDENTAL TO PAY ITEM "PLUGGING EXISTING PIPE")
11. INSTALL 36" DIAM STEEL CASING PIPE, SEE WOODINVILLE WATER DISTRICT #13 FOR INSTALLATION DETAILS
12. ABANDON EXISTING MANHOLES



Legend

- Planned Piping Removal or Install
- Potential Area of PCE Impacted Media (saturated zone soils & groundwater)

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DATE: 4/11/25	CHECKED BY: RM
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DRAWN BY: BM	SCALE: AS SHOWN
SHEET 19 OF XX	
DRAWING NO.: SS2	

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